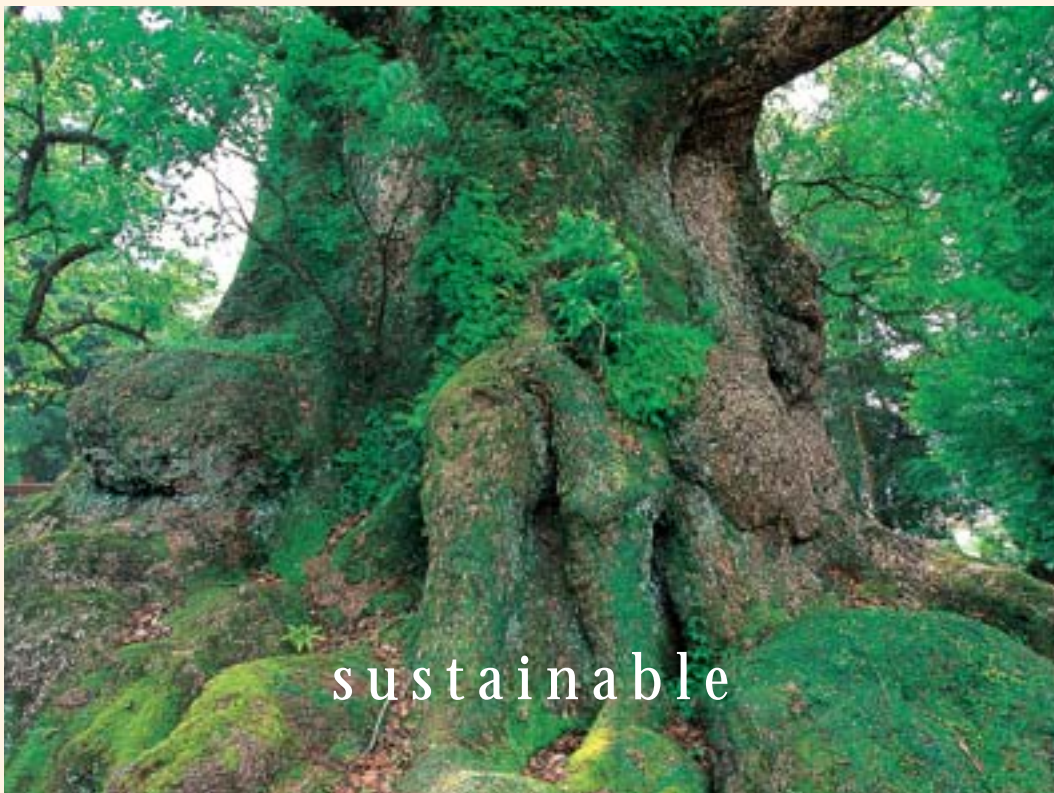


Towards an Environmentally Friendly Corporate Stance

2002 Kyushu Electric Power Environment Action Report



KYUSHU ELECTRIC POWER CO.,INC.

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Scope and editorial policies of 2002 Kyushu Electric Environment Action Report

This report compiles the activities of Kyushu Electric Power Co., Inc. during fiscal 2001 (April 1, 2001 – March 31, 2002), and covers the future plans and activities of the group companies. During compilation, reference was made to the Environmental Reporting Guidelines (Fiscal Year 2000 version) published by the Ministry of the Environment, and Environmental Reporting Guidelines 2001 with Focus on Stakeholders published by the Ministry of Economy, Trade and Industry. In addition, topics on economic and societal aspects are included for the first time, based on our support of the concepts contained in the Sustainable Reporting Guidelines proposed by the Global Reporting Initiative (GRI). New or improved measures since the last report are listed below.

Items newly added:

Conformity to environmental regulations, Emergency measures (p.7); Effects from environmental activities (pp.8-9); Supporting social contribution by employees, Safety and health of employees (p.27); Business status and management targets (pp.32-33); Kyushu Electric Power Group's environmental activity progress (pp.46-51); Third-party review of the Environment Action Report (pp.90-91).

Improved items:

In order to allow readers to learn more about their areas of interest, we have created Related Information segments including more detailed information, while maintaining an easy-to-read format.

The next report is planned for publication in August 2003.

Message from the President



Japan became a signatory country to the Kyoto Protocol (adopted at the Conference of the Parties to the UN Framework Convention on Climate Change held in Kyoto, December 1997) in June this year and, at the same time, revised the Law Concerning the Protection of Measures to Cope with Global Warming, clearly showing our commitment to resolve pressing global environmental problems.

The electric utility service industry produces various environmentally damaging materials such as discharged carbon dioxide. However, we at Kyushu Electric Power Co., Inc. consider conservation of the natural environment one of our top priorities, and we are determined to coordinate business growth and environmental protection. We promote all kinds of environmentally friendly industrial methods.

In concrete terms, we have established the environmental management framework, promoted the use of nuclear energy to reduce carbon dioxide emissions, and put into practice zero-waste strategies with the aim of building a recycling-based society. We also promote the Kyushu Homeland Forestation Program in collaboration with local communities. Over the past year, Kyushu Electric Power Group companies worked at many environmentally oriented projects, including the development and improvement of a system of environmental accounting and the promotion of education on energy and the environment.

This “Environment Action Report” is the sixth in our series to date. Our endeavor is to help deepen readers’ understanding of the issues under discussion. The report’s value was greatly enhanced by the substantial contributions of experts and customers from outside the company. Furthermore, it has been checked by a third-party organization to ensure the highest possible level of objectivity and reliability.

We hope to foster environmental activities through increased communication about the environment with a broader audience in the future. I look forward to hearing your opinions and suggestions.

A handwritten signature in black ink that reads "M. Kamata". The signature is written in a cursive, flowing style.

Michisada Kamata
President
September, 2002

Special Features of 2002 Environment Action Report

1. Special Feature

Kyushu Electric takes on the duty of informing society of the environmental impact deriving from its economic business activities, as well as measures for its mitigation. This sense of duty drives our environmental activities. In light of this, the results of our environmental activities are compiled annually into the Environment Action Report.

For a broader understanding

This report is intended for customers, the general public, corporate environmental activity experts, companies involved in our business activities, and those who live near Kyushu Electric facilities. For this reason, the part of the report with general, concise information in reference to environmental activities is compiled in the Main Section, and a separate portion for “Related Information (pp.32-67)” is prepared to provide more information on items frequently requested by readers, and details on articles from the Main Section.

Enriched content on sustainable development and other items

Elements on sustainable development (according to the GRI* proposal) include the economy, environment and society. Its economical aspect is described in costs and benefits of environmental activities in the environmental accounting system (pp.8-9), and business status and management targets (pp.32-33). Meanwhile, topics on society are: status of conformity with environmental regulations, and emergency measures (p.7); supporting employees’ social contributions, and safety and health (p.27); and environmental organizations that Kyushu Electric is affiliated with or supports (p.72).

New items have been added about which Kyushu Electric particularly hopes to spread information, such as the progress in the Kyushu Electric Power Group’s environmental management (pp.46-51) and policies and plans of optimal combination of power sources (p.58).

*GRI: The Global Reporting Initiative is an organization of the United Nations Environment Program, accountant associations of various countries, and NGOs to establish and diffuse guidelines, which serve as an international standard for sustainable development reports by companies.

Improvement of report reliability

To ensure objective reliability of the report, it was subjected to a review by a third-party institute* (pp.90-91) for the first time. The review checked the following: the soundness of information collecting and processing methods; data and basic materials listed; suitability of contents by verification and comparison of internal documents and other disclosed information on environmental activities; inclusion of articles on significant environmental aspects; and confirmation of the content on Kyushu Electric’s conformity with laws.

*The review was conducted by Tohatsu Environmental Research Institute Ltd., which was once the environmental division of Deloitte Touche Tohmatsu.

2. Contents

Part 1: Main Section

Part 1 describes overall environmental activities from three aspects: I. Promotion of Environmental Management; II. Addressing Environmental Activities; and III. Opinions from Outside the Company.

. Promotion of Environmental Management (pp.4-9)

The explanation includes the environmental management framework which is the foundation for activities and PDCA cycle in regard to environmental activities, as well as environmental activity costs and benefits.

1. Environmental Management Framework (pp.4-7)

The items described are policies and promotional schemes for Kyushu Electric’s environmental management, status of the activities of the committees inside and outside the company, status of conformity with environmental regulations, preparedness for emergency situations, and the fiscal 2002 Environment Action Plan.

2. Environmental Accounting (pp.8-9)

The results of total costs and benefits for fiscal 2001 are listed in regard to environmental accounting.

. Addressing Environmental Activities (pp.10-27)

The change in records against environmental targets is shown, and specific environmental activity status is described under four themes: Measures for Global Environment Issues, Establishing a Recycling-based Society, Maintaining Harmony with the Local Environment, and Working with Society.

1. Records and Targets for Environmental Load (p.10)

The content includes target values for fiscal 2006, records from the past three years, and other items that are worth mentioning in comparison with the previous fiscal year regarding main environmental activities.

2. Measures for Global Environmental Issues (pp.11-15)

Items explained are the promotion of nuclear power as a measure for greenhouse gas reduction, in-house installation of wind and photovoltaic power generation facilities to promote new energy, reduction of transmission and distribution loss as a measure for energy conservation and use of the Kyoto Mechanism.

3. Establishing a Recycling-based Society – Challenges towards “Zero-waste” (pp.16-18)

The content outlines challenges for zero-waste and promotion of green procurement.

4. Maintaining Harmony with the Local Environment (pp.19-22)

The description includes activities such as environmental impact assessment and prevention of air, water and noise pollution, as well as management of both chemical substances and dioxins for the purpose of environmental preservation.

5. Working with Society (pp.23-27)

Various environment-related communication methods are listed, such as study tour implementation in communities, forestation activities under the Kyushu Homeland Forestation Program, tree-planting during Environmental Month and other volunteer activities.

. Opinions from Outside the Company (pp.28-31)

Opinions from outside the company are introduced as a result of a questionnaire from the previous report, principal opinions of the Kyushu Electric Power Environmental Advisory Council, and main opinions from customer surveys. Items which reflect these opinions are also included.

Part 2. Related Information (pp.32-67)

Information related to the Main Section is given in three categories: I. Environmental Management; II. Environmental Activities; and III. Local Community.

Third-Party Review of the Environment Action Report (pp.70-71)

The results of the third-party review and third-party opinions are reported.

I. Promotion of Environmental Management



Kyushu Electric Power is aware that dealing with environmental problems is a fundamental precondition of its own existence and business activities. In doing so, the company will execute corporate activities that contribute to a sound environment while satisfying the social commitments expected of a corporation. For this purpose, Kyushu Electric Power Company shall promote environmental management that will enable both conservation of the environment and growth of the corporation. The environmental activities are implemented based on the annual Environment Action Plan; and the results are publicized in the “Environment Action Report”. This issue of the Report summarizes the environmental activities conducted in accordance with the Fiscal 2001 Environment Action Plan (formulated in March 2001) as well as their results and developments.

1 Environmental Management Framework

(1) Environmental policy

Kyushu Electric Power has established the Kyushu Electric Power Environment Charter to define the stance and the direction of environmental activities to be pursued. The Kyushu Electric Power Group Environment Philosophy has also been developed for Group companies to set forth principles of their commitment to environmental activities, as well as the Kyushu Electric Power Group Environment Policy, which sets out specific guidelines for implementing environmental activities. Kyushu Electric Power shall actively implement environmental activities based on these policies to ensure outstanding environmental management.

Corporate Philosophy

1. Kyushu Electric Power shall keep energy aglow forever.
2. Kyushu Electric Power shall maintain close contact with the community at all times and act in pursuit of valuable social goals.
3. Kyushu Electric Power shall create a dynamic corporate culture by being a step ahead of the times.

Kyushu Electric Power Environment Charter

Towards an Environmentally Friendly Corporate Stance

1. The company shall, in all its corporate activities, recognize the importance of maintaining awareness of environmental conservation needs.

Kyushu Electric Power fully realizes that dealing with environmental problems is a fundamental precondition for its own existence and business activities.

2. In all its corporate activities, the company shall make concerted efforts to contribute to a sound environment.

Strive to prevent global warming and to conserve nature and the environment.

Actively implement environmental conservation programs that contribute to the community's well being.

Reduce waste output and encourage use of waste as a resource, thus promoting a recycling-based society.

3. The company shall, in all its corporate activities, promote the disclosure of environment-related information.

Promote ease of public access to business related environmental information and provide opportunities for communicating with many members of the general public.

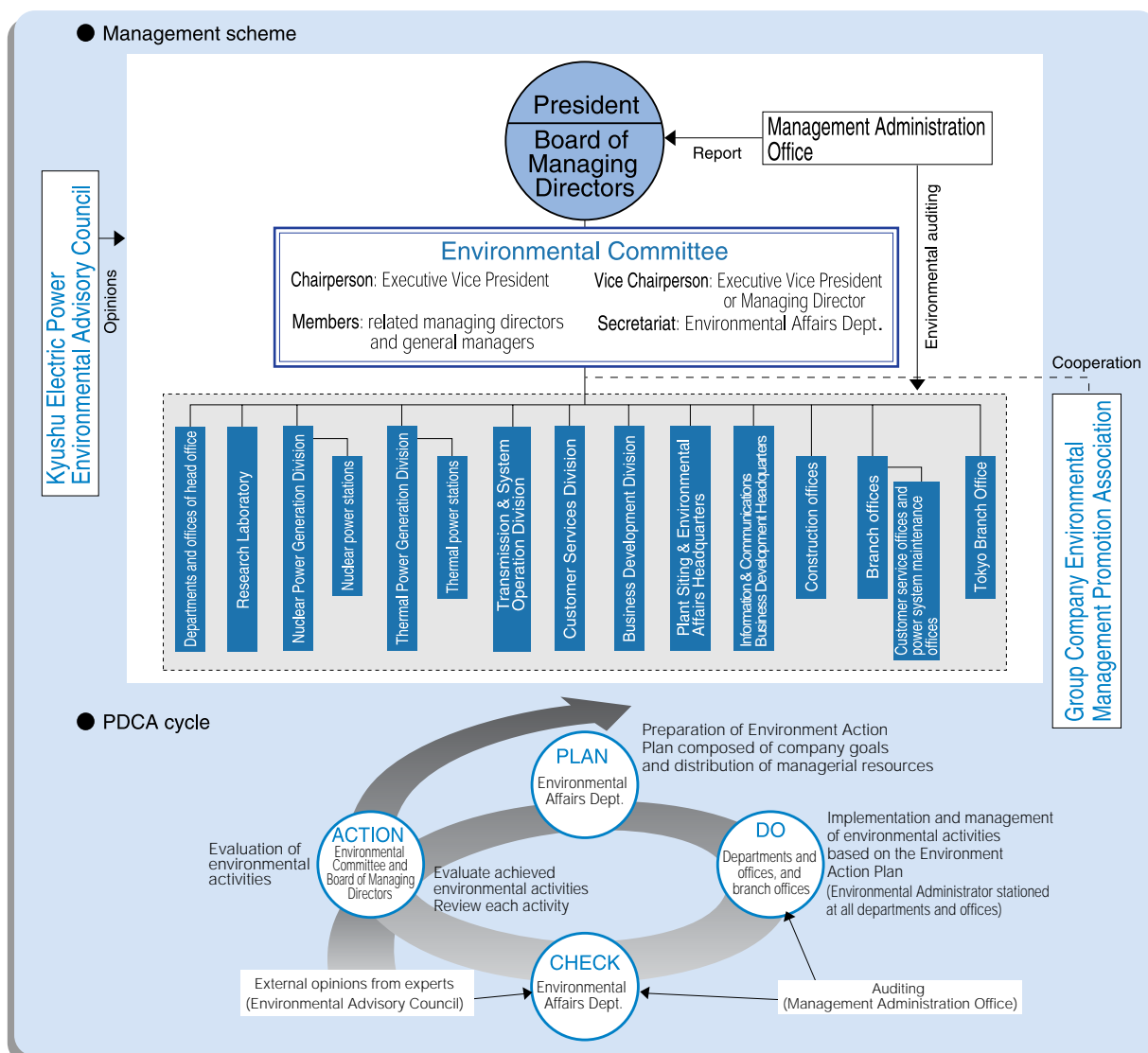
February 15, 2001

N.B. Please refer to Related Information 18.(p.46) for Kyushu Electric Power Group Environment Philosophy and Kyushu Electric Power Group Environment Policies.

(2) Promotional scheme

Kyushu Electric Power has structured a company-wide scheme to promote the implementation of environmental management.

- An Environmental Committee has been established to better review the environment activity strategies of Kyushu Electric Power as a whole. The committee's agenda is authorized by the Board of Managing Directors, and will be adopted as the company's environmental management guidelines.
- The Kyushu Electric Power Environmental Advisory Council, composed of experts in various fields, has been established for external evaluation of our environmental activities.
- Internal evaluation is conducted by the Management Administration Office. We will ensure that the results of both internal and external evaluation be reflected in future activities. (See Related Information I4. (p.40) for more details.)
- Further, the Group Environmental Management Promotion Subcommittee of the Group Management Association (former Group Company Environmental Management Promotion Association, reorganized in May 2002) has been set up to promote the environmental management of the Kyushu Electric Group as a whole.
- The Subcommittee serves to discuss and draft common objectives for the Group, as well as action plans. (See Related Information I8. (pp.46-51) for more details.) Meanwhile, these activities are subject to evaluation by the Kyushu Electric Power Environmental Advisory Council.



Environmental Committee

Kyushu Electric Power strongly promotes environmental management by building an environmentally conscious administrative system closely tied to company management.

The Environmental Committee discusses and drafts environmental activity strategies and environment action plans, such as the extent of managerial resources to be distributed to environmental management.

The Environmental Committee is chaired by the Executive Vice President and composed of related managing directors and general managers.

Matters deliberated by the Environmental Committee are first submitted to the Board of Managing Directors, then adopted within the business plans of each division, department and branch office, and implemented company-wide in the form of specific environmental activities.

Environmental Administrators (161 administrators as of July 2002) have been appointed for all departments and offices to supervise and fully enforce environmental activities.



Discussing comprehensive environmental strategies at the Environmental Committee

Kyushu Electric Power Environmental Advisory Council

Kyushu Electric Power attaches great importance to external evaluation from experts in promoting environmental management.

The Kyushu Electric Environmental Advisory Council was established in April 2001 to evaluate the environmental management efforts of Kyushu Electric Power and the Group companies.

The council is composed of nine experts in various fields and from each prefecture in Kyushu.

The feedback for the 2nd Advisory Council is listed on p29.



Kyushu Electric Power Environmental Advisory Council (held on August 9, 2002)

Environmental management system

Kyushu Electric Power aims to build a company-wide environmental management system (EMS) that is both efficient and effective.

ISO 14001 certification was acquired at the model office selected, taking into account the significantly different functions of our operational establishments, e.g. branch offices, power stations, power system maintenance offices and customer service offices.

An ISO-based system was applied to all thermal power stations by the end of fiscal 2001.

As for branch offices, customer service offices, power system maintenance offices and nuclear power stations, etc. an ISO-based system is planned to cover all sites by fiscal 2002 and 2003. (See Related Information I3. (pp.38-39) for more details.)



Audit of ISO certification at the Nagasaki Branch Office

ISO certification at selected model offices

Office	Certificate acquisition
Matsuura Thermal Power Station	July 1997
Sendai Nuclear Power Station	March 1999
Hitoyoshi Power System Maintenance Office	March 2001
Omarugawa Hydro Power Plant Construction Office	August 2001
Saga Customer Service Office	June 2002
Nagasaki Branch Office	July 2002

Matsuura Thermal Power Station was granted the first ISO14001 ever given to an electric power company in Japan.

Conformity to environmental regulations

Kyushu Electric Power strictly conforms with environmental laws and ordinances, as well as agreements on environmental conservation concluded with related local governments.

The company has committed no breaches of environmental laws, and no failures have occurred in the last 5 years. Currently, no legal actions regarding environmental issues are being filed against Kyushu Electric Power.

Emergency measures

Kyushu Electric Power prepares against emergencies such as facility failures and natural disasters by installing and upgrading facilities for disaster prevention, implementing adequate education and training for its staff, and preparing manuals that help responsible staff to better deal with their duties.

Power stations are under agreement to remain in close contact with their local governments.

Both the Genkai and Sendai Nuclear Power Stations have a nuclear power training center on their premises.

At both nuclear power training center, simulation equipment enables trainees to learn from a wide variety of potential dangers by simulating crises that have actually occurred, even outside Japan.

(3) Fiscal 2002 Environment Action Plan

Activities carried out under the fiscal 2001 Environment Action Plan were reviewed in March 2002 based on the external and internal evaluations received. The fiscal 2002 Environment Action Plan is based on five core Environment Action Policies: a) promoting environmental management (new policy introduced in fiscal 2002); b) dealing with global environmental issues; c) establishing a recycling-based society; d) maintaining harmony with the local environment; and e) working with society. The Plan also formulates major environmental activity targets, and Kyushu Electric Power has made a company-wide commitment to spare no efforts in achieving these goals.

Promoting Environmental Management

Establishment of an environmental management framework	apply the environmental management system company-wide, and promote environmental management among Kyushu Electric Power Group companies
Improvement of environmental efficiency	establish and implement an environmental accounting system that will eventually improve the management of the environment

Dealing with global environmental issues

Greenhouse gas reduction	promotion of nuclear power generation; improvement of the efficiency of power generation facilities; measures for CO ₂ emission reduction (e.g. building a framework within the company and implementing specific actions to meet targets); enforcement of SF ₆ gas recovery; study of potentially effective Kyoto Mechanism practices.
New energy promotion	promotion of the Green Electric Power System; purchase of surplus power
Measures for energy conservation	promotion of heat storage systems and high-efficiency equipment; utilization of unused energy; improvement of corporate vehicles' fuel efficiency; further promotion of company-wide energy-saving activities

Establishing a recycling-based society

Challenges towards zero-waste	zero-waste through promotion and adequate management of the "three R's" (reduce, reuse and recycle); productive use of waste products (e.g. coal ash) as a business; and promotion of various environmental projects among the Kyushu Electric Power Group companies
Promotion of green procurement	establishment of the green procurement system covering all materials and suppliers

Maintaining harmony with the local environment

Environmental preservation for power stations and substations	environmental assessment; prevention of air, water and noise pollution; emission reduction of CFCs subject to regulations for ozone layer protection; environmental monitoring; radioactive waste management; chemical-substance controls
Harmony with the surrounding environment	greening of power stations; achievement of harmony with the surrounding environment upon facility design; response to emerging environmental risks such as soil contamination

Working with society

Communication	organization of study tours and lectures; strengthening environmental promotion activities
Community activities	various environmental activities in collaboration with NGOs; promotion of the Kyushu Homeland Forestation Program; voluntary cleaning projects and others
International cooperation	exchanges with overseas utilities; implementation and support of overseas projects
Employee awareness enhancement	training; lectures; provision of environment related information

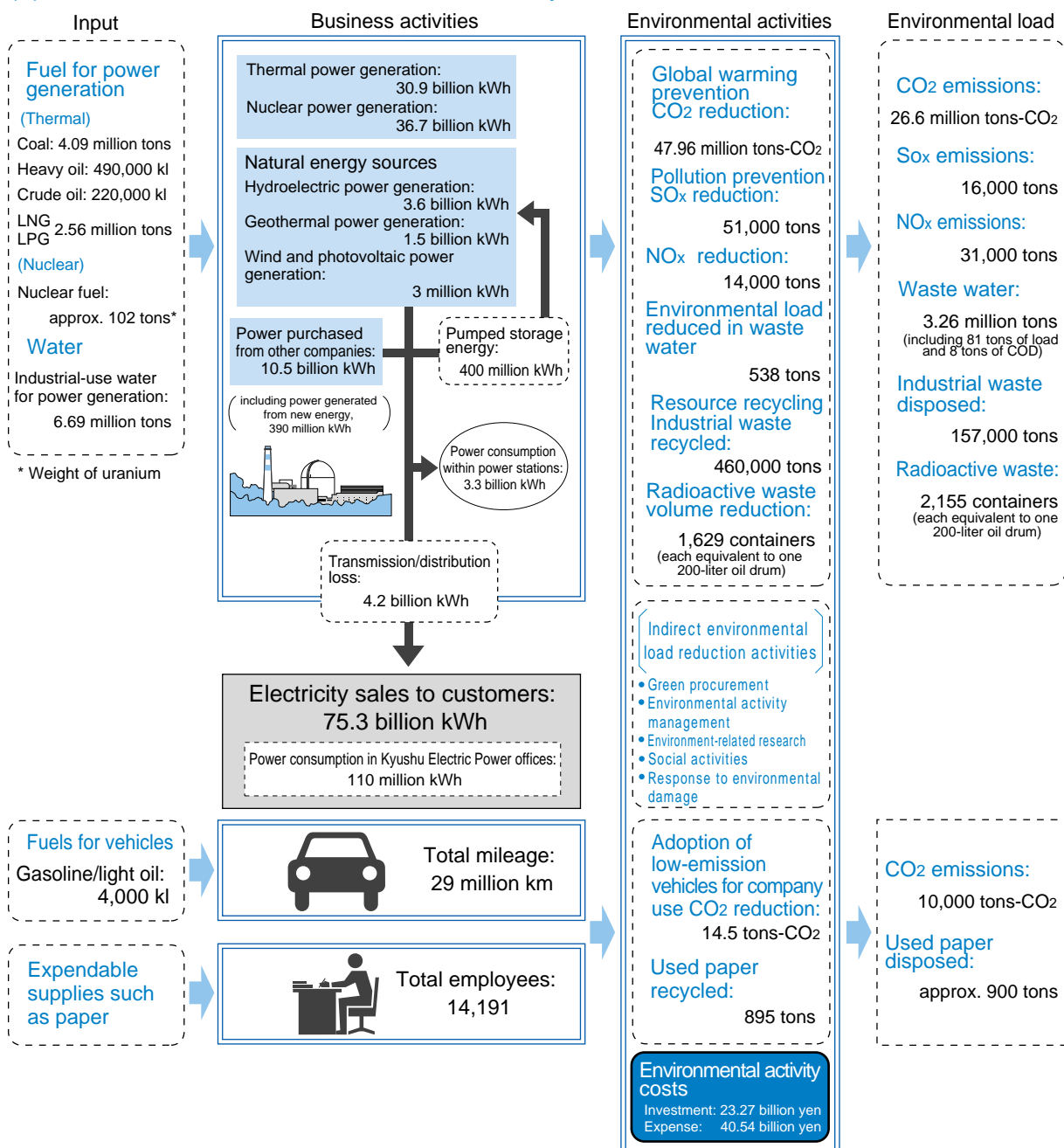
2. Environmental Accounting

Kyushu Electric Power introduced environmental accounting in fiscal 2000. The costs and benefits of environmental activities are taken into account in decision-making regarding environmental-activity deployment, and are disclosed to the public. We focused our efforts on improving our environmental accounting system in fiscal 2001, including the calculation of benefits in addition to costs. Please refer to the table on the next page for the results.

For efficient, effective environmental activity deployment, the environmental accounting system must evolve into a comprehensive system. It must enable quantitative understanding of the environmental load (environmental impact) 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.

See Related Information I2. (pp.34-37) for a detailed view of the environmental accounting system and its use.

(1) Business activities, environmental activity benefits and environmental load



(2) Environmental activity costs and benefits (fiscal 2001 records)

Environmental activity category		Main activities	Environmental costs (100 million yen)		Environmental activity benefits*1		
			Investment	Expense	Items	Extent of benefits, etc.	
Global environment preservation	Global warming prevention	Installation of power sources with low CO ₂ emissions, thermal efficiency improvement, introduction and support for new energy equipment, contribution to World Bank Prototype Carbon Fund, energy conservation (including low-emission vehicles) and SF ₆ emission control	6.0	44.3	CO ₂ reduction	Nuclear power generation	30.1 million ton-CO ₂ /yr
						LNG power generation	6.58 million ton-CO ₂ /yr
						Hydro, geothermal power generation	5.49 million ton-CO ₂ /yr
						New energy power generation and purchase	300,000 ton-CO ₂ /yr
						Improvement of facility efficiency	4.93 million ton-CO ₂ /yr
						World Bank PCF	- ton-CO ₂ /yr
						Energy saving activities	15 ton-CO ₂ /yr
	Ozone layer protection	Measures for freons and halon recovery	0.0	0.4	SF ₆ emissions reduction*2	560,000 ton-CO ₂ /yr	
Local natural environment preservation	Air pollution prevention	Flue gas treatment (desulfurization, denitrification, particulate reduction equipment) and use of fuel with low sulfur content	93.4	87.2	Freons emissions*3	1.3 ODP ton/yr	
	Water pollution prevention	Waste water treatment, measures against oil leaks and warm waste water at power stations	14.4	28.3	SOx reduction	51,177 ton/yr	
	Noise and vibration prevention	Noise and vibration measures at power stations, substations and transmission facilities	8.8	0.0	NOx reduction	14,431 ton/yr	
Resource recycling	Industrial waste	Reduction and recycling of industrial waste	11.9	25.2	Particulate reduction	239,583 ton/yr	
		Disposal of industrial waste and PCB storage	13.8	9.3	Environmental load reduced in waste water*4	538 ton/yr	
	General waste	Reduction and recycling of general waste	0.5	1.3	Amount recycled	459,500 tons/yr	
		Disposal of general waste	0.0	1.8	Proper final disposal amount	157,000 tons/yr	
	Measures for dealing with radioactive waste, and spent nuclear fuel*5	Disposal and other treatment of radioactive waste	4.7	67.5	Used paper recycled	895 tons/yr	
Green procurement	Additional expenses incurred from green procurement	-	-	Used paper properly disposed	Approx. 900 tons/yr		
Environmental activity management	Environmental activity organization	Expenses from environment-related license acquisition, education and training, and for personnel	0.0	0.5	Volume reduction of the Low-level radioactive waste	1,629 containers/yr (each equivalent to one 200-liter oil drum)	
	ISO and EMS application and maintenance	ISO14001 and EMS (ISO-based system) acquisition, application and maintenance	0.2	1.1	Amount of spent nuclear fuel stored	2,474 assemblies	
	Environmental load measurement and monitoring	Environmental impact assessment, monitoring and measurement of environmentally burdening substances, and PRTR measures	2.7	15.9	As a rule, general-purpose goods are procured from FY 2002.		
Environment related research	Environmental preservation	Prevention of global warming, improvement of air and water quality and effective use of waste	0.0	3.9	Participants to training and lectures	4,765 people/yr	
	Environmental load control during transmission and distribution	Improvement in thermal efficiency and transmission/distribution loss factor	0.0	0.3	Personnel with environment-related licenses	1,368 people	
Social activities	Greening of sites	Greening, maintenance and management of Kyushu Electric power station sites	7.9	17.7	Offices that acquired ISO certificate	4 offices	
					Offices that applied EMS	10 offices	
	Maintaining quality townscapes and surroundings	Measures to create harmony with surroundings such as buildings with scenic care and underground transmission and distribution lines	68.2	89.4	No. of monitoring and measurement locations	17,323 locations	
					No. of research cases in practical use phase	5 cases	
	Environment Month	Environment Month and Kyushu Homeland Forestation Program	0.1	0.8	Total area of greening	47.28 million m ²	
	Supporting local environmental activities	Support for local environmental activities and environmental organizations	0.0	0.3	No. of buildings with scenic care	176 buildings	
Environmental information disclosure	Environment Action Report, pamphlet and website preparation	0.0	0.2	No. of steel towers with scenic care	80 units		
Response to environmental impairment	Pollution load levy under the Pollution-related Health Damage Compensation Law	0.0	9.7	Length of underground distribution lines	1,795km		
Total			232.7	405.4	No. of participants at lectures, etc.	2,406 people/yr	
Reference	Percentage in Kyushu Electric Power total investments and expenses		8%	3%	No. of trees and saplings	193,083/yr	
	Total investments: 297.9 billion yen						
	Total expenses: 1,290.2 billion yen						
					Reference: Measures for dealing with spent nuclear fuel		
					Main activities	Environmental costs (100 million yen)	
					Allowance etc. for spent nuclear fuel reprocessing	Investment	Expense
						0.0	395.3

N.B. Listed are Kyushu Electric Power's costs and benefits from environmental activities. Figures are rounded, and may not add up to the total.

*1: See Related Information 12. (pp.34-37) for the details of activity benefit calculation.

*2: SF₆ emission reduction is converted to the weight of CO₂ using the global warming potential for SF₆ (23,900). The amount of reduction includes those attained by equipment overhaul and dismantlement.

*3: The emissions reduction for freons is converted into a relative value taking ozone depletion potential (ODP) per unit weight of CFC-11 as 1.

*4: Environmental load in waste water is obtained by assessing each pollutant in waste water based on environmental standards, and converting it into weight by the COD (chemical oxygen demand) standard.

*5: The figure does not include allowance for spent nuclear fuel reprocessing (refer to the reference table).

Economic effects from environmental activities

Among environmental activities, real economic effects that lead to savings and income are as shown at the table on the right.

Environmental activity category	Main activities	Quantity of benefits
Global environment preservation	Global warming prevention	Fuel cost savings from improvement of thermal efficiency and the transmission/distribution loss factor
Resource recycling	Waste measures	Income from sale of unneeded supplies
	Waste reduction	Final disposal cost savings from recycling
Savings in statutory charges	Pollution load levy savings from SOx emission reduction	
Total		29.13 billion yen

II. Addressing Environmental Activities



1. Records and Targets of Environmental Load

Kyushu Electric Power endeavors to reduce the environmental load by setting the target values for main environmental activities.

Item	Unit	Past record			Target *1	Interim target *2	Page	
		FY1999	FY2000	FY2001	FY2006	FY2003		
Measures for global environmental issues	CO ₂ emissions	10,000 tons-CO ₂	2 230	2,390	2,660	Approx. 2,700 *3	Approx. 2,400 *3	P11
	CO ₂ emissions intensity (end use electricity)	kg-CO ₂ /kWh	0.305	0.317	0.353	Approx. 0.34	Approx. 0.32	P11
	Nuclear power capacity factor	%	84.0	85.8	79.7	Approx. 85	85.5	P12
	Thermal power production efficiency (power generating end)	%	40.4	40.4	40.5	Approx. 40	Approx. 40	P12
	Wind power installed capacity	kW	1 750	1,750	1,750	3,250	3,250	P12
	Photovoltaic power installed capacity	kW	325	325	325	365	330	P12
	Power purchased from new energy sources *4	millionkWh	324	372	392	Purchase as a rule	Purchase as a rule	P14
	Transmission/distribution loss factor	%	5.6	5.4	5.2	5.6	5.6	P14
	Heat storage system load installed capacity	10,000 kW	22.1	25.3	28.2	46	36	P14
	Office power consumption	millionkWh	109	108	108	101 or less	104 or less	P15
	Low-emission, fuel-efficient vehicle introduction rate *5	%	—	0.63	3.5	40 or more	10 or more	P15
	SF ₆ recovery rate at overhaul of equipment	%	93	95	98	97 or more	97 or more	P15
Establishing a recycling-based society	Industrial waste recycling rate	%	67	65	75	95 or more	95 or more	P16
	Coal ash recycling	%	62	59	68	94 or more	94 or more	P16
	Other waste recycling	%	80	87	96	98 or more	98 or more	P16
	Used paper collection and recycling	%	—	Approx. 40% *6	Approx. 50% *6	100	100	P17
	Green procurement *7	—	—	—	—	Procure as a rule	Procure as a rule	P18
Measures for maintaining harmony with the local environment	SO _x emissions intensity per thermal power generated kWh	g/kWh	0.30	0.29	0.27	Approx. 0.3	Approx. 0.3	P19
	NO _x emissions intensity per thermal power generated kWh	g/kWh	0.23	0.23	0.22	Approx. 0.2	Approx. 0.2	P19
	Emissions of specific freons *8	ton	3.6	0	0	0	0	P20
	Dose evaluation value per year on people living near nuclear power stations	mSv	Less than 0.001	Less than 0.001	Less than 0.001	Less than 0.001	Less than 0.001	P20
Employee awareness enhancement	Number of licensed energy managers	Persons	539	619	682	500 or more	500 or more	P27
	Number of pollution prevention managers	Persons	475	490	500	500 or more	500 or more	

*1: Kyushu Electric Power had set business targets from fiscal 1999 to 2003 in its March 1999 new medium-term management plan, and the environmental target year was set for fiscal 2003 accordingly. However, a new medium-term management plan was drawn for the five-year period from fiscal 2002 to 2006, and the environmental target year was changed to fiscal 2006.

*2: Environmental matters were disclosed with the target year of fiscal 2003, therefore the targets for fiscal 2003 were listed above as interim targets previous to fiscal 2006 to confirm their degree of achievement to this time. Following the preparation of the new business plan, some of the target values and interim target values were modified.

*3: Prospects are based on FY 2002 power supply plans.

*4: New energy sources refer to photovoltaic, wind and waste-fired power generation.

*5: The share of clean energy vehicles (electric, and gas-and-electric hybrid cars) and fuel-efficient vehicles (vehicles that are in conformity with FY 2010 fuel economy standards and are low-emission vehicles as approved by the Ministry of Land, Infrastructure and Transport) among all company cars.

*6: Estimation based on the records of certain offices.

*7: Green procurement includes a wide range of office and stationery supplies in conformity with socially recognized standards.

Comparison of FY 2001 achievements to those of previous years

Reasons for increase in CO₂ emissions (2.7 million tons-CO₂) and emissions intensity (0.036kg-CO₂/kWh)

Due to renewal work on key facilities of Genkai Nuclear Power Station Unit 1 and 2 (See Related Information II.3. (p.54) for more details), the nuclear power capacity factor declined (to 79.7% from 85.8%), resulting in a decreased share of nuclear power generation in electricity sales (to 43% from 46%).

Causes of industrial waste recycling rate improvement (10 points)

It was mainly due to the improved recycling rate (to 68% from 59%) of coal ash, which amounts to 80% of industrial waste and was utilized as a material for cement production.

Causes of improved introduction rates for low-emission and other vehicles (approx. 3 points)

It was due to the introduction of 35 electric vehicles and 76 fuel-efficient vehicles.

	FY2001 records	
	Comparison to previous year	Comparison to FY1990
CO ₂ emissions	2.7 million ton-CO ₂ increase	6% up
CO ₂ emissions intensity	0.036kg-CO ₂ /kWh increase	21% down
Industrial waste recycling rate	10-point increase	—
Low-emission vehicle introduction rate	2.87-point increase	—

2. Measures for Global Environmental Issues

(1) Measures for greenhouse gas reduction taken on the power supply side

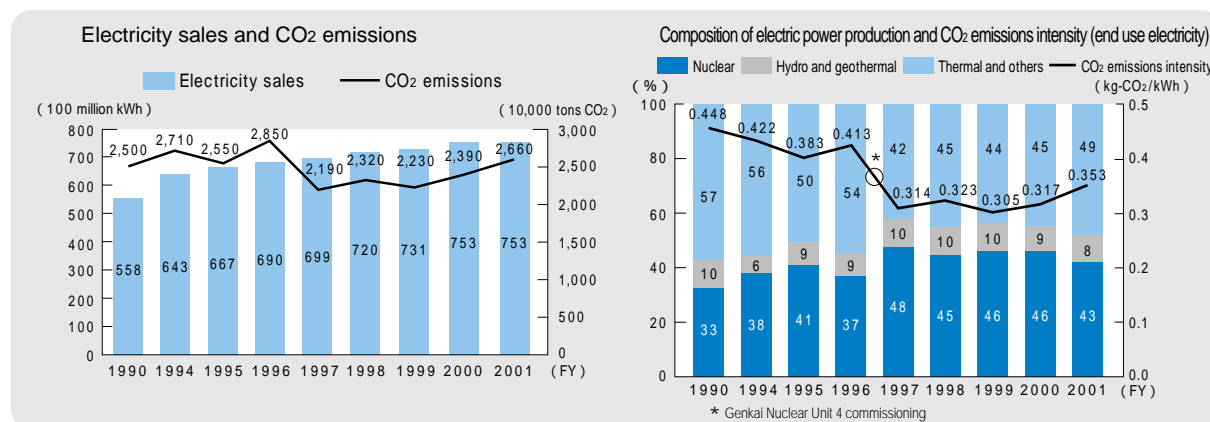
CO₂ comprises 90% of the greenhouse gases emitted in Japan, and approximately 25% of this is attributable to the electric power industry.

Kyushu Electric Power's CO₂ emissions in fiscal 2001 amounted to 26.6 million tons CO₂ or 2% of the total in Japan.

During the 11 years from fiscal 1990, Kyushu Electric Power's electricity sales increased 1.4 times; however, CO₂ emissions have remained around 106%. This was mainly due to the development of two nuclear power stations (2.36 million kW).

Other indices show that CO₂ emissions per kWh consumed by customers, i.e. CO₂ emissions intensity (end use electricity), decreased to 79%. This means that CO₂ emissions attributable to power consumed by customers in regular households were reduced by approximately 27kg-CO₂ per month from the fiscal 1990 value.

(N.B. the above figure is estimated on the assumption that Kyushu's average power consumption of 284 kWh/month (FY2001 records) under lighting contracts (Residential Lighting A and B) equals the electric consumption of regular households.



Promotion of nuclear power

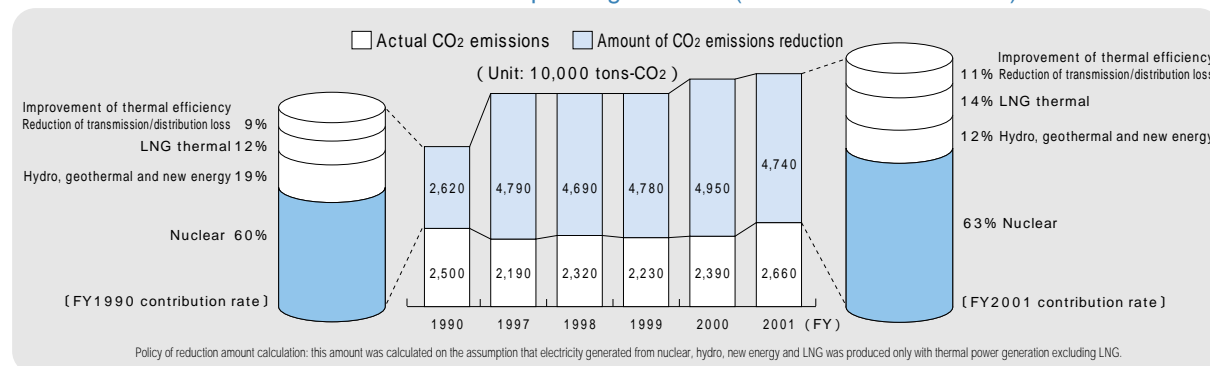
Kyushu Electric Power is committed to developing and utilizing nuclear power, while placing the utmost emphasis on safety, and with the understanding and cooperation of the public. (See Related Information II.1. (p.52) and II.2. (p.53) for details of constant operation at a rated thermal power, as well as the Plutonium-Thermal (Plu-Thermal; Plutonium utilization in light water reactors) Project.)

In fiscal 2001, the reactor vessel head and steam generator for Genkai Nuclear Unit 1 and 2 were replaced to further improve the reliability of components and reduce the dose of radiation exposure to workers during inspections (See Related Information II.3. (p.54) for details).

This procedure extended the inspection period, resulting in a lower nuclear power capacity factor of 79.7%, or 6.1% lower than in fiscal 2000.

In the case of Kyushu Electric Power, a one-point increase in the nuclear power capacity factor leads to a reduction of approximately 400,000 tons of CO₂ emissions annually. The lower capacity factor is the major cause of the CO₂ emissions increase in fiscal 2001.

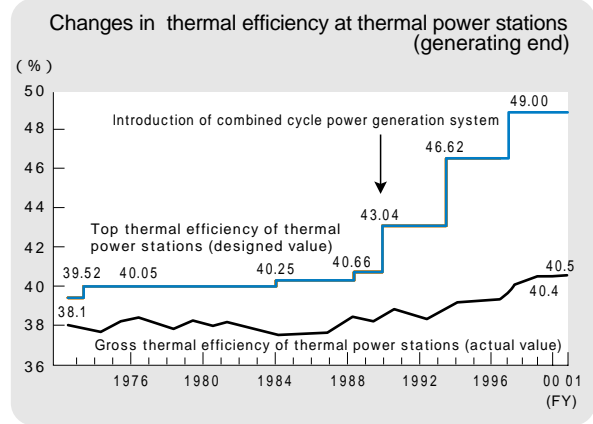
CO₂ emissions reduction effects of nuclear power generation (contribution rate of 63%)



Improvement of power generation facility efficiency

Kyushu Electric Power strives to improve thermal efficiency of thermal power stations in order to effectively use energy resources.

- The thermal efficiency improvement of thermal power stations decreases the amount of fuel consumption, resulting in a reduction of CO₂, SO_x and NO_x emissions.
- The gross thermal efficiency for thermal power stations in fiscal 2001 was 40.5%, the highest level ever. This is attributed to greater use of power stations with high thermal efficiency such as the Shin-Oita Power Station, which features the combined cycle power generation system.
- If the gross thermal efficiency at Kyushu Electric Power's thermal power stations improves by 1 point, the company's annual emissions can be reduced by about 550,000 tons of CO₂ equivalent.



(2) Promotion of new energy sources (wind, photovoltaic powers, etc.)

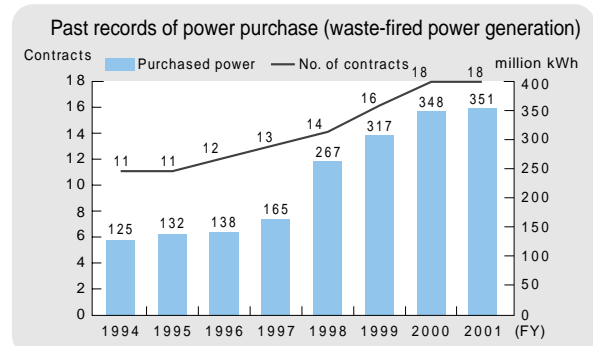
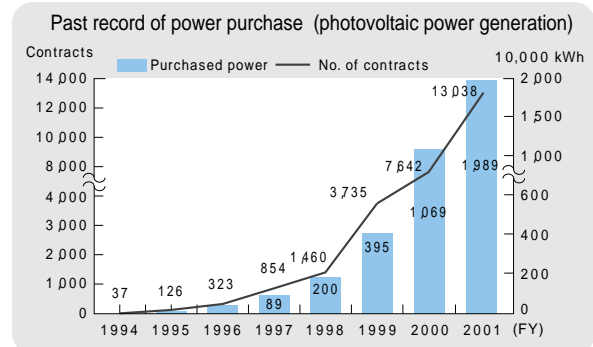
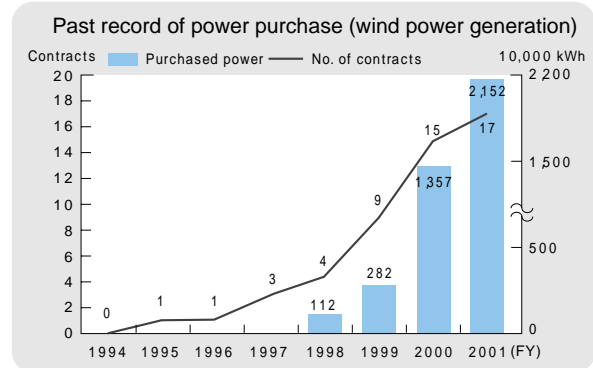
New energy sources such as wind and photovoltaic power are clean and inexhaustible energy, although there are still hurdles to be cleared. Obstacles include high weather dependence; low energy density; and high generation costs. Kyushu Electric Power has systematically installed new energy facilities company-wide. The company also purchases electricity generated by such energy sources, and offers subsidies to people who install new energy facilities at home. (See Related Information II4. (p.56) for features of the new energy sources.)

In-house installation of power generation facilities utilizing new energy sources

Kyushu Electric Power has installed power generation facilities utilizing new energy sources within its premises. The total capacity at all facilities reached 2,125 kW by the end of fiscal 2001. This sum includes 1,750 kW from six units of wind power facilities, 325 kW from 21 photovoltaic power facilities and 50 kW from a fuel cell facility.

Purchase of power from customers

- Kyushu Electric Power purchases surplus power generated at customers' wind or photovoltaic power generation facilities at the same unit price as Kyushu Electric Power's power supply. In the case of commercial wind power generation, amounts of power below 2,000 kW are purchased at the long-term contract price, and those 2,000 kW or more are purchased by bidding. Meanwhile, power generated from the heat exhaust of waste incineration facilities is purchased at the unit price shown in the purchasing lineup.
- In fiscal 2001, Kyushu Electric Power purchased 21.52 million kWh generated by wind (17 contracts), 19.89 million kWh generated by photovoltaic methods (13,038 contracts) and 351 million kWh generated by waste-fired power generation (18 contracts).



Support and subsidy for wind and photovoltaic power generation

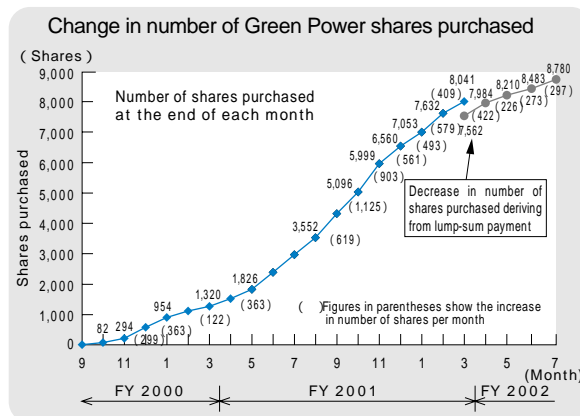
Green Electric Power System (introduced in October 2000)

This system enables customers to participate in the Kyushu Green Power Fund together with Kyushu Electric Power, thus contributing to the promotion of natural energy. Subsidies from the fund are offered to facilities employing photovoltaic or wind power generation, thereby encouraging further use of natural energy.

The fund is managed by the Kyushu Industrial Advancement Center (KIAC) to ensure transparency of administration and operations.

Kyushu Electric Power donates an amount equal to customer contributions (one share: 500 yen/month) in addition to promoting the system, receiving applications and drawing contributions from customer's bank accounts on behalf of KIAC.

The system attracted 8,780 shares by the end of July 2002.



Photovoltaic power generation monitoring panel
Neijme Junior High School (Kagoshima Pref.)

Record of subsidy in FY2001

	Photovoltaic power generation	Wind power generation
Subsidy recipient	11 institutions (Public institutions including elementary and junior high schools)	2 companies* (Japan Wind Development Co., Ltd., Minami-Kyushu Wind Power Corp.)
Total generation capacity	281kW	28 000kW*
Subsidy amount	14.1 million yen (Unit price: 100,000 yen/kW Limit: 20 kW/recipient)	For 3 years after the start of electric supply, each kWh supplied to Kyushu Electric Power multiplied by 0.05 yen.

* Originally planned for 3 recipients of 49,750 kW (Oshima Village withdrew its grant application after abandoning the plan.)

Subsidy plan for FY2002

	Photovoltaic power generation		Wind power generation
	General recipient	Special recipient	
Subsidy recipient	22 institutions (Public institutions including elementary and junior high schools)	4 institutions (Facilities to be installed at public institutions with the cooperation of civil groups and public institute.)	3 companies (Windtech Corp., Tomen Power Kihoku Corp. Minami-Kyushu Wind Power Corp.)
Total generation capacity	323 kW	15 kW	51,300 kW
Subsidy amount	23.85 million yen (Unit price: 100,000yen/kW Limit: 15 kW/recipient)	7.995 million yen (Unit price: 2 million yen/recipient)	For 3 years after the start of electric supply, each kWh supplied to Kyushu Electric Power multiplied by 0.1yen.

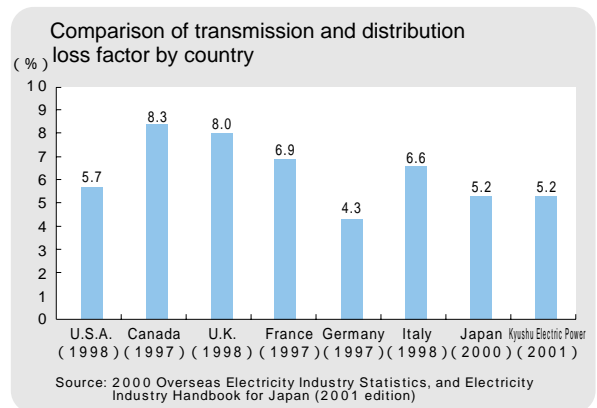
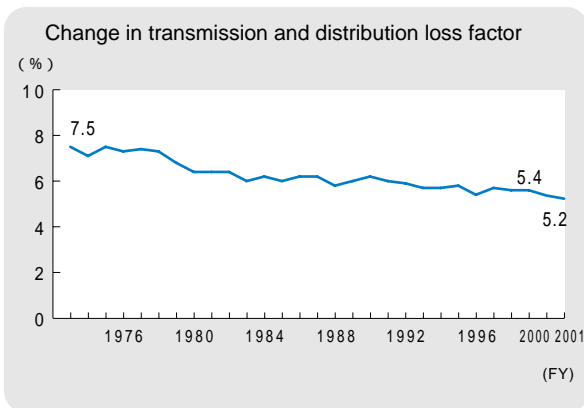
(3) Measures for energy conservation

Kyushu Electric Power believes that energy conservation is not simply a matter of making painful choices about energy reduction, but of using energy efficiently and without waste. The company works towards reducing environmental load by creating an efficient energy supply through reduction of transmission and distribution loss. It also encourages more efficient energy use by promoting heat storage systems and heat-pump water heaters, avoiding unnecessary lighting at offices, and by introducing low-emission vehicles.

Reduction of transmission and distribution loss

Kyushu Electric Power strives to conserve energy by reducing distribution and transmission loss, therefore efficiently supplying energy.

The transmission and distribution loss for fiscal 2001 was 5.2%, a 0.2-point improvement over fiscal 2000.

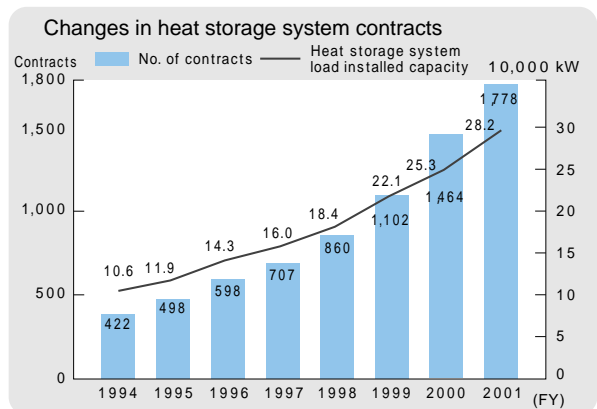


Promotion of heat storage system and heat-pump water heaters

Kyushu Electric Power encourages the use of heat storage systems and heat-pump water heaters to make more efficient energy use possible.

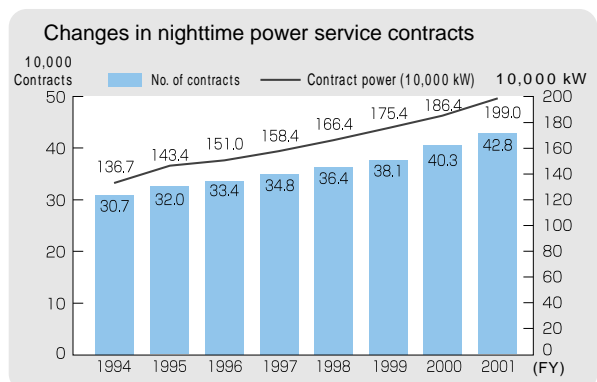
Heat storage system

Through heat storage systems, the cold and thermal energy necessary for air conditioning of buildings and factories is stored in a heat storage tank in the form of ice or warm water, and is used during the daytime. The number of contracts for such heat storage systems at the end of fiscal 2001 was 1,778, with a total load installed capacity of 282,000 kW.



Heat-pump water heater and other equipment

The wide range of electric water heaters currently on the market include improved models such as heat-pump types with three times better efficiency than conventional heaters, and multi-functional heat-pump types, in addition to conventional models using electric heaters. The number of contracts for electric water heaters as of the end of fiscal 2001 was 428,000, with a total contract power of 1.99 million kW.



Conserving energy in everyday business operations

As their contribution to reducing CO₂ emissions, all employees at Kyushu Electric Power practice energy saving in their everyday work dealings.

Reducing power consumption in offices

Energy conservation activities include switching off unnecessary lights as well as improving office facilities to reduce energy consumption.

Kyushu Electric Power has set energy savings targets for the end of fiscal 2006 (with an annual reduction of 1%), and is working towards achieving those targets.

Office energy consumption in fiscal 2001 was 108 million kWh, approximately the same level as the previous year.

As of fiscal 2002, offices implemented measures to reduce energy consumption wherever possible. Such measures include the use of fluorescent lighting, modification of air-conditioning equipment, and more energy-conscious use of air-conditioning.

Introduction of low-emission vehicles

Kyushu Electric Power encourages reductions in vehicle fuel consumption by introducing clean-energy and fuel-efficient vehicles.

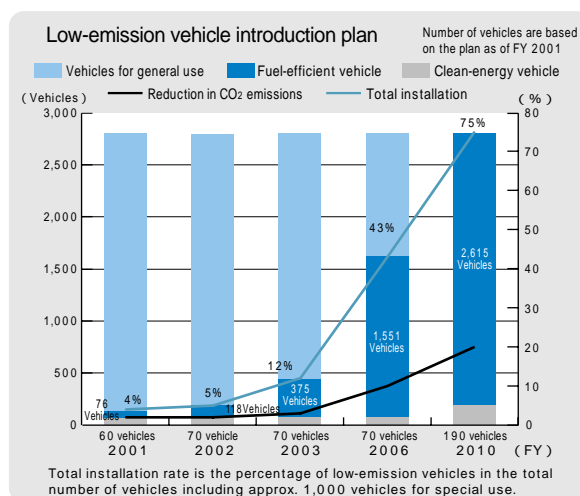
Kyushu Electric Power plans to replace all general use vehicles with fuel-efficient vehicles that feature both fuel savings and low emissions, by the end of fiscal 2010. Approximately 5% of all vehicles will be clean-energy vehicles such as electric vehicles and hybrid gas-and-electric powered vehicles.

The company has promoted the development and adoption of electric vehicles since 1986. So far, a total of 60 electric vehicles have been introduced within the company. Among these, an electric bus designated for power station tours developed in 1999 is one of the largest electric buses in Japan.

The company will introduce 10 hybrid vehicles in fiscal 2002 and examine CO₂ emissions reductions in a variety of running conditions, such as urban and mountainous areas. During the examinations, operation and charging capacity of electric-powered vehicles will also be studied. Based on the data obtained, an effective introductory plan for clean-energy vehicles will be drafted in fiscal 2003.



Electric vehicle (Nissan Hypermini)



(4) Reduction of SF₆ (sulfur hexafluoride) gas emissions

Kyushu Electric Power uses the greenhouse gas SF₆ for insulation in some of its electric equipment, and takes care not to release this gas into the atmosphere when the equipment is overhauled.

The use of SF₆, which provides excellent insulation, is essential because there are no effective insulating gases that can be used as a substitute.

Thanks to the introduction of gas recovery equipment, the SF₆ gas recovery rate (reutilization rate) during overhauls improved from 40% in fiscal 1997 to 98% in fiscal 2001. In fiscal 2001, 22.33 tons of SF₆ (the equivalent of 534,000 tons of CO₂) were recovered.

SF₆ gas recovery during overhauls (CO₂ equivalent*)

Total SF ₆ gas (CO ₂ equivalent)	Recovered SF ₆ gas (CO ₂ equivalent)	Recovery rate
22.86 tons (546,000 tons)	22.33 tons (534,000 tons)	98%

* Figures are obtained by converting the weight of SF₆ gas to the weight of CO₂, which causes an equivalent level of greenhouse effect. In addition, an extra 29,000 tons of SF₆ (CO₂ equivalent), with a recovery rate of 95%, were recovered upon dismantlement of relevant equipment.

(5) Towards Kyoto Mechanism utilization

The Kyoto Mechanism is expected to complement greenhouse gas reduction measures in Japan. Kyushu Electric Power has joined the World Bank's Prototype Carbon Fund, aiming to obtain expertise in the use of the Kyoto Mechanism in advance. (See Related Information I6. (P42) for details.)

3. Establishing a Recycling-Based Society - Challenges towards 'Zero-Waste'

To establish a recycling-based society, Kyushu Electric Power addresses the challenge of 'zero-waste', reducing the volume of waste for final disposal to close to zero.

- The company is practicing the 'three R's' (reduce, reuse and recycle) for general and industrial waste.
- The company is engaged in waste-recycling business with the cooperation of its group companies.

Enhancing employee awareness

Kyushu Electric Power endeavors to achieve zero-waste by enhancing awareness company-wide.

- The "Environment Handbook", which gives an easy-to-understand explanation for achieving zero-waste, is distributed to every employee.
- Posters encouraging zero-waste are displayed at all offices.
- Slogans are encouraged from employees and are used to enhance awareness regarding zero-waste.

Zero-waste slogans

Grand Prize	Don't throw it out! Your soul goes out with your garbage.
First Prize	Rethink our precious resources and our planet's future.
Excellence Prize	Good endeavor for all: separate garbage, cut waste, and keep the planet clean.
	Properly separated garbage becomes a precious resource.
	Let's recycle! Let's separate garbage! Let's cut waste! Keep it up!

* 1,212 slogans were collected and 2,406 employees (approx. 17% of all employees) voted electronically for the best slogans.



Zero-waste encouragement poster

(1) Industrial waste

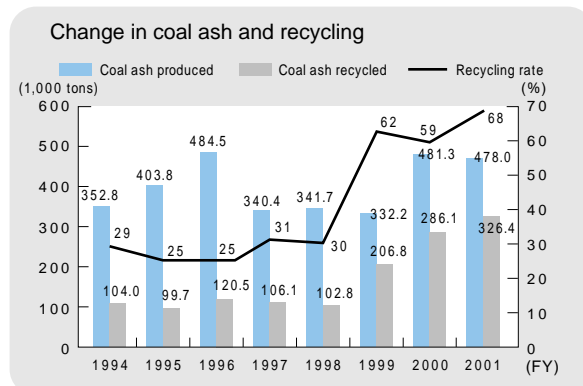
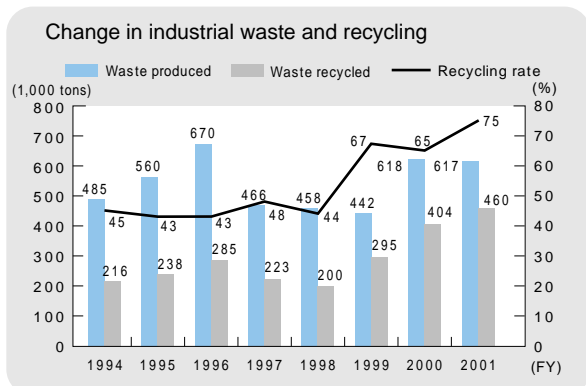
The industrial waste generated by Kyushu Electric Power's operations includes coal ash, gypsum from desulfurization facilities, sludge from waste water treatment, scrap metal and discarded concrete poles.

- The overall industrial waste generated in fiscal 2001 was approximately 620,000 tons, the same level as fiscal 2000.
- The overall recycling rate improved to 75%, a 10-percent increase from fiscal 2000. This was mainly due to a 40,000-ton increase in coal ash recycling.
- The 460,000 tons recycled at Kyushu Electric Power in fiscal 2001 are equivalent to 1% of the amount of annual waste for final disposal in Japan.
- To achieve a total recycling rate of 95% or more by fiscal 2003, the use of coal ash as a material for cement production will be expanded, while the recycling rate for sludge and waste plastic will also be improved.
- All used fluorescent tubes discarded by the offices are recycled by Japan Recycling Light Technology & System, one of our group companies. In addition, the Kyushu Electric Power group discusses measures for achieving zero-waste at the Kyushu Electric Group Company Environmental Management Promotion Association.

Industrial waste by category at Kyushu Electric Power (FY 2001)

	Waste produced (1,000 tons)	Ratio of waste	Amount recycled (1,000 tons)	Recycling rate	Target (FY 2003)
Coal ash	478.0	78%	326.4	68%	Total recycling rate of 95% or more [with the aim of zero-waste in the future]
Gypsum	107.0	17%	107.0	100%	
Sludge	5.4	1%	1.5	28%	
Scrap metal	12.9	2%	12.7	98%	
Discarded concrete poles	8.9	1%	8.9	100%	
Others	4.3	1%	3.0	69%	
Total	616.5	100%	459.5	75%	

Other waste includes:
 Waste oil (2,200 tons, 98%);
 Waste plastic (600 tons, 5%);
 Waste glass and ceramics (600 tons, 1%);
 Industrial waste subject to special control (400 tons, 99%);
 Heavy and clued oil ash (300 tons, 100%).
 Figures in parentheses show the waste produced and recycling rate, respectively.



(2) General waste

The general waste resulting from Kyushu Electric Power's operations includes used paper, empty cans and bottles, plastic bottles and kitchen garbage.

Promotion of used paper recycling

In fiscal 2002, the company started to make further efforts to achieve 100% used paper recycling.

A total of 1,800 tons of used paper were generated during fiscal 2001. Of this, 895 tons were collected in special boxes for used paper and during periodical collection activities.

The company is also working towards reducing paper use by digitizing paper-based business operations.

A recycling system was established in fiscal 2002 to collect five different types of used paper: newspapers, magazines, cardboard, confidential documents and others.

Confidential documents are recycled by Kyushu Environmental Management Corporation, one of our group companies.

Collection of used paper at Kyushu Electric Power (FY 2001)

Type of used paper	Amount collected (tons)
Newspapers	106
Magazines	91
Cardboard	113
Confidential documents	127
Others*	458
Total	895

* Others include used photocopy paper, handbills and envelopes.



Recycling at Amagi Customer Service Office

Promotion of other general waste recycling

Bottles, cans and plastic bottles are collected separately.

The company plans to adopt composting facilities at all business offices and other facilities with cafeterias to help address kitchen garbage produced there. Three disposers have so far been introduced on trial to test their disposal capacity, operation and usefulness of the resulting compost.

Old, worn work clothing is collected for recycling.



Composting facility on trial at Education & Training Center

(3) Organizing recycling as a business

With the cooperation of our group companies, Kyushu Electric Power actively promotes several waste recycling businesses.

Fluorescent tube recycling group company Japan Recycling Light Technology & System

Used fluorescent tubes are collected, sorted, crushed and recycled as glass, metals, fluorescent substance and other materials.



Confidential document recycling group company Kyushu Environmental Management Corporation

Under strict security, confidential documents are collected, stored for a limited duration and have their information erased. The treated paper is then dissolved and recycled.

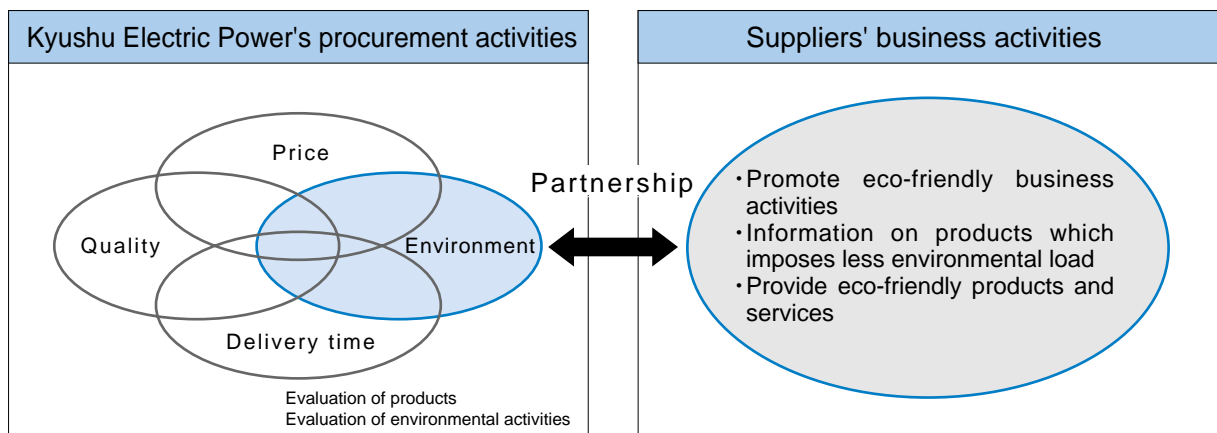


Used paper with confidential information being erased under strict security

(4) Promotion of green procurement

Kyushu Electric Power has made a policy of choosing environmentally friendly goods when purchasing stationery, expendable office automation supplies and work clothing in order to promote the establishment of a recycling-based society. In fiscal 2001, the company introduced the green procurement system to give greater priority to eco-friendly materials and suppliers. (Operation started in fiscal 2002. See Related Information I7. (p.44) for details.)

- The green procurement system encourages the use of eco-friendly goods and cooperation with suppliers to promote environmental activities. In this system, environmental aspects are evaluated when purchasing goods, in addition to practical considerations of quality, price and delivery time.
- The company selectively purchases office and stationery supplies with EcoMark or other socially recognized environmental labeling. Guidelines for purchasing have already been established for seven categories: miscellaneous goods, fixtures and furniture, electric appliances, stationery, other expendables, printing and office equipment. More categories will be included in the future.
- Criteria have also been examined since fiscal 2001 for electricity related materials and equipment. The criteria will help the company purchase materials and equipment that cause less environmental damage.



4. Maintaining Harmony with the Local Environment

Kyushu Electric makes positive efforts to protect the environment of surrounding communities, through such activities as environmental impact assessments prior to construction of power stations, environmental conservation during power facility operation, proper management of the facility itself, as well as maintaining harmony with the local environment.

(1) Environmental impact assessment

In accordance with the Environmental Impact Assessment Law, Kyushu Electric Power conducts a survey on the natural (sea, land and air) and social environment prior to the construction of power stations. Then, the environmental impact likely to be caused by construction of the plant is estimated and evaluated, and appropriate measures are taken to protect the environment of the vicinity. (See Related Information III5. (p.67) for details.)

(2) Prevention of air, water and noise pollution

In operating its power stations and other facilities, Kyushu Electric Power conforms not only to the laws and regulations, but also the environmental conservation agreements concluded with related local governments in regard to air, water and noise pollution as well as vibration.

Measures against air pollution

Using the best technology in the world, Kyushu Electric Power takes measures to address exhaust gas from thermal power stations.

Kyushu Electric Power's fiscal 2001 emissions intensity (emissions per kW thermal electric power production) was 0.27g/kWh for sulfur oxide (SOx), and 0.22g/kWh for nitrogen oxide (NOx).

SOx reduction measures

- Use of heavy and crude oil with a low sulfur content
- Promotion of LNG use which does not contain sulfur
- Installation of desulfurization facilities which remove SOx from exhaust gas
- Adoption of the in-furnace desulfurization method, which removes SOx within the boiler

NOx reduction measures

- Combustion method improvement including boilers
- Adoption of the two-stage combustion method
- Adoption of the exhaust gas re-circulation combustion method
- Adoption of low NOx burners
- Installation of denitrification facilities, which remove NOx from exhaust gas

Particulate reduction measures

- Promotion of LNG use which does not generate particulates
- Installation of high efficiency precipitators, which remove particulates from exhaust gas

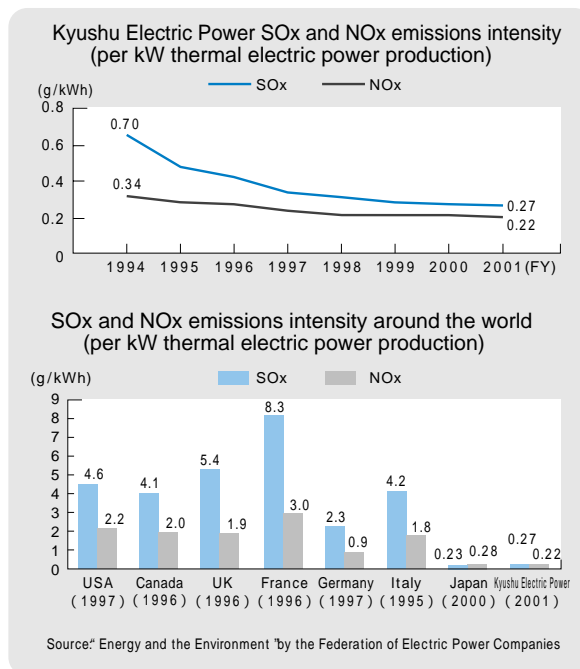
Water quality conservation

At all the company's thermal and nuclear power stations, waste water from facilities and sites is treated using special waste water treatment systems and is discharged after confirming its quality.

Quality analysis is conducted regularly for water in reservoirs at hydroelectric power stations. The water quality is maintained by measures including treating freshwater red tide with ultraviolet rays, selective water intake when water is turbid, and ensuring the health of neighboring forests.

Measures against noise and vibration

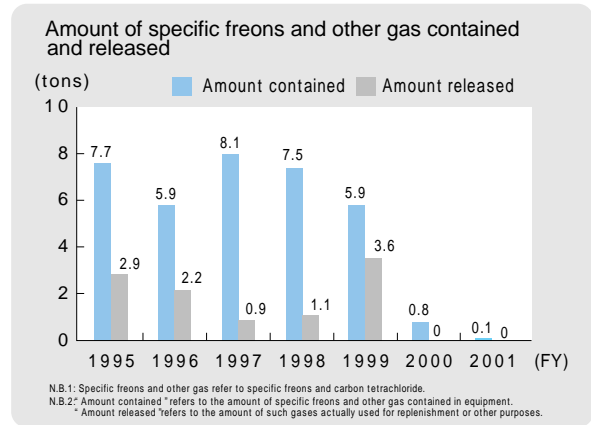
Kyushu Electric Power addresses noise and vibration problems by adopting low-noise, low-vibration equipment, installing mufflers and soundproofing walls, and by installing noise-producing equipment indoors.



(3) Ozone layer protection

Kyushu Electric Power tackles the reduction of specific freons and other gas to prevent ozone layer destruction.

Kyushu Electric Power's specific freons and other emissions (specific freons and carbon tetrachloride) have been zero since fiscal 2001, and their amount contained in fiscal 2001 was almost zero. These achievements were made possible by measures such as washing work clothing with water instead of dry-cleaning and changing generator refrigerant. Future tasks include reducing alternative freons and halon emissions, which are used as air conditioner refrigerant and in fire extinguishing facilities.



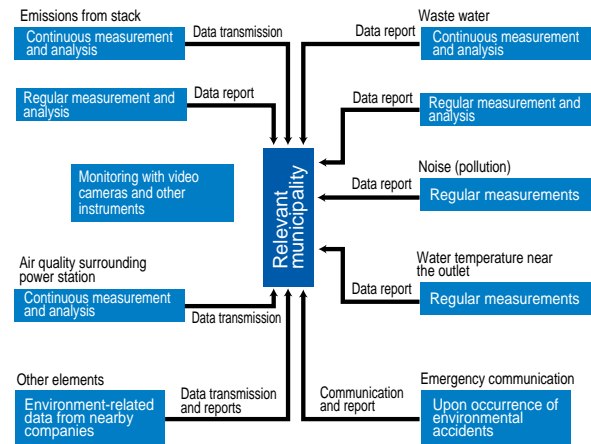
(4) Environmental protection management

Kyushu Electric Power's power stations strictly manage to ensure environmental protection by means of environmental monitoring and chemical substance control.

Environmental monitoring

- Continuous monitoring using environmental supervisory instruments
- Telecamera monitoring
- Patrol monitoring
- Regular measurement and analysis
- Reporting environmental data to related authorities

The environment surrounding power stations is under strict control, with power stations cooperating with relevant municipalities and neighboring businesses. No major environmental accidents have occurred to date.



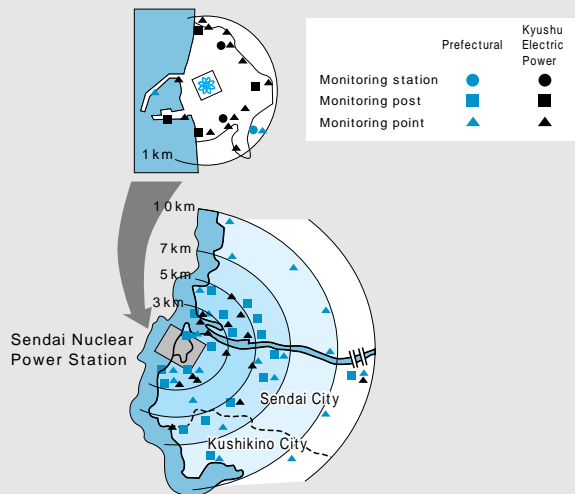
Environmental monitoring for radioactivity around nuclear power stations

The radioactivity of air, seawater and environmental samples of agricultural and marine products is measured to confirm that the environments surrounding nuclear power stations are not influenced by radiation. Similar measurements are also carried out by the prefectures where nuclear power stations are located.

Kyushu Electric Power reports on the measurement results to the related prefectures. The prefectures in turn review and evaluate the reports under the guidance and advice of academic experts, and publicize the findings in public relations magazines.

The radiation dosage for people living near power stations is less than 0.001 mSv per year. This is much lower than the 1 mSv per year statutory dosage limit, and also lower than the annual 0.05 mSv target set by the Nuclear Safety Commission.

Radioactivity inspection in vicinity of Sendai Nuclear Power Station



* Monitoring station and post: continuous measurement of radiation dosage in the air
* Monitoring point: measurement of total dosage for a certain period of time

Radioactive waste management

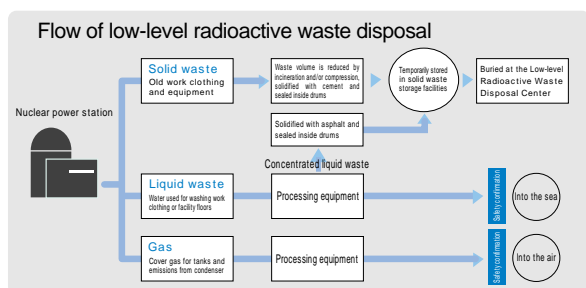
Radioactive waste includes low-level radioactive waste issued from nuclear power stations and high-level radioactive waste resulting from spent fuel reprocessing. Both require different management and disposal methods.

Management of low-level radioactive waste

Waste in the form of gas or liquid is discharged into the air or sea after being treated, measured for radioactivity, and confirmed as safe.

Concentrated, treated waste water is solidified with asphalt and sealed inside drums.

Solid waste is first bulk-reduced by incineration and/or compression, and sealed inside drums. These drums are first stored stringently in the solid waste storage located within the power station site. The drums are then transferred to the Low-level Radioactive Waste Disposal Center of Japan Nuclear Fuel Limited in Rokkasho-mura, Aomori Prefecture. There, they are buried and kept until the waste ceases to have any effect on the living environment.



Low-level radioactive waste storage status

(Unit: a 200-liter drum)

	Waste stored in power station sites	Waste transferred *
Genkai Nuclear Power Station	20,143 (18,074)	5,936 (5,936)
Sendai Nuclear Power Station	9,775 (9,689)	—
Total	29,918 (27,763)	5,936 (5,936)

Figures are the cumulative totals as of the end of FY2001, and figures in parentheses are totals as of the end of FY2000.

* Amount transferred to the Low-level Radioactive Waste Disposal Center.

《Reference》 Disposal of high-level radioactive waste

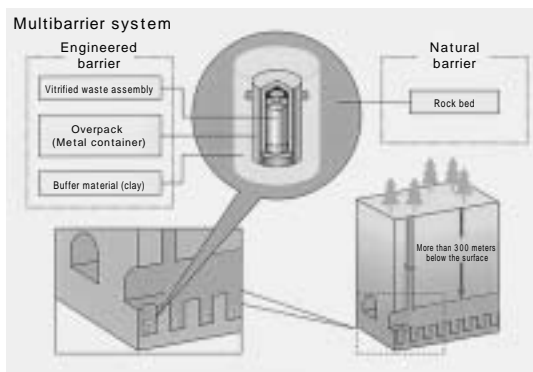
In Japan, spent fuel used up in nuclear power stations is reprocessed to extract uranium and plutonium for effective re-use in the nuclear fuel cycle. The high-level radioactive liquid waste generated in the process of spent-fuel reprocessing is mixed with glass matrix and encapsulated in stainless steel containers, called canisters, to form vitrified waste assemblies. This vitrified waste assembly is called high-level radioactive waste.

Guidelines set by the Japanese government require that high-level radioactive waste be stored in an interim storage facility for cooling for 30 to 50 years, and then finally disposed of in a stable geological formation at a depth of more than 300 meters.

For the purpose of implementing final disposal of high-level radioactive waste, the Nuclear Waste Management Organization of Japan (NUMO) was established in October 2000 under the Specified Radioactive Waste Final Disposal Act (promulgated in June 2000). According to the basic strategy on selection procedures for a preliminary survey site for specified radioactive waste etc., which was announced by NUMO in October 2001, the project schedule for final disposal is formulated as follows:

- by2007 Selection of preliminary survey site;
- by2012 Selection of precise survey site;
- by2027 Selection of a final disposal site; and
- by2037 Start of operation

Basic concept of geological disposal facilities for high-level radioactive waste



Chemical substance control

Most chemical substances Kyushu Electric Power handles are for use at thermal or nuclear power stations, and are properly managed at each office in full accordance with related laws and regulations.

PRTR (Pollutant Release and Transfer Register) system

Kyushu Electric Power has taken the initiative in investigating, collecting and disclosing data on specific chemical substances' emissions and amounts transferred. The following table shows results for fiscal 2001.

PRTR investigation results (FY2001) *1

Index No	Chemical substances	Applications	Unit	Amount handled	Amount released into environment				Amount transferred *2	FY2000 (reference)		
					Air	Water	Soil	Landfill		Amount handled	Amount released	Amount transferred
63	Xylene	Coating material for equipment	kg	4 800	4 800	0	0	0	0	—	—	—
124	HCFC-123	Refrigerant for AC	kg	—	—	—	—	—	—	1 100	0.1	0
179	Dioxins	Waste incinerator	mg-TEQ *3	—	40	0	0	0	14	—	140	230
253	Hydrazine	Feed water processing agent	kg	35 000	1.7	0	0	0	0	31 000	4.1	0
304	Boron and boron compounds	Reactivity control in nuclear reactors	kg	3 200	0	0	0	0	0	—	—	—
311	Manganese and manganese compounds	Desulfurization agent	kg	1 300	0	54	0	0	0	2 300	96	0
353	Tris phosphate (dimethyl phenyl)	Turbine control	kg	11 000	0	0	0	0	12 000	7 800	0	7 800

*1: Calculated for 1 ton or more of Class 1 chemical substances, or 0.5 tons or more specified Class 1 chemical substances handled by offices annually (Effective digit:2). All dioxins are calculated regardless of the amount.

*2: Amount transferred as waste.

*3: Since the toxicity of dioxins differs according to type, values are expressed in toxicity equivalent quantity (TEQ) in 2, 3, 7, 8-T4CDD.

N.B. 1: Since fiscal 2002, enterprises are required to report to the government records and management of the quantity of specified chemical substances that are emitted and transferred, under the Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management. (full enforcement in Apr. 2001)

N.B. 2: Under the PRTR (Pollutant Release and Transfer Register) system, operators keep track of the amount of each chemical substance subject to PRTR that is released during operational activities and of the amount transferred as waste. These results are then reported. This system serves to promote voluntary management efforts by operators together with society as a whole, fostering countermeasures against the environmental risks imposed by such chemical substances.

Dioxins

Kyushu Electric Power is reducing the use of waste incinerators, which emit dioxins. In fiscal 2000 and 2001, the company discontinued the use of 16 waste incinerators. Forty-seven waste incinerators were still in operation at the end of fiscal 2001, but their emission levels meet all standards stipulated by the Law Concerning Special Measures against Dioxins (enforced in Jan. 2000).

PCB (polychlorinated biphenyl)

Equipment which utilizes PCB (1,511 high-voltage transformers, capacitors and others) is kept at special storage areas at Kyushu Electric Power under stringent surveillance.

Kyushu Electric Power plans to treat the equipment and render it harmless by 2016, the deadline set by the law concerning special measures against PCB waste, effective as of July 2001.

(5) Harmony with the surrounding environment

When designing facilities, Kyushu Electric Power places a high priority on the natural and urban landscapes of their surrounding areas, and implements environmentally friendly measures such as tree planting, in addition to natural environment protection activities.

Shinchi Substation in Nagasaki City faces a road connecting China Town, Glover Garden and Oranda-dori street. The substation was constructed taking into consideration suggestions and opinions of the local residents and Nagasaki City, in order to ensure that the substation would blend well with its surrounding area at the entrance to Oranda-dori street, which features the former houses of early foreign residents and has an exotic atmosphere.

In January 2002, the substation was awarded a prize at the 12th competition of urban view plans of Nagasaki City for its achieving harmony with the surrounding environment.



Shinchi Substation won a prize at the 12th competition of urban view plans of Nagasaki City

5. Working with Society

Kyushu Electric Power cooperates with local communities through environmental activities such as promoting campaigns, environmental business in alliance with NGOs, as well as global-scale environmental activities including providing technical cooperation to developing countries.

(1) Communication

Kyushu Electric Power makes concerted efforts to disclose environmental information to the public through its Environment Action Reports, study tours, lectures and through the media. The company also maintains communication with the public through hearing opinions.

Study Tours

Kyushu Electric Power organizes study tours for the general public to help raise understanding on the effective use and development of nuclear power as a means of addressing global warming. The tours usually involve visits to observe facilities at power stations and PR facilities such as Genkai Energy Park. In fiscal 2001, a total of about 150,000 people participated in study tours to Genkai Nuclear Power Station and Sendai Nuclear Power Station.



Genkai Energy Park
(opened inside Genkai Nuclear Power Station premises March 31, 2000)

Lectures

Every year during Environment Month (June) and the communication promotion campaign (October), lectures and talks about the environment and energy issues are held for the general public. During Environment Month, lectures for the general public were held at 4 offices, with an attendance of about 800 people. Kyushu Electric Power also sent lecturers 26 times to give lessons on the environment and energy at elementary and junior high schools, or sent them to local municipality symposiums. These activities attracted about 1,700 people in total.

Symposium on energy and environment (Head Office)

A noted academic expert held a keynote speech on the theme “The Brain, Nature and Japan.” A panel discussion was also held on “The Future of the Community and the Potential of Natural Energy” at which experts on natural (green) energy exchanged opinions on the progress of green energy use and the potential of green energy from different standpoints.



Symposium

Lecture on “The Soul and Environment” (Minato Thermal Power Station)

The chief priest of Jimyoin Temple, Fukuoka City, gave a lecture on “The Soul and the Environment” which was attended by 200 people ranging from environmental activists to housewives.



Lecture (A sign language interpreter also attended.)

(2) Community activities

Kyushu Electric Power is dedicated to organizing Environmental Month and the Kyushu Homeland Forestation Program. At the same time, the company supports environmental activities through participation in the Green Helper training scheme and various environmental community programs.

Planting one million trees under the Kyushu Homeland Forestation Program

As part of its celebration of 50 years since foundation, Kyushu Electric Power began the Kyushu Homeland Forestation Program in FY2001. The program aims to plant one million trees at sites throughout Kyushu over the next 10 years.

Forestation volunteers in Unzen/Fugen (Nagasaki Branch Office)

In March 2002, 10 years after the volcanic disaster of Mt. Fugen in Unzen, Shimabara City, Nagasaki Pref., 11,500 saplings including *machilus thunbergii* and *quercus myrsinaefolia* were planted at the Taruki Plateau.

The activity was joined by about 2,100 volunteers, including boy scouts of Nagasaki, Junior Green Friends, Green Helpers and local government staff. A total of 375 Kyushu Electric Power staff members attended, including President Kamata.



Forestation volunteers in Unzen/Fugen (President Kamata on the left)

Forestation of Onagohata (Hita Power System Maintenance Office, Oita Branch Office)

In April 2001, 12,000 chinquapin, oak and *machilus thunbergii* saplings were planted in the 3,000m² of land surrounding Kyushu Electric Power's Onagohata dam.

About 1,500 people from all over Kyushu joined the activity.

After a thorough field study of the geographical distribution of plants, selections were made for rapidly growing indigenous forest in the land. This activity is based on the concept of native forests by native trees proposed by Dr. Akira Miyawaki, Professor Emeritus of Yokohama National University.



Forestation of Onagohata

Tree planting in Onagohata began in 2000. This afforested area and the abundance of nature around it make it ideal for environmental education, and will be used for the Periods for Integrated Study, which was introduced in the school curriculum in fiscal 2002. (See Related Information III1. (p.62) for details.)

These activities were introduced at the 8th International Congress of Ecology, held in Seoul in Aug. 2002, to publicize Kyushu Electric Power's environmental activities to the world. (See Related Information III1. (p.63) for details.)

Foresting activities in FY 2001

	Name	No. of trees	No. of participants	Date of activity	Tress plated
Kitakyushu	Forestation in surrounding Aburaki dam	7,000	380	Mar. 17, 2002	Wild cherry tree, Camellia
Fukuoka	Planting of 100,000 trees in Koga City	5,000	1,120	Mar. 9, 2002	Chinquapin, <i>Machilus thunbergii</i> , Oak
Saga	Forestation of dirtheaps in former Taku coal mine area	5,000	900	Mar. 3, 2002	Chinquapin, Oak
Nagasaki	Forestation volunteers in Unzen/Fugen	11,500	2,450	Mar. 3, 2002	<i>Machilus thunbergii</i> , <i>Quercus myrsinaefolia</i>
Oita	Forestation of Onagohata	12,000	1,460	Apr. 29, 2001	Chinquapin, <i>Machilus thunbergii</i> , Oak
Kumamoto	Forestation of Kuma Village Sports Park	3,600	310	Feb. 23, 2002	Azalea
	Forestation of Oyano Town Sports Park	5,390	80	Mar. 2, 2002	Camellia sasanqua, Redrobbin
Miyazaki	Forestation of Takahara Town	3,000	450	Feb. 17, 2002	<i>Zelkova serrata</i> , <i>Melia azedarach</i>
	Reforestation project in Hitotsuba Beach	4,000	480	Mar. 1, 2002	Japanese black pine
Kagoshima	Forestation commemorating 60-year anniversary of Kanoya municipalization	8,800	4,000	May. 3, 2001	Chinquapin, <i>Machilus thunbergii</i> , Oak
	Greening project in Fukiage Beach	10,000	560	Nov. 23, 2001	Japanese black pine, Chinquapin, Oak
Others	52 places (incl. 25 places where trees were planted during Environmental Month)	30,950	6,220	—	—
Total	63	106,240	18,410	—	—

Environment Month in FY 2001

Kyushu Electric Power is actively promoting volunteer activities including tree planting and cleaning the community.

Tree planting

About 4,000 saplings were planted by 24 offices as part of the greening activities.

Staff members of the Okuchi Customer Service Office, Kagoshima Branch Office, planted 900 Camellia Sasanqua trees, on which blooms the official flower of Okuchi City, in Tadamoto Park with the cooperation of local residents. The objective is to have the park in full bloom even before the cherry blossom season for which it is famous.

Volunteer activities

Kyushu Electric Power was involved in various volunteer activities such as cleaning local communities, stocking rivers with fry, making community farms at its power station premises open to the public.

Ninety-eight offices cleaned roads, rivers and coasts around their offices. Forty-two offices also joined cleanups led by local governments. The Takanabe Customer Service Office, Miyazaki Branch Office, helped clean Takanabe Beach.

Five offices stocked rivers with fry. This includes releasing 500 eels into the Kikuchi River by the Yamaga Customer Service Office, Kumamoto Branch Office.

Community farms and greenhouses at our premises were made open to the public at four offices. Genkai Nuclear Power Station invited 101 nursery school toddlers from Genkai Town to pick tomatoes grown in its greenhouse that uses waste heat from the plant.

Green Helper Training Scheme

Since 1998, Kyushu Electric Power has supported the Green Helper training scheme to foster skilled greening specialists. The scheme was implemented through a non-profit organization.

By the end of fiscal 2001, 325 individuals have completed their training at 6 training locations (Kumamoto, Fukuoka, Saga, Oita, Miyazaki and Kagoshima). The qualified Green Helpers organize Green Helpers' associations in each area and participate in forest conservation activities and the Kyushu Homeland Forestation Program.

Training will be conducted in Nagasaki and Oita in fiscal 2002.



Tree planting (Oguchi City, Kagoshima Pref.)



Cleanup of Takanabe Beach (Takanabe Town, Miyazaki Pref.)



Fry releasing (Yamaga City, Kumamoto Pref.)



Picking tomatoes (Genkai Nuclear Power Station)



Green Helper training (Kagoshima Branch Office)

(3) International Cooperation

The company supports environmental conservation activities overseas through international cooperation efforts with overseas electric utilities, including information exchanges, sending specialists, receiving trainees here and through technical support.

Technical cooperation through international exchange agreements

Kyushu Electric Power has entered into exchange agreements with overseas electric utilities aiming to exchange information and opinions on common issues: global environmental problems, development and safety assurance of nuclear power, efficient management, and deregulation. The shared information and opinions are helpful to business operation.

Kyushu Electric Power entered into an agreement for a personnel training program with Electricity of Vietnam in June 2001, and accepted trainees from the company.

Because international exchange agreements open doors to new business opportunities, the company seeks ways of conducting cooperative business including the areas of Independent Power Producers (IPP) and consulting. (See Related Information I5. (p.41) for current status of international business development.)

International alliances agreements

Country	Company/organization	Date of agreement
Korea	Korea Electric Power Corp.	Jan.1969
P.R.China	Szechwan Electric Power Test & Research Institute	Apr.1991
P.R.China	Shandong Electric Power Corp.	Apr.1992
U.K.	Scottish Power Co., Ltd.	Aug.1993
Australia	Western Power Co., Ltd.	Dec.1994
France	Electricité de France	Oct.1996
Thailand	Provincial Electricity Authority	Feb.2000
Philippines	National Power Corporation	Oct.2000
Vietnam	Electricity of Vietnam*	Jun.2001

*Entered into an agreement for personnel training program.



Training program for trainees from Electricity of Vietnam

(4) Employee Awareness Enhancement

Kyushu Electric Power trains employees and provides varied information on environmental activities in order to enhance the environmental awareness of each employee.

Training and lectures

In-house training programs are held for employees. The programs feature lectures or talks on environmental issues by lecturers invited from within and outside the company.

In fiscal 2001, a total of 287 employees joined eight environmental training programs tailored to different needs in each department and career.

A total of 340 employees joined lectures given by the Environmental Affairs Dept. at five offices.

During Environment Month, special lecturers were invited at 28 offices, at which 1,234 employees attended.

A lecture with the theme “Forests - Source of Human Hopes and Dreams” was given by an academic expert for 98 employees of the Kumamoto Branch Office.

At the Head Office, academic experts gave two lectures: “Scientific Findings on Global Warming” and “The Renaissance in the Globe and Humans”, which 143 and 83 employees attended respectively.



Lecture at the Kumamoto Branch Office



Lecture at the Head Office

Fostering specialists for environmental measures

The company helps employees obtain qualifications such as Energy Manager and Pollution Control Manager by establishing systems to assist with correspondence education fees, or by providing allowances for employees who obtain publicly recognized licenses and qualifications.

A total of 682 employees were qualified as Energy Managers as of the end of fiscal 2001, 63 more managers than the previous year.

No. of qualified employees (cumulative total) Unit: person

	FY 2000	FY 2001
Energy Managers	619	682
Pollution Control Managers	490	500
Industrial Waste Intermediate Treatment Facility Engineering Controller	130	132
Industrial Waste Final Disposal Site Engineering Controller	54	54

Providing information

The company regularly provides employees with environment related information by broadcasting domestic and international environmental news through company televisions, and through company newsletters and environmental magazines.

Providing information through a newsletter, "Environment Digest"

Contents of the monthly newsletter are as follows:

Social trends and news on environmental issues	Information on measures newly introduced by the company
Information on environmental events held by the company and other organizers	Essays from people engaged in environmental activities



Award system

Kyushu Electric Power has established an award system for employees who devote themselves to the local community. The system aims to encourage employees' active commitment to local communities and communication with them.

In fiscal 2001, 47 employees received awards. The award-winning contributions include offering volunteer driving services for the disabled or the aged, giving lectures on Shintoism and its music to boost regional development and to pass on tradition to young people, as well as coaching sports teams to help sound youth development.

Supporting social contribution

Kyushu Electric Power encourages employees' social contributions by setting up a volunteer leave system.

In fiscal 2001, 191.5 days of volunteer leave were taken company-wide.

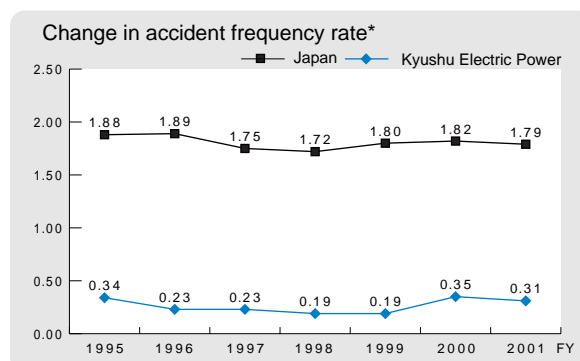
Use of volunteer leave (FY 2001) Unit: day

	Social service	Community activities	Sports and cultural activities	Donor (bone marrow donor registry)	Total
First half	45	12.5	32	0	89.5
Second half	51	24	16	11	102
Total	96	36.5	48	11	191.5

Safety and health

The safety and health of all employees are two fundamental elements for active and sustainable business activities including environmental activities. Kyushu Electric Power works to create a safe and healthy working environment with the aim of "zero-accident challenge and individual health management." The company mainly focuses on the following points:

1. Preventing operational accidents
2. Preventing traffic accidents
3. Improving the working environment
4. Preventing disasters at subsidiary firms and contractor operations
5. Improving measures for comprehensive health management



* AFR (Accident Frequency Rate) is the number of injuries leading to one or more days off work in 1 million man-hours worked

III. Opinions from Outside the Company

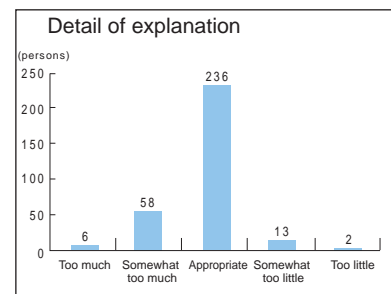
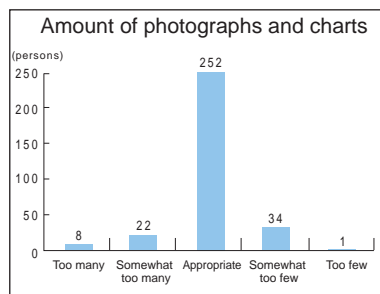
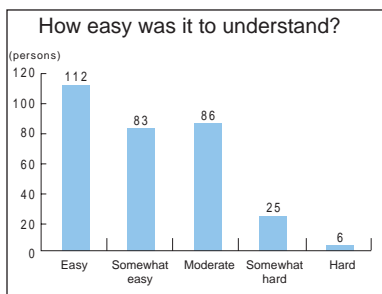
Third-Party Evaluation



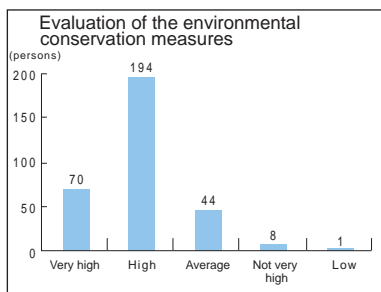
1. Results of the Questionnaire from the Previous Report

The "Fiscal 2001 Kyushu Electric Power Environment Action Report" was published in October 2001. Through the questionnaire enclosed in the report, Kyushu Electric Power received many valuable opinions on the implementation of its environmental activities from local governments, environmental NGOs, people in the field of education and the general public. Kyushu Electric Power sent out a total of 5,304 questionnaires and 323 or 6% of them were returned as of August 16, 2002.

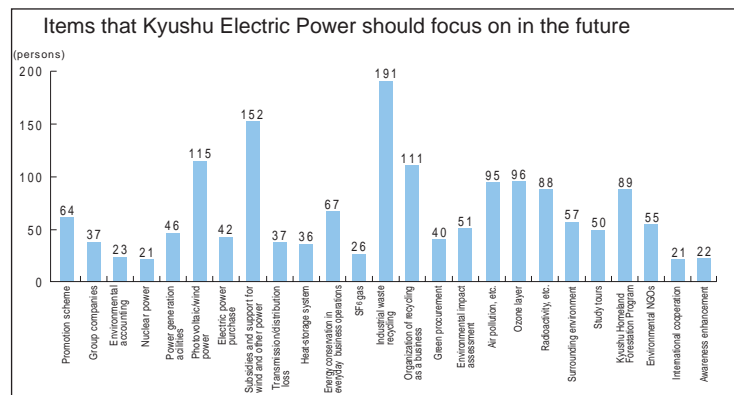
Q1: What was your impression of the fiscal 2001 Environment Action Report? (Choose one)



Q2: What is your evaluation of Kyushu Electric Power's environmental conservation measures?



Q3: Chose five activities that Kyushu Electric Power should focus on.



Q4: List any opinions or requests regarding Kyushu Electric Power's environmental conservation measures or the content of the Environment Action Report.

Opinions and requests

Editing and contents

- Make it easier to understand with more charts.
- The tone is too subdued. Colors will make it easier to see.
- The glossary was useful.
- More data that aid in the evaluation of environmental activities should be included.
- Please prepare an easier version that could be used for school education (elementary and junior high schools).

Report content

- Radioactive waste and plutonium use in thermal reactors (Plu-Thermal project) regarding nuclear power generation should be explained in detail.
- More information on and promotion of energy savings is necessary for the general public.

Environmental activities

- More effort should be devoted to promoting the use of natural energy sources, such as photovoltaic power and wind power generation.
- Please devote more effort to thinking about ways to create synergy between corporate management and environmental concerns.

Due to space limitations, we can present only a few of the opinions we received. However, all opinions and requests were carefully considered and will be reflected in our future environmental activities. Please refer to Main Section III. 4 (p.31) for specific items in which respondents' opinions were adopted.

2. Principal Opinions of the Kyushu Electric Power Environmental Advisory Council

The 2nd Kyushu Electric Power Environmental Advisory Council was held on August 9, 2002. Various views on Kyushu Electric Power's measures for environmental issues and the "Fiscal 2002 Kyushu Electric Power Environment Action Report" were discussed. The following are some of the principal opinions of the Council:

(1) Environmental accounting

Although there is a tendency to convert everything to a monetary value, representing things in terms of quantity of substances and activities is an effective way to express value without misleading companies and society.

In light of possible electricity-rate changes, other items such as input of materials and electricity sales, in addition to operating revenue, might be used for comparison in calculating environmental efficiency.

(2) Environmental education

Whenever a lecture is given in elementary schools, issues such as, "What sort of activities can children engage in that would help the earth?" should be explained in simple terms.

Education for children is critical for the future of the global environment.

Future environmental education needs to include energy in addition to environmental conservation. Kyushu Electric Power should take the lead.

A campaign must be launched to discuss electricity and future energy sources.

By developing appropriate teaching materials, for example, environmental education that stimulates children's awareness of the environmental issues around them should be promoted.

Cooperation systems must be developed with other companies that share a common motivation to support administration and environmental education, in addition to cooperation with academic experts and citizens' groups.

Forestation that fosters CO₂ sink should be utilized effectively for environmental education, beyond activities to protect and plant trees.

(3) Environment Action Report (draft)

The Action Report should be compiled with a clear understanding in mind of the target readers.

The slogan used on the front cover photograph should be taken up frequently within the report, and would be clearer to readers if explained in the Message from the President.

Images of Kyushu should be more frequent, including on the front cover. A caption should accompany the front cover photograph.

It is important to follow the PDCA cycle at each office in the third-party review, in addition to throughout the company.

Explanations should make people aware of attainable targets, such as how a 1% thermal efficiency improvement will lead to significant CO₂ reduction.

The Environment Action Report is an excellent environmental education material. The contact number list for study tours should be included.

The introduction of new energy sources with less environmental load should be aggressively addressed. Also, basic policies on the optimal combination of energy sources including new energy sources should be stated based on the stance of growth with balance of the 3Es (environment, energy and economy).

The digest version of the Environment Action Report from the last fiscal year was easy to understand, making Kyushu Electric Power seem friendlier.

The digest version would be more approachable if photographs of regular staff were used to describe activity status.

These valuable opinions will be incorporated into Kyushu Electric Power's environmental activities of the future.

Members of the Kyushu Electric Power Environmental Advisory Council

(Names listed below are in the order of the Japanese syllabary.)

Ei Akagi	: writer
Naohito Asano	: Professor, Faculty of Law, Fukuoka University, and member of the Central Environment Council
Nahomi Ishikubo	: lifestyle journalist
Mami Oku	: Associate Professor, Faculty of Environmental Studies, Nagasaki University
Takao Sawada	: Economic Editor, Seibuhonsha office, the Yomiuri Shimbun newspaper
Satoshi Tsuruta	: Executive director, Japan Environmental Measurement & Chemical Analysis Association
Akira Fukuizumi	: Teacher, Fukuoka Prefectural Shuyukan High School
Kan Yoshida	: copywriter
Junko Yoshida	: Representative director, NPO Moshimoshi Tikyū

3. Main Opinions from Customer Surveys

Kyushu Electric Power listens to the opinions of our customers and incorporates them into its management practices in order to become a company that is trusted and chosen by customers. The opinions below concern the environment.

(1) Outline of the survey

Survey area: service area of Kyushu Electric Power (excluding isolated islands)

Survey population: 3,100 men and women from 24 to 64 years old

Survey period: July–August 2001

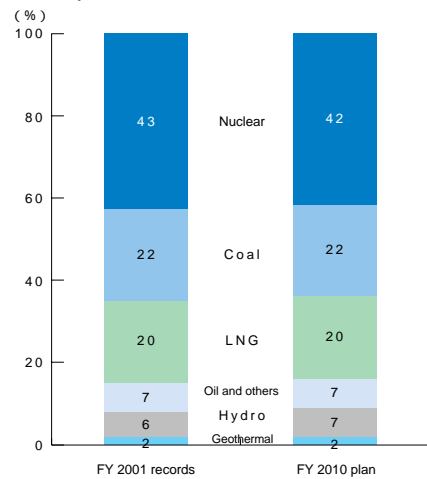
(2) Environment-related opinions and other items

What do you think is the major power generation method in Kyushu?

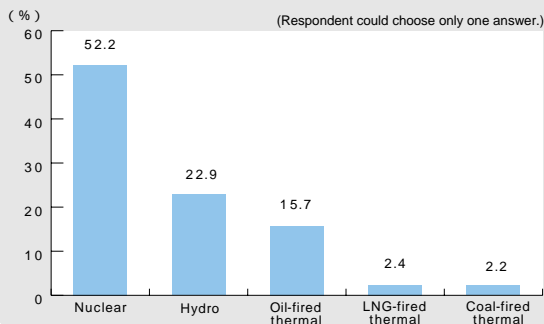
Many are aware of the main power source in Kyushu being nuclear power, but not of the small share of hydro and oil.

Many hope that photovoltaic power generation becomes a major source of power for Kyushu in the future (10 years from now). The number of people who have high expectations for photovoltaic and wind power is increasing.

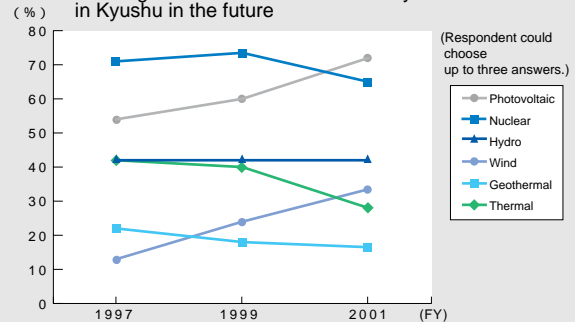
Composition of electric power production in Kyushu



What do you think is the main power source in Kyushu?



Power generation method that is likely to be dominant in Kyushu in the future

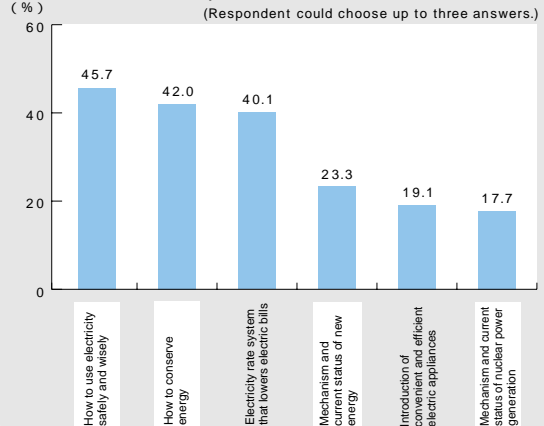


Information requests

Many requested information on the best ways to use electricity and conserve energy.

Information on the mechanism and current status of nuclear power generation as well as new energy sources is also frequently requested.

Information requested



4. Items Reflecting Opinions

The opinions and requests from customers and the Kyushu Electric Power Environmental Advisory Council in regard to Kyushu Electric Power's environmental activities and the Environment Action Report are reflected in the content of this Environment Action Report and environmental activities:

	Summary of opinion	Items reflecting the opinions
Environment Action Report	For easier reading Charts and colors Glossary	Report was made in color (last year's version used two-color printing) using charts as much as possible. Charts were printed with a blue base, which is Kyushu Electric Power's official color. <small>N.B. The English version is in two-color printing.</small> The order of the glossary was changed to that of the Japanese syllabary and the alphabet, and contents was enriched. <small>N.B. The glossary has been omitted from the English version.</small>
	Environmental activity benefits Evaluation of environmental activities and their benefits Synergy between corporate management and the environment	Environmental activity benefits and economic effects from environmental activities are listed in environmental accounting (pp.8-9). The benefit calculation method for environmental accounting and its future utilization for environmental efficiency improvement are also included (pp.34-37). Environmental targets, achievements and comparison with the previous fiscal year are listed (p.10).
	Related to nuclear power Radioactive waste Plu-Thermal project	Regarding radioactive waste, an article on disposal of high-level radioactive waste was added (p.21). Other detailed information on nuclear power includes constant thermal output operation, Plu-Thermal project and renewal of components at Genkai Nuclear Power Station (pp.52-55).
	Related to new energy Details of support activities and current status Promotion of understanding for new energies	Detailed characteristics (current status, records of Kyushu Electric Power's power stations and tasks) of new energy sources (wind, photovoltaic power) are listed (pp.56-57). The content on policies regarding the optimal combination of energy sources and the Green Electric Power System is enriched (pp.58-89).
	Better ways to use electricity Energy conservation	An article on using the Household Eco-Account Book has been added as one of the energy conservation activities in regular households (p.65).
Environmental Activities	Environmental education Environmental education system development Necessity of education on energy	Measures include sending a lecturer to classes in elementary and junior high schools and to lectures organized by local governments (p.23). Support for energy and environmental education is planned (p.62). Support will be actively offered for educational efforts that incorporate energy and the environment. In addition to the publication of a digest version of the Environment Action Report similar to that of last year, preparation of a new booklet that may be used for energy and environmental education is being considered.

I. Environmental Management



1. Business Status and Management Targets

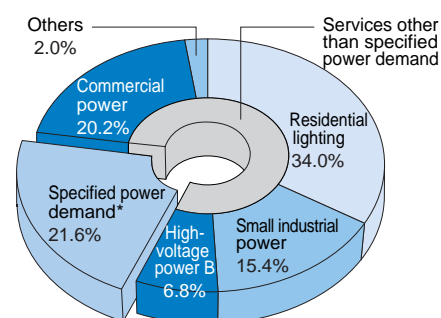
Kyushu Electric Power can be said to be in its second establishment phase, in which a company-wide effort is being made to build a sound foundation for continuous growth, to address new challenges such as competition due to partial liberalization of the power market, and business expansion by entering into new businesses.

(1) Sale status

The Japanese economy suffered a great deal in fiscal 2001, a state of affairs attributable to a reduction in production and investment in plants and equipment, caused by the slowing of the world economy and domestic demand. It was further hampered by sluggish personal consumption due to worsening unemployment and lower incomes, as well as the aggravation of deflation.

In this economic situation, Kyushu Electric Power's electricity sales for services from large industrial power contracts were 3.0% lower than in fiscal 2000 records. This was caused by a reduction in steel production and the installation of private electric generating facilities at some factories, in addition to inventory adjustment of electric machines, which was triggered by the slump in IT-related businesses. However, sales of general services such as residential lighting and commercial power contracts increased by 1.3% over fiscal 2000. As a result, total electricity sales for fiscal 2001 were 75.32 billion kWh, a 0.1% increase over fiscal 2000. The sales of specified power demand, which are subject to liberalization, amounted to 16.27 billion kWh.

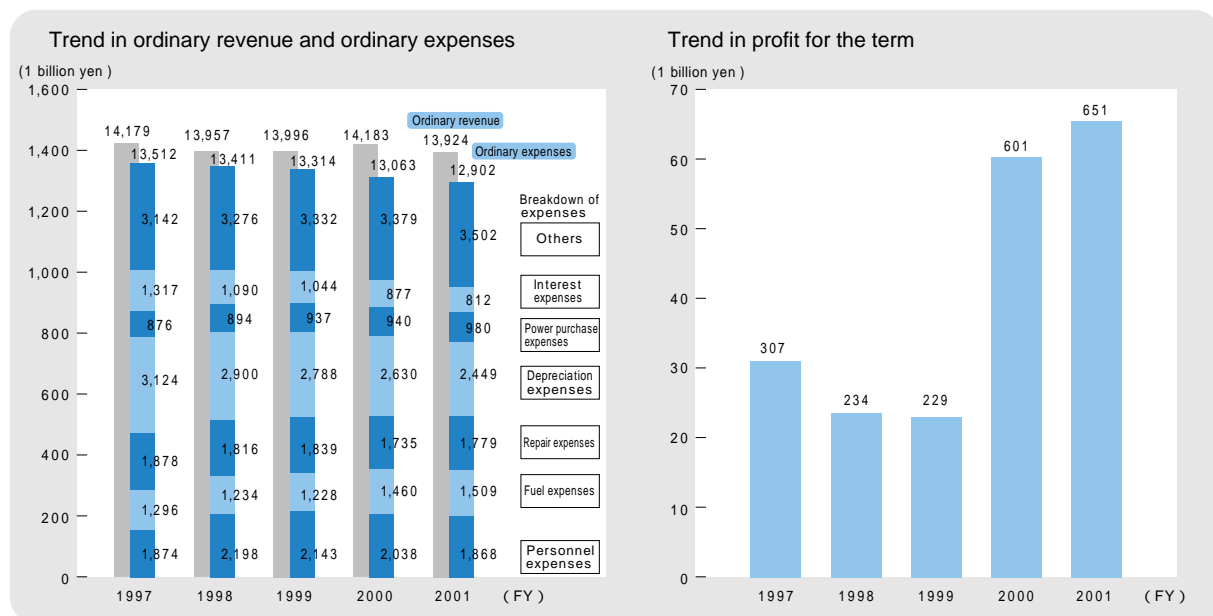
Composition of fiscal 2001 electricity sales



* Specified power demand means customers who are subject to liberalization under the partial liberalization of electricity retailing that started in March 2000 (customers who receive electricity at an extra-high voltage of 20,000 volts or higher and with a consumption level of 2,000 kW or more, as a rule).

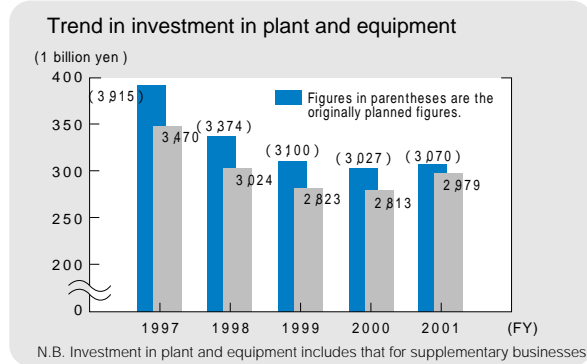
(2) Revenue and expense

Even though electricity sales for fiscal 2001 were at about the same level as in fiscal 2000, operating revenue was 1.9% less than in fiscal 2000 at 1,384.5 billion yen, due to the electricity rate reduction that started in October 2000. Total ordinary revenue, which comprises operating and other revenues, amounted to 1,392.4 billion yen. As for expenses, fuel costs increased because of a weak yen. However, personnel expenses were less than in fiscal 2000, when retirement-benefit costs began. As a result of other efficiency improvement efforts and capital reductions throughout the business, the total ordinary expense came to 1,290.2 billion yen. Thus the fiscal 2001 ordinary profit was 102.2 billion yen; and the profit for the term, 65.1 billion yen.



(3) Investment in plant and equipment

Investment in plants and equipment has been kept within the range of owned capital since fiscal 1997, thanks to efforts spanning all projects for efficiency improvement that resulted in higher efficiency than originally planned. The amount invested for fiscal 2001 was 297.9 billion yen, or 3.0%, or a 9.1 billion-yen reduction from the plan. This was attributable to a review of planning and replacement standards, as well as cost reductions achieved in design and construction.



(4) Management Targets

Kyushu Electric Power established a medium-term management plan in March 1999 to manage the company from a long-term perspective. The plan clearly described the target corporate image and set main policies of management to achieve it. New management policies were added in March 2000, including ROA and reduction of interest-bearing debt, to reinforce business foundations.

In March 2002, it became clear that the original business targets were achievable and that the acceleration of managerial efficiency improvement was needed to keep up with severe competition from other companies. On this basis, a new medium-term management plan was drawn to set new goals for the fiscal period 2002 to 2006.

- Target corporate image**

 1. A strong corporation with a competitive edge in all aspects, including price and quality
 2. A flexible corporation that responds to changes in conditions and various needs
 3. A corporation involved in a wide scope of businesses, with the power supply business at its core
 4. A corporation trusted and recognized by society

The new medium-term management plan sets higher business targets (targets for electricity rates and financial affairs) to accelerate the development of price competitiveness and financial strength. Kyushu Electric Power takes on the challenge of realizing a target corporate image under its new medium-term management plan.

Target for electricity rates

Realization of an electricity rate system that can compete against PPS (power producers and suppliers), operators of dispersed power sources and other electric utilities

Targets for financial affairs

	Original target (FY2000-2003)	Current target (FY2002-2006)
Shareholder's equity ratio	20% or more at the end of FY 2003	25% at the end of FY 2006
Reduction in interest-bearing debt	Cumulative total reduction of approx. 200 billion yen	Cumulative total reduction of 450 billion yen
FCF (free cash flow)	—	Average of 120 billion yen
Ordinary profit	Average of approx. 90 billion yen	Average of 100 billion yen
ROA (return on assets)	Average of approx. 1.5% (profit for the term/total asset)	Average of 3% (taxed operating profit/total assets)
ROE (return on equity)	Average of approx. 8%	Average of 8%

N.B. Originally, the profit for the term was used as the numerator for ROA as with ROE. However, it has been changed to the taxed operating profit before interest payments, in order to measure the efficiency of the total assets and to ensure awareness of returns to investors.

Trend in ratio of shareholders' equity and interest-bearing debt

Fiscal Year (FY)	Shareholders' equity ratio (%)	Interest-bearing debt (1 billion yen)
1997	15.5	27,840
1998	15.7	27,326
1999	17.1	26,026
2000	19.1	25,289
2001	19.6	24,887
2006 (Target)	25%	-450 billion yen

Trend in FCF and ordinary profit

Fiscal Year (FY)	FCF (1 billion yen)	Ordinary profit (1 billion yen)
1997	760	666
1998	875	545
1999	1,298	682
2000	1,093	1,119
2001	696	1,022
Average between 2002-2006 (Target)	120 billion yen	100 billion yen

Trend in ROA and ROE

Fiscal Year (FY)	ROA (%)	ROE (%)
1997	2.7	5.0
1998	2.4	3.8
1999	2.8	3.6
2000	3.3	8.3
2001	3.1	8.4
Average between 2002-2006 (Target)	3.0%	8.0%

2. The Environmental Accounting System and its Utilization

Kyushu Electric Power proceeds with systematic improvement of environmental accounting to promote efficient and effective environmental activities and understanding from society.

(1) Environmental accounting system

Fiscal 2001 environmental accounting

System's basic guidelines

The system is based on the "Fiscal 2002 Guidelines for Environmental Accounting" (March 2002 by the Ministry of the Environment). However, environmental activities are divided into small categories so that the content may be easily understood.

Accounting period

April 1, 2001 to March 31, 2002 (same as the business year)

Scope of accounting application

Kyushu Electric Power Co., Inc. (application to the Kyushu Electric Power Group companies is under consideration, therefore currently not included)

Scope of activities for the accounting application

The prevention, control, removal or reparation of any action that significantly hampers the environment caused by business or non-business activities and of problems that might hinder efforts to support the environment.

(Supplemental definition)

The above activities exclude those related to safety and sanitation (e.g. measures against particulates at workplaces) within the company and other environmental activities that are deemed to be social conventions (e.g. low-noise transformers and electric motors).

Environmental activity costs

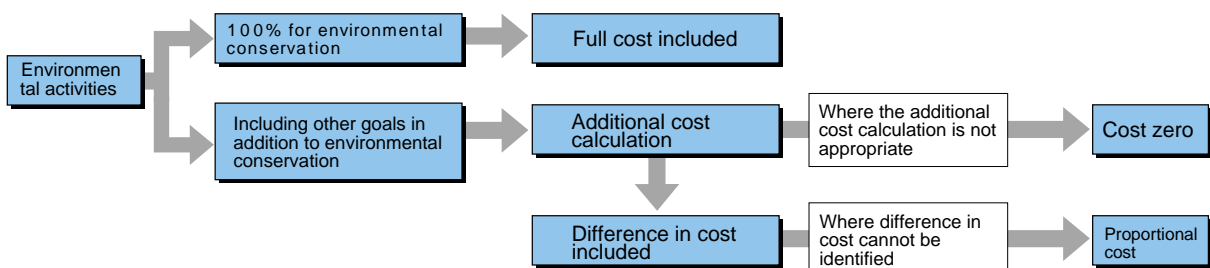
Investment and expenses in environmental activity costs are defined as follows:

Investments: expenditures for the fiscal year for items capitalized as assets such as investment in plant and equipment, and other financing for the purpose of environmental conservation

Expenses: expenditure for the purpose of environmental conservation, e.g. depreciation expenses, lease expenses, repair expenses, maintenance and management expenses, commissioning expenses and personnel expenses

(N.B. Depreciation expenses are applicable for items equivalent to environmental activity facilities, and are calculated and added according to the service life and depreciation method of the financial and accounting practices.)

The full costs and differences in cost are used in the cost calculation as a principle; however, proportional costs are used where the differences in cost are difficult to identify.



Benefits of environmental activities

Benefits from environmental activities are calculated based on the amount of substances, and are defined according to the types of activities as follows:

Activities that directly reduce the environmental load

Amount of environmental load reduction from the baseline* (the conditions which would have occurred had there been no environmental targets)

*Baselines are set for their respective environmental activities. For example, the baseline for CO₂ reduction calculations is a situation where the electricity generated by all power generation methods was produced only by oil and coal-fired thermal generation; and that for SO_x reduction calculation is a situation where no desulfurization facility is installed.

However, for items of which calculation of the environmental load reduction is difficult, the amount of influence on the environmental load reduction is posted.

Activities for the removal, mitigation or reparation of the impact of the environmental load

Amount of environmental load to which impact removal and other activities are implemented

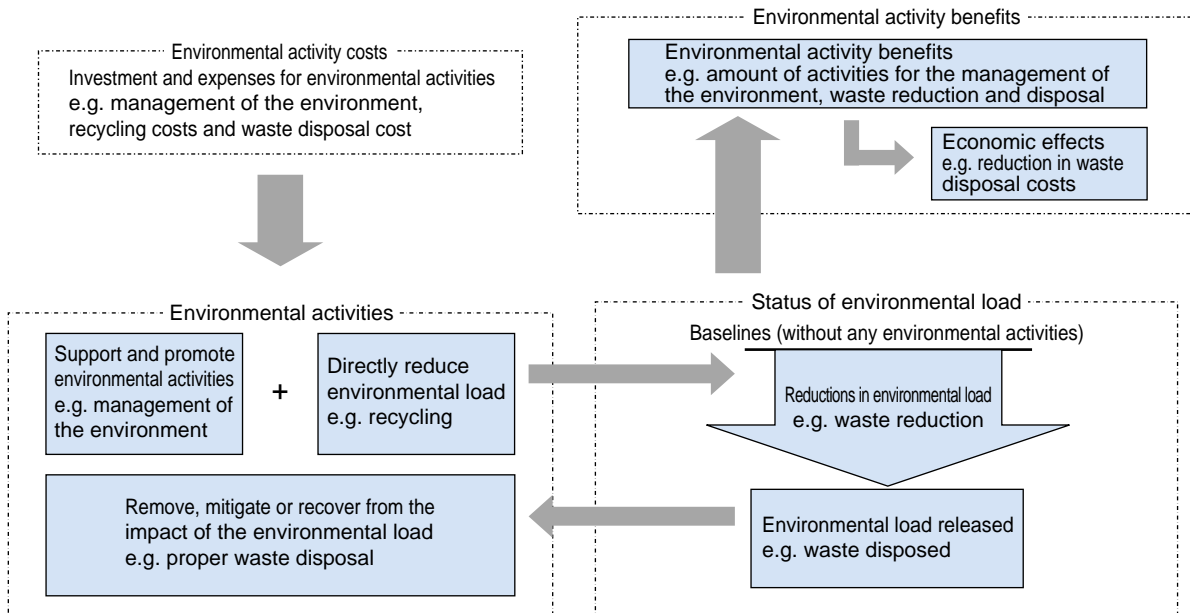
Activities that support and promote environmental load reduction (two items above)

Amount of activities that are required for support and promotion

Economic effects of environmental activities

Items in the economic effects include the cost reductions, savings and sales of unneeded supplies (i.e. real effects only) attendant on the reduction of environmental load that incurs costs whenever used or treated. However, estimated effects such as costs avoided from the reparation of environmental damages are not included.

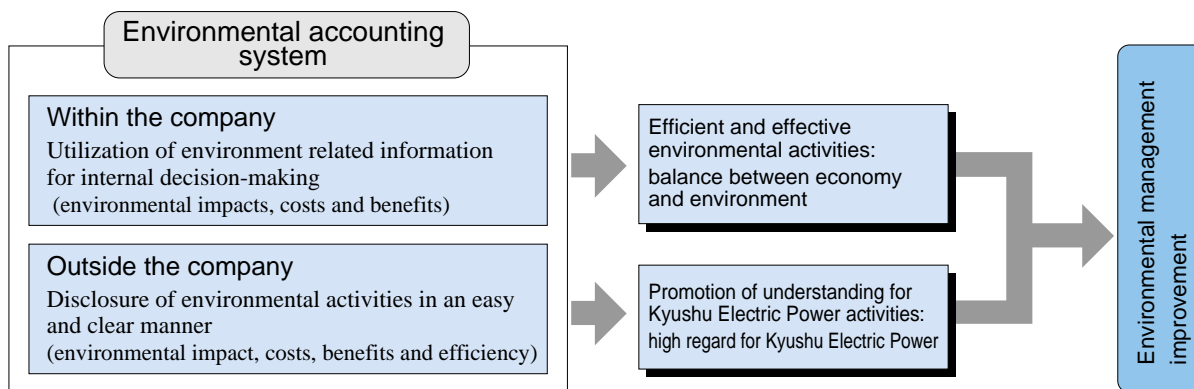
Environmental activity costs and benefits



For improvement of environmental accounting

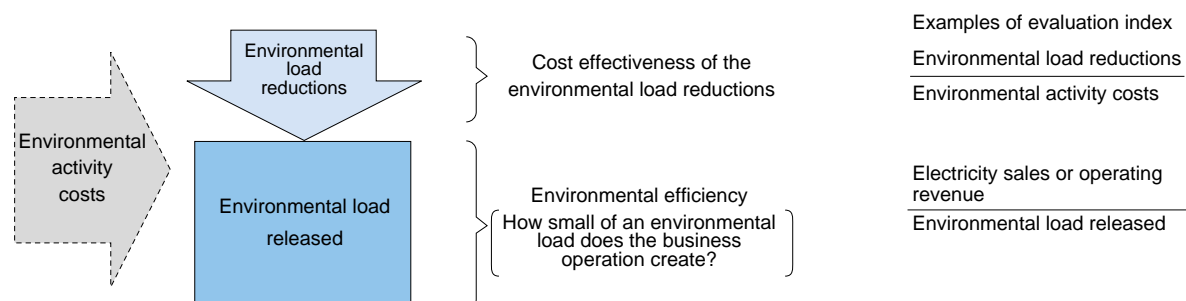
Systematic improvement of the environmental accounting system

Kyushu Electric Power is proceeding with the systematic improvement of its environmental accounting system in order to bring up its level of environmental management.



Establishment of an index for the management of the environment

The management index is currently undergoing examination. This enables costs and environmental load reductions calculated in environmental accounting to be used in the management of the environment.



As a part of this measure, the items below were calculated as a test:

Integration of environmental load categories

Comparison of cost effectiveness (reduction efficiency) of each activity by using integrated environmental load categories

Change in company-wide environmental efficiency

Kyushu Electric Power plans to examine all of the items above, and to further utilize environmental accounting throughout the company and at each office.

Integration of environmental load categories and reduction efficiency

Environmental load is expressed as the amount of CO₂, SO_x, NO_x, particulates and waste, and is calculated in different units. To carry out environmental activities effectively, environmental load categories must be integrated by taking into account the level of impact on the environment so that a comparison may be made.

The method of integration is currently under research both domestically and internationally. The trial calculation shown here used the integration coefficient of the ELP method, which was developed by the Nagata Laboratory of Waseda University. The reduction efficiency of the activities that directly reduce the environmental load was calculated based on the results.

N.B. ELP method: (ELP is a unit of integrated environmental load used to estimate the environmental efficiency index of environmental accounting. In the ELP method, substances, such as CO₂, SO_x, NO_x are classified according to the weight of their environmental impact level in order to integrate environmental load. Research is being conducted regarding environmental load integration as a quantification method for the LCA (Life Cycle Assessment) of products. For more information about the concept and the integration coefficient, access <http://www.nagata.mech.waseda.ac.jp/study/lca1/index-j.html>.)

Environmental activity categories		Environmental activity costs (a)	Environmental activity benefits		Integrated*1		Reduction efficiency (a ÷ b)*2		
			Items	Benefits (b)	Index	enefits (b)	Integrated environmental load categories	Each environmental load	
Global environment conservation	Global warming prevention	4.43 billion yen	CO ₂ reduction	Power source	47,400,000 tons-CO ₂ /yr	1	47,400,000	92	92 yen/tons-CO ₂
				Energy saving	15 tons-CO ₂ /yr		15		
				SF ₆ emission reduction	562,965 tons-CO ₂ /yr		562,965		
Pollution prevention	Air pollution prevention	8.72 billion yen		SO _x reduction	51,177 tons	1,417	72,517,809	38	28,579 yen/tons
				NO _x reduction	14,431 tons	1,360	19,626,160		
				Particulate reduction	239,583 tons	574	137,520,642		
	Water pollution prevention	2.83 billion yen		Environmental load reduced in waste water	538 tons	1,138	612,244	4,626	5,263,838 yen/tons
Resource recycling	Industrial waste	2.52 billion yen		Reduction in disposal + amount recycled	459,500 tons	6	2,757,000	916	5,493 yen/ tons
	General waste	130 million yen		Used paper recycled	895 tons		5,370	24,658	147,946 yen/ tons
Total		18.64 billion yen		-	-	-	281,002,205	66	-

*1: The index for the integration used was obtained by converting the ELP method index so that the CO₂ index equals one.

*2: The denominator of the reduction efficiency (b) is the integrated effect for the integrated environmental load categories, and the respective effect (of CO₂waste, etc.) for each environmental load.

The trial calculation above yields the following assumptions:

Among reduction efficiencies for each environmental load, global warming prevention (CO₂ reduction) is most inexpensive (efficient); and with respect to integrated environmental load categories that take into account the level of environmental impact, air pollution prevention is implemented with the best efficiency.

Among the activities for global warming prevention, the installation of power sources with low CO₂ emissions such as nuclear power stations is implemented to simultaneously achieve economic efficiency, energy security and environmental preservation (optimal combination of energy sources). Therefore, despite a great contribution to CO₂ reduction, no cost is included for it since calculation of the additional cost for the purpose of environmental preservation is not appropriate. For the same reason, even though reduction efficiency as an integrated item is inexpensive, reduction efficiency for each measure is expensive, as evidenced by the approximate 13,300 yen/ton-CO₂ cost for the introduction and support of new energy, and approximately 300yen/ton -CO₂ for SF₆ emissions reductions.

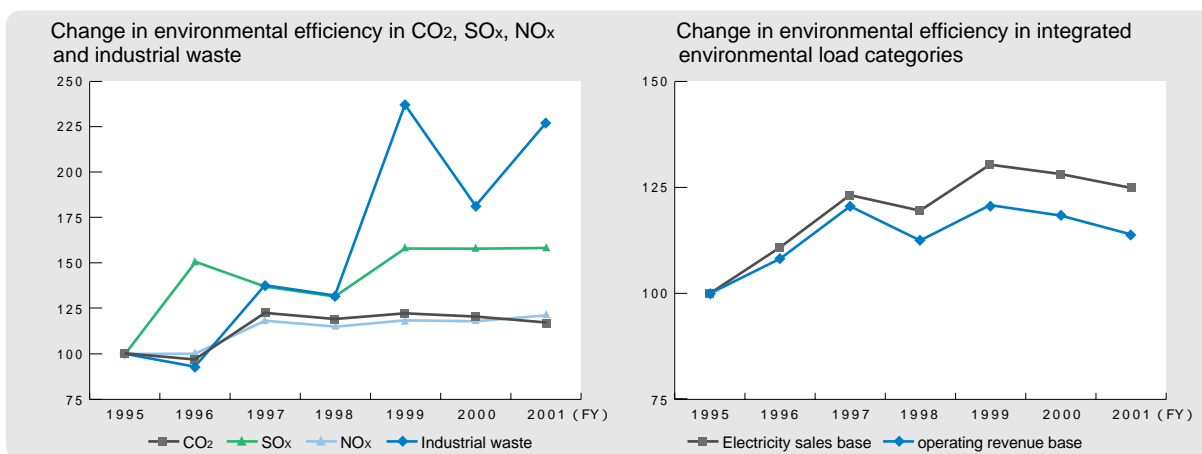
Although the recycling of a large quantity of industrial waste, such as coal ash, may require a large share of the costs, it boasts 27 times higher reduction efficiency (being efficient) than general waste.

Changes in company-wide environmental efficiency

As stated in the “Fiscal 2002 White Paper on Environment” by the Ministry of the Environment, the improvement of environmental efficiency is essential in creating a society with sustainable development.

‘Environmental efficiency’ is defined as the amount of economic activities (GDP is used in the White Paper) per amount of energy consumption and environmental load.

Here, four environmental loads (CO₂, SO_x, NO_x and industrial waste) and their integrated environmental load categories are calculated as a test to recognize present conditions with the purpose of achieving sustainable development. In calculating environmental efficiency, the electricity sales that are the foundation of the company's business activities are used as the base for each environmental load, and electricity sales and operating revenue are used for the integrated environmental load categories.



N.B. Environmental efficiency = Kyushu Electric Power's electricity sales (or operating revenue)÷ each environmental load
However, all data are based on fiscal 1995 as a baseline of 100.

3. Developing a Company-wide Environmental Management System

Kyushu Electric Power aims to develop the environmental management system (EMS) in all facilities that is both efficient and effective. ISO14001 certification was acquired at the model offices selected, taking into account the significantly different functions of our operational establishments, e.g. branch offices, power stations, power system maintenance offices and customer service offices. A system conforming to ISO14001 has been developed and applied to other facilities, based on achievements made by model offices.

(1) ISO14001 acquisition

In July 1997, ISO14001 was granted to our Matsuura Thermal Power Station, the first such certificate ever to be granted to an electric power company in Japan. Since then, the certificate has been granted to the Sendai Nuclear Power Station, Hitoyoshi Power System Maintenance Office and Omarugawa Hydro Power Plant Construction Office. The Saga Customer Service Office joined the group in June and the Nagasaki Branch Office in July of 2002, completing the acquisition of certificates for all model offices.

Offices with ISO14001 certification

Office name	Date of acquisition
Matsuura Thermal Power Station	July 1997
Sendai Nuclear Power Station	March 1999
Hitoyoshi Power System Maintenance Office	March 2001
Omarugawa Hydro Power Plant Construction Office	August 2001
Saga Customer Service Office	June 2002
Nagasaki Branch Office	July 2002



Audit of ISO certification at Saga Customer Service Office



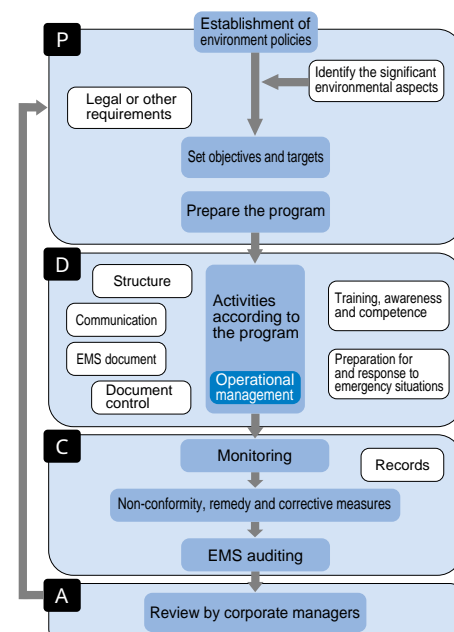
ISO certificate award ceremony, Nagasaki Branch Office

(2) Company-wide application of an ISO-based system

The ISO-based system to be applied in each office aims to promote environmental management in a caring, positive and effective manner, and to steadily raise the level of environmental activities by following the PDCA cycle. After introducing the system, offices set environmental activity targets such as for energy conservation and zero-waste, and implement those activities under the guidance of the environmental administrators in a unified effort.

What is an ISO-based system?

It is an environmental management system that satisfies all the requirements of the ISO14001 standard and is adapted to the actual situation of the offices. To bring all offices to the level of those that acquired the ISO14001 certificate, audit results from the model offices for each business area are given as feedback to the system.



ISO-based system application

An ISO-based system was applied to all thermal power stations by the end of fiscal 2001.

Gradual application of the system started in April 2002 at other branch offices, customer service offices, power system maintenance offices and nuclear power stations. Completion is aimed for fiscal 2003 for all offices.

Nine offices started the system application in April 2002: Iizuka, Yame, Yanagawa, Futsukaichi, Goto, Usa, Tamana, Kanoya customer service offices and Nagasaki Power System Maintenance Office



Introductory training at Iizuka Customer Service Office

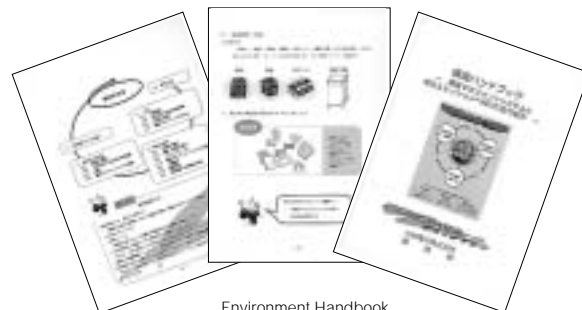


Environment policies for Shin-Kokura Power Station

At offices where environmental management is applied, introductory training is provided to all staff for better understanding of the ISO14001 standard and for the smooth application of the environmental management system.

Enhancement of employee awareness

To ensure the effectiveness of the environmental management system and zero-waste measures, the "Environment Handbook" is handed to all employees to enhance their understanding.



Environment Handbook

(3) Internal environmental audits

To ensure the proper operation and maintenance of the environmental management system within each office, internal environmental audits are conducted periodically and results and matters that require improvement are reported to company managers.

Special training for internal environmental auditors is provided to auditors who are from offices with ISO14001 certificates or the ISO-based system. The training is to improve the level of the internal environmental auditors and is given by an instructor from outside the company (Kyushu I.S.O. Certification/Registration Organization Co., Ltd.). The first training was provided in June 2002, where 21 auditors participated and received a certificate of completion. Training in fiscal 2002 will include approximately 200 auditors.



Training for the internal environmental auditors

Kyushu I.S.O. Certification/Registration Organization Co.,Ltd. (QICO)

Kyushu Electric Power established Kyushu I.S.O. Certification/Registration Organization Co., Ltd. in February 2002 with the cooperation of its Group companies. Its main business is registration, auditing and seminars for ISO quality and the environmental management systems (ISO9001 and 14001).

4. Suggestions and Improvements from Inspection (Environmental Audits) in the Second Half of FY2000

Kyushu Electric Power sets annual environment action plans, incorporates the environmental targets in the company-wide medium-term business plan, and has its achievement status checked by its Management Administration Office. Further, for the steady and effective promotion of the environmental activities within the company as a whole and at each office, environmental audits are conducted in branch offices, customer service offices, power system maintenance offices and power stations about every three years, as a part of the Management Administration Office inspection.

In the audits, measures for management and reduction of environmental load as well as conformity with related laws are checked. The results and items that require improvement are reported to the Board of Managing Directors for approval. The environmental audits (inspection for the second half of FY2000) were conducted between December 2000 and March 2001. Suggestions for improvement in environmental activities, which were offered during the audits, were put into practice.

(1) Suggestions and their contents

subjects for environmental audit	Suggestions	Details
Measures for environmental preservation	1. Comprehend the recycling rate, amount of emission and possession for waste, specify policies and set the target values	Waste management should be done at each office and for each type of waste, in addition to keeping records and setting targets for the company or for departments.
Measures for environmental management	2. Address environmental management such as ISO14001 and the Green Electric Power System in a positive manner 3. Address environmental issues as the Kyushu Electric Power Group	Positive measures are required for the application of the company-wide environmental management system and promotion of the Green Electric Power System. Environmental management for the entire Kyushu Electric Power Group should be promoted.

(2) Improvements in environmental activities

Steps are taken for improvement measures and activities in response to the suggestions of the environmental audit.

For the achievement of zero-waste, the target recycling rate for each type of waste is set for each department and branch office, and a company-wide movement (challenges towards zero-waste) is launched. (See p.16.)

In the environmental management system, model offices were selected from each business area, such as branch offices, power stations, power system maintenance offices and customer service offices to acquire ISO14001 certification. A system conforming to ISO14001 was developed based on achievements and will be applied company-wide in fiscal 2002 and 2003. (See p.6.)

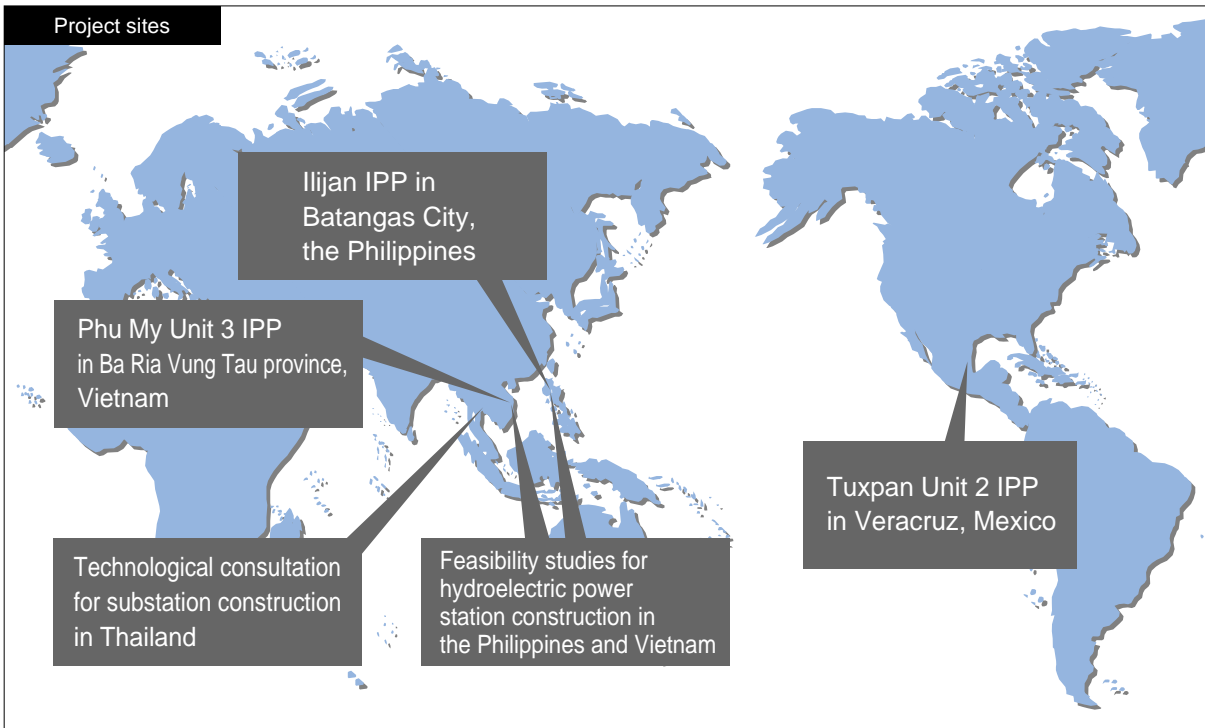
Environmental administrators were designated in all departments and offices to supervise and manage environmental activities. (See p.6.)

The promotion of the Green Electric Power System included seminars for NGOs and awareness enhancement for environmental administrators from each office. This has prompted better understanding both inside and outside the company, enforced measures at each branch office such as thorough voluntary target establishment, and increased the number of subscribers to the system. (See p.13.)

To propel the Group companies' environmental management, the Group Environmental Management Promotion Subcommittee was established under the Group Management Association. The subcommittee draws up an environment philosophy and policies as well as activity targets in order to enhance the Group' efforts. (See p.46.)

5. Status of Overseas Business Deployment

Kyushu Electric Power proceeds with environmentally conscious businesses abroad, such as global warming prevention, as evidenced in the construction of high-efficiency thermal power stations and feasibility studies for its hydroelectric power station construction project.



Thermal power generation projects (IPP)

Project name	Partners	Generation method	Output (10,000kW)	Construction began	Start of commercial operations
Tuxpan Unit 2 IPP, Mexico	Mitsubishi Corporation	Gas combined cycle	49.5	February 2000	December 2001
Ilijan IPP, Philippines	Korea Electric Power Corp., Mitsubishi Corporation, Mirant (USA),		120	March 1999	June 2002
Phu My Unit 3 IPP, Vietnam	BP (UK), SembCorp (Singapore), Nissho Iwai Corp.		71.7	December 2001	Scheduled in December 2003

Feasibility study of projects for global environment and plant activation
(Commissioned by the Japan External Trade Organization: JETRO)

Feasibility studies for hydroelectric power station construction projects in the Philippines and Vietnam began in August 2002.

Technological consultation for substation construction for the Provincial Electricity Authority (PEA)

A contract was signed with the PEA for the overall management of construction work and consultation started in July 2001.



Tuxpan Unit 2 IPP, Mexico

6. Participation in the World Bank's Prototype Carbon Fund (PCF)

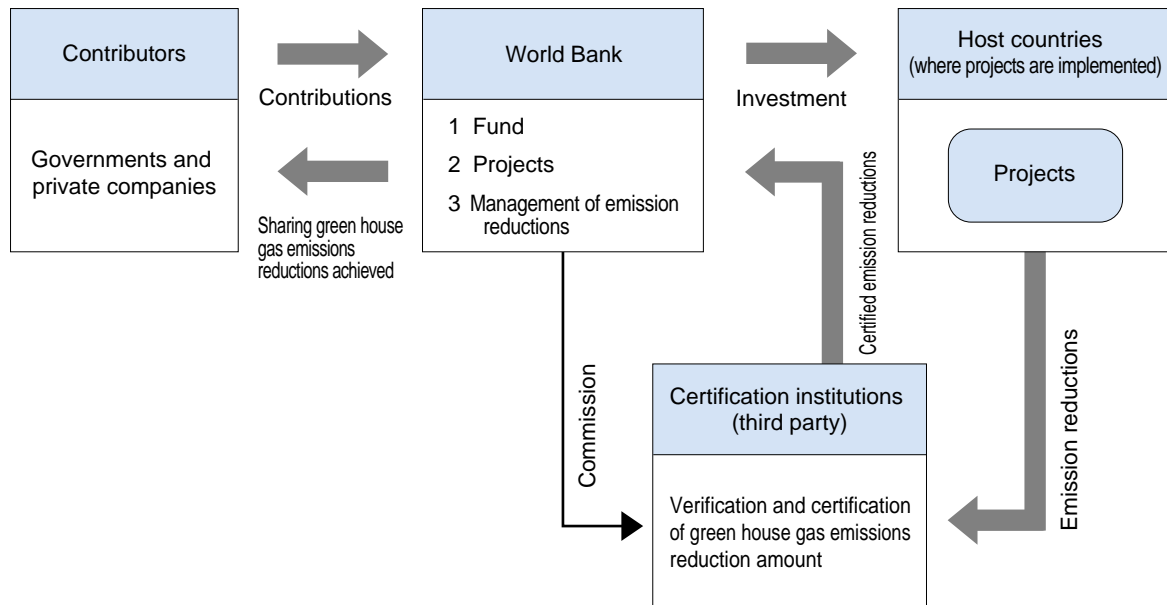
(1) Outline of the PCF

The World Bank established the Prototype Carbon Fund (PCF) in January 2000 to address greenhouse gas reductions internationally. Kyushu Electric Power became one of its proud participants. The PCF enables the World Bank to effectively invest funds from contributors (governments and companies) in greenhouse gas emission reduction projects that are implemented in developing countries and economies in transition. Greenhouse gas emission reductions achieved by applying the Kyoto Mechanism will be shared among contributors.

Operation period	January 2000 to December 2012
Fund amount	180 million dollars
Contribution by Kyushu Electric Power*	5 million dollars + an additional contribution of 3 million (scheduled to enter the contract in November 2002)
Contributors	6 countries, 17 companies including Kyushu Electric Power

* The contribution is paid in annual installments until 2012, according to project investments for the year.

PCF operation diagram



(2) Status of PCF

The PCF plans to invest in 30-35 greenhouse gas emission reduction projects in various countries throughout the world. By July 2002, the purchase of greenhouse gas reductions for 11 projects was agreed.

Overview of projects for which the purchase of emission reductions were agreed

Host country	Outline of projects
Latvia	Methane recovery and power generation at waste disposal sites
Brazil	Use of charcoal for pig iron production (alternative to coal and coke)
Chile	Construction of a small hydroelectric power station (alternative to coal and natural gas)
Uganda	Construction of a small hydroelectric power station (alternative to diesel electric power generation)
Poland	Construction of a geothermal district heating plant (alternative to coal), improvement of heating system efficiency
	Biomass heating for factories (alternative to coal)
Czech Republic	Improvement of heating system efficiency for hospitals
	Construction of gas district heating plant (alternative to coal), improvement of district heating system efficiency

(3) Fostering personnel

Kyushu Electric Power sends a new employee to the World Bank to address CO2 measures for the future through fostering and training of personnel.

Message from the employee sent to the World Bank

“ I have been sent to the World Bank headquarters in Washington, DC to join the PCF management team as a trainee. Even though it has been only five months, I have taken a part in advanced efforts for PCF greenhouse gas reduction projects. The staff at the PCF workplace tackles tough jobs vigorously, constantly traveling around the world because global warming is an important and timely issue throughout the world.

The Kyoto Mechanism still suffers ambiguity in its operation rules, and has not been actively implemented yet. However, it is a system from which developed countries can benefit by meeting Kyoto Protocol commitments at a low cost, while developing countries can enjoy the benefits of sustainable development through new investment and technological contributions offered by developed countries. The system seems quite effective from a global standpoint. Especially for Japan, it is important to study and utilize this system, since Japan has already made significant progress in energy conservation and will be required to make even more effort than other countries to reduce greenhouse gas emissions. In light of this, I have much to learn from the PCF, which is forging a path where there is none, and I am very much inspired by the forward-looking, energetic PCF team led by the reliable fund manager Ken.”

Daisuke Tsuchiya, sent to the World Bank as a trainee from the Environmental Affairs Dept.



In front of the World Bank headquarters, Washington, DC

《Reference》Kyoto Protocol

The Kyoto Protocol was adopted in December 1997 at the Third Conference of Parties to the UN Convention on Climate Change (COP3) held in Kyoto, and set quantified targets of greenhouse gas reductions for developed countries including economies in transition. Different target values have been set for different countries, such as 6% for Japan, 7% for the USA and 8% for the EU. No targets have been set for developing countries.

Target gas	Carbon dioxide, methane, dinitrogen monoxide, three freon alternative gases (HFC, PFC, SF6)
Base year	1990 (1995 may be the base year for HFC, PFC and SF6)
Target period	First commitment period is from 2008 to 2012
Reduction target	<ul style="list-style-type: none"> • Reduction of total emissions from developed countries by at least 5% from the 1990 value • Target values are set for each developed country
Requirements to effectuate	<ol style="list-style-type: none"> 1. Ratification by 55 or more Parties to the UN Framework Convention on Climate Change 2. Total CO2 emissions from the developed countries that ratified the protocol amount to 55% or more of that from all developed countries <p>This Protocol shall enter into force on the ninetieth day after both 1 and 2 above are met.</p>

Kyoto Mechanism

The Kyoto Mechanism refers to systems that are approved in the Kyoto Protocol and promote every country to achieve greenhouse gas reductions through international cooperation.

- Emission Trading developed countries trade assigned amounts
- Joint Implementation developed countries jointly implement emission reduction projects and share the reductions
- Clean Development Mechanism developed countries cooperate with emission reduction projects in developing countries and receive resulting reductions

7. Measures for Green Procurement

(1) Green Procurement Policy

Kyushu Electric Power promotes green procurement under its Green Procurement Policy for the creation of a recycling-based society.

Policies of Green Procurement

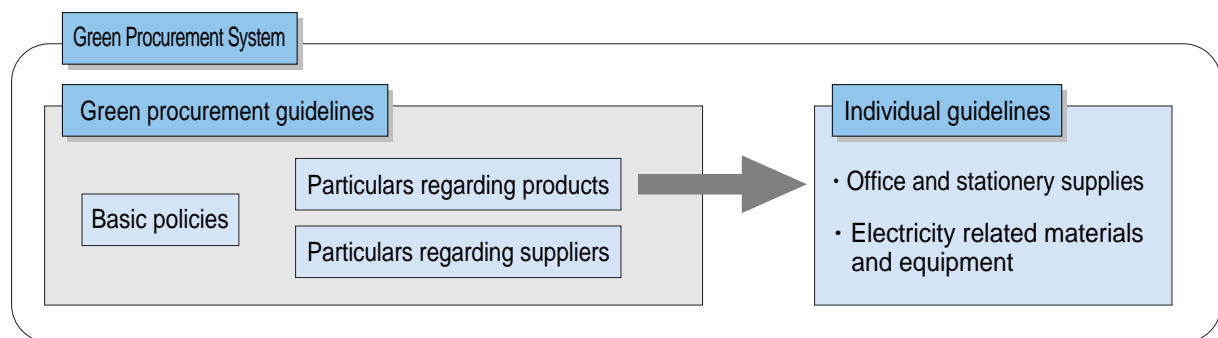
Kyushu Electric Power recognizes its task of contributing to the creation of a recycling-based society, and endeavors to mitigate environmental load in all business activities including the procurement of products with the cooperation of all the suppliers of Kyushu Electric Power.

Upon procurement, each employee takes responsibility and reviews the necessity of the products.

Kyushu Electric Power actively promotes this system, which encourages the purchase of environmentally friendly products.

Under the Green Procurement, the company takes into account environmental aspects in addition to practical considerations of price, quality and delivery time when purchasing products. It aims to promote the procurement of eco-friendly products under collaborative partnership with suppliers, thereby strengthening relations with the suppliers in the field of environmental activities toward the creation of a recycling-based society.

(2) Green Procurement guidelines



Particulars regarding products

Office and stationery supplies (goods on the market)

The company selectively purchases office and stationery supplies with the EcoMark or other socially recognized environmental labeling.

Individual guidelines for items and judgment criteria are set for products purchased, according to their categories.

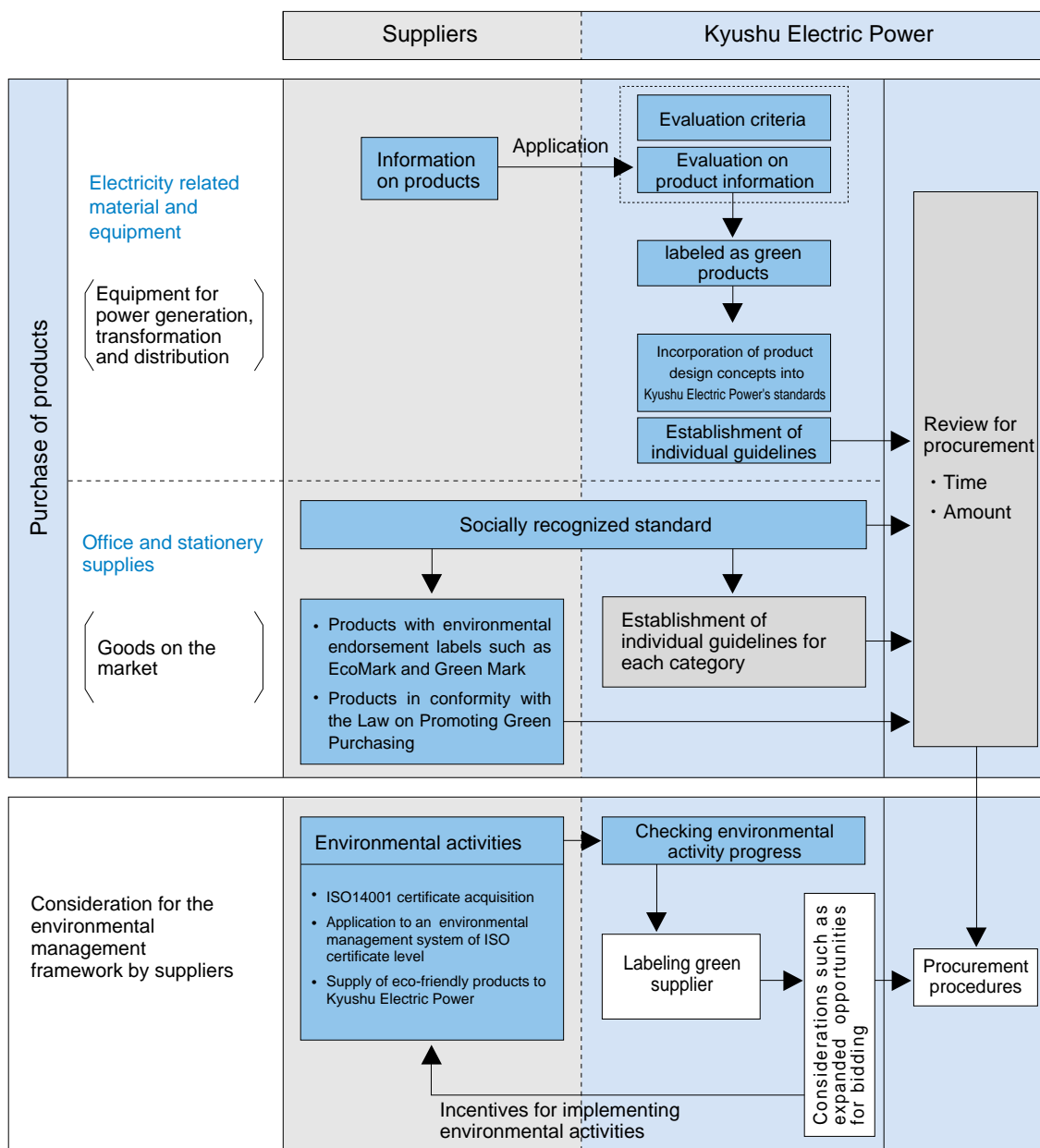
Electricity related material and equipment (inclusive of construction work and services)

The company welcomes information and proposals on environmentally friendly products from suppliers. We evaluate information and proposals based on the degree of contribution to environmental load reduction in their total lifecycles. Products and ideas judged to be based on environmental considerations are favorably reviewed for procurement.

Particulars regarding suppliers

- Kyushu Electric Power requests its suppliers to make self-evaluations on their progress in environmental activities and submit reports on the subject.
- Based on the information submitted, Kyushu Electric Power checks the environmental activity status of these suppliers. When a supplier is judged to be active in implementation, the company designates the supplier to be a Kyushu Electric Power 'green supplier' and makes an announcement with prior consent.
- For those labeled as green suppliers, special consideration will be made after a certain time from the start of the green procurement system operation, such as expanded opportunities for bidding.

(3) Flow of green procurement



For inquiries on the green procurement system:

Purchase Planning & International Procurement Group, Materials and Fuels Dept., Kyushu Electric Power Co., Inc.
Phone: 81-92-726-1645

8. Kyushu Electric Power Group's Environmental Activity Progress

Kyushu Electric Power Group boasts technologies and expertise accumulated through its operation, and operates in the general energy business, with electricity as its mainstay. It is also engaged in a wide range of businesses such as information and telecommunications, environment and recycling, and lifestyle services.

The area of environment and recycling includes fluorescent tube recycling, power generation using waste heat from waste incineration, and recycling of confidential documents.

The Group Environmental Management Promotion Subcommittee under the Group Management Association, comprising the Kyushu Electric Power Group's 27 member companies, has established an Environment Philosophy and Environment Policies thereby promoting the environmental management efforts of the Group.

In fiscal 2002, the Environmental Committee (tentative name) was established in each of the 27 member companies. The committees take charge in implementing measures to achieve each company's targets set for greenhouse gas reduction and recycling promotion, thereby following the PDCA cycle in environmental activities.

For other potential environmental loads that have not been recorded, methods will be developed in fiscal 2002 and actual management will start in fiscal 2003, based on a unified group target.

(1) Kyushu Electric Power Group Environment Philosophy and Environment Policies

The Environment Philosophy states the principle of the Group's commitment to environmental activities; and the Environment Policies clarify specific guidelines for implementing such activities.

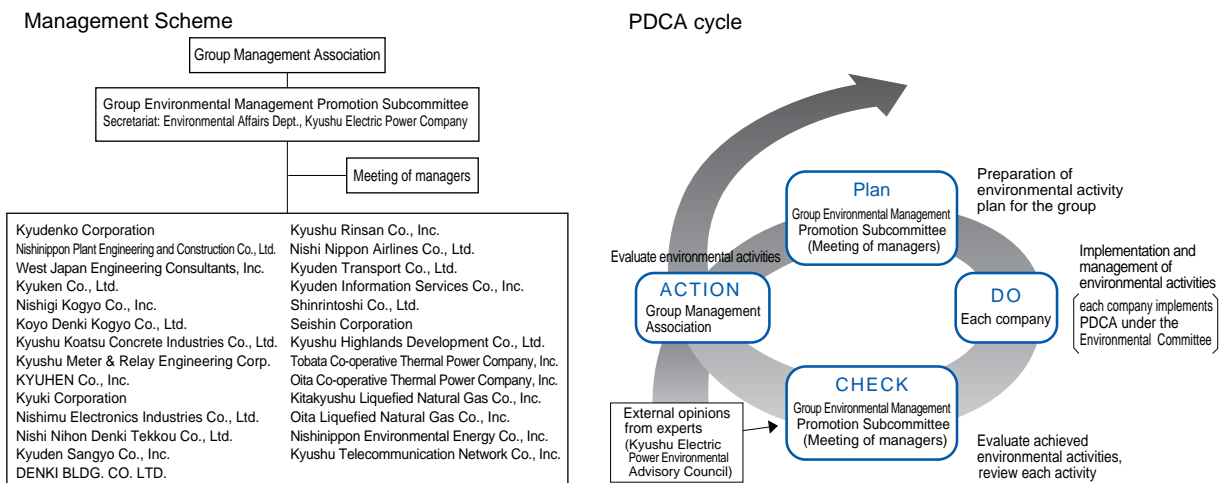
Environment Philosophy

The Kyushu Electric Power Group recognizes the importance of an environmental preservation consciousness in every aspect of energy supply and other businesses, and works towards the realization of an affluent society and better global environment.

Environment Policies

1. We fulfill our responsibility to society by complying with all environmental preservation laws and regulations.
2. For the creation of a recycling-based society, we work to reduce the environmental load through the effective use of energy and resources, as well as recycling of waste.
3. We tackle all environmental issues aggressively and contribute to society through continuous environmental activities.
4. We disclose environment-related information and work for improved communication with society.

(2) Environmental Management Promotional Scheme



(3) Handling and storage of environmentally damaging substances by Kyushu Electric Power Group (FY2001 records)

Starting this year, Kyushu Electric Power Group follows and publishes the amount and handling status of environmentally damaging substances. In regard to substances for which regulations are imposed under the law, the Group continues proper operation and management as required, and examines measures for possible environmental load reduction.

PRTR System

PRTR investigation results (FY2001)

(Unit: kg)

Index No.	Chemical substances	Applications	Company	Amount handled	Amount released into the environment			Amount transferred
					Air	Water	Soil	
1	Water-soluble zinc compounds	Hot dip galvanizing	Nishi Nihon Denki Tekkou Co., Ltd.	103,303	70	0	0	103,233
40	Ethyl benzene	Coating	Kyushu Meter & Relay Engineering Corp.	1,297	1,297	0	0	0
43	Ethylene glycol	Coolant	Nishinippon Environmental Energy Co., Inc.	8,207	8,207	0	0	0
63	Xylene	Coating	Kyushu Meter & Relay Engineering Corp.	5,610	5,610	0	0	0
			Kyuhon Co., Inc.	2,550	2,550	0	0	0
145	Dichloromethane	Cleaning	Nishimu Electronics Industries Co., Ltd.	9,000	8,750	0	0	250
227	Toluene	Coating	Kyushu Meter & Relay Engineering Corp.	6,210	6,210	0	0	0
			Kyuhon Co., Inc.	1,123	1,123	0	0	0
230	Lead and its compounds	Hot dip galvanizing	Nishi Nihon Denki Tekkou Co., Ltd.	4,354	0	0	0	4,354
		Soldering	Nishimu Electronics Industries Co., Ltd.	1,100	0	0	0	0

N.B. 1: Substances of which one ton or more were handled annually are listed above.

2: Please refer to p.22 for investigation results of Kyushu Electric Power.

PCB

PCB held by the Kyushu Electric Power Group is shown below and kept at special storage areas under strict control.

The group plans to render it harmless by the deadline of the year 2016, according to the Law Concerning Special Measures against PCB Waste, effective July 2001.

PCB storage

Equipment using PCB	Amount	Management status	Companies possessing PCB
Transformer	36 units	6 units in use, 30 units kept in strict security	Kyudenko Corporation, DENKI BLDG. CO. LTD., Tobata Co-operative Thermal Power Company, Inc., Oita Co-operative Thermal Power Company, Inc.
Capacitor	95 units	6 units in use, 89 units kept in strict security	Kyudenko Corporation, Nishinippon Plant Engineering and Construction Co., Ltd., Koyo Denki Kogyo Co., Ltd., Kyushu Koatsu Concrete Industries Co., Ltd., Kyushu Meter & Relay Engineering Corp., Kyuhon Co., Inc., Kyuki Corporation, Nishimu Electronics Industries Co., Ltd., Nishi Nihon Denki Tekkou Co., Ltd., DENKI BLDG. CO. LTD., Kyushu Highlands Development Co., Ltd., Tobata Co-operative Thermal Power Company, Inc., Oita Co-operative Thermal Power Company, Inc.
Stabilizer	112 units 2 drums	All units kept in strict security	Kyudenko Corporation, DENKI BLDG. CO. LTD., Tobata Co-operative Thermal Power Company, Inc., Oita Co-operative Thermal Power Company, Inc.
Others	8 units, 74 l	All units kept in strict security	Kyuden Sangyo Co., Inc., DENKI BLDG. CO. LTD., Tobata Co-operative Thermal Power Company, Inc.

N.B. Please refer to p.22 for investigation results of Kyushu Electric Power.

Measures against air pollution

SOx and NOx emissions from power generating facilities

Name of companies and units	Installed capacity (MW)	Fuels used	Records		Agreement with local governments		
			SOx (ppm)	NOx (ppm)	SOx (ppm)	NOx (ppm)	
Tobata Co-operative Thermal Power Company, Inc.	Unit 2	156	Mostly LNG	Not measured because emissions are 10m ³ /h or less	91	18	93
	Unit 3	250	Mostly LNG		72	11	80
	Unit 4	375	Mostly LNG		17	19	19
Oita Co-operative Thermal Power Company, Inc.	Unit 1	253	Mostly residue gas	306	170	326	180
	Unit 2	253	Mostly residue gas	303	169		180

N.B. 1: The records are the maximum values for the year.

2: The Air Pollution Control Law does not require measurement of SOx emissions when its emission is 10m³/h or less.

Others

The group's aim for the future is to replace specific freons with alternative freons and recover SF₆ gas, thereby reducing environmental load.

(4) Promotion of environmental management

Kyushu Electric Power Group plans to address the items below as measures for fiscal 2002 environmental management:

Item	Specific measures
Creation of an environmental management framework	Establish the Environmental Committee (tentative name) in all Group companies to examine specific environmental activities and implement PDCA as an organizational measure All group companies aim for ISO14001 acquisition by a fiscal year to be determined, or examine the specific content towards the development of an ISO14001-based environmental management system
Green procurement	Selectively purchase environmentally friendly office and stationery supplies such as those with an EcoMark when costs are roughly the same as previously used products Expand green procurement to products other than those for office and stationery supplies, as long as it is reasonable for each company's situation
Measures for recycling	Raise rates of paper recycling, recycled paper use, and industrial waste recycling Promote measures for recycling confidential documents and fluorescent tubes
Environmental education	Study meetings on environmental management and activities led by the Environmental Affairs Dept. of Kyushu Electric Power Joint training for the development of an environmental management framework Organization of environment related seminars, etc. Study tour to model companies and offices with advanced environmental activities
Promotion of green power	Measures to boost Green Electric Power System subscription for the promotion of natural energy Seminars organized by Environmental Affairs Dept. of Kyushu Electric Power
Joint environmental preservation activities	Greening activities such as forestation programs Cleaning of local communities

(5) Main environmental preservation measures by Kyushu Electric Power Group

Environmental measures for transmission line construction by Kyuken Co., Ltd.

Transmission line construction work means building power supply facilities. This work is often conducted near natural or living environments. This fact requires priority to be placed on environmental measures. The problems that construction can cause for the natural environment include deforestation, water pollution (ground and river water) and disposal of construction materials (industrial waste disposal); and for the living environment, noise, vibration, dust and reduction of natural scenery.

Kyuken Co., Ltd. conducts necessary construction work while thinking of techniques to minimize effects on the environment. This photograph shows one example where a soundproof structure and walls with scenic environment considerations are set up as a measure to ease noise during shield

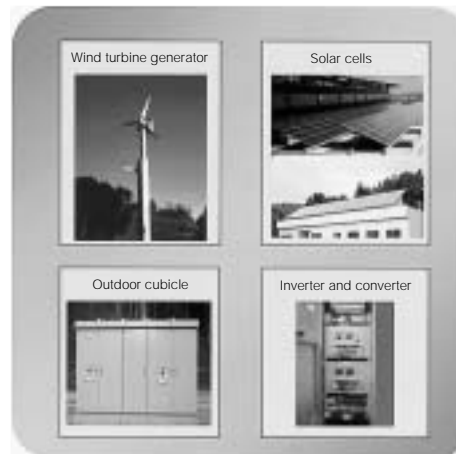
tunneling work to lay underground transmission lines.



Tunneling work, part of the new construction of a Kurume branch-line (start shaft side)

Development and sale of wind and photovoltaic hybrid power generation systems to take advantage of multiple natural energies by Nishimu Electronics Industries Co., Ltd.

This wind and photovoltaic hybrid power generation method addresses the relation between the two natural elements of wind and sunlight; wind is usually strong when the sunlight is weak, and vice-versa. Nishimu Electronics Industries Co., Ltd. developed and sells a wind and photovoltaic hybrid power generation system that captures multiple energies from nature in such opposite weather conditions (two related patents are pending). This system may be applied in islands or remote areas where no electric power system is in place thanks to the technology that created this system.



ISO14001 acquisition and activities for environmental preservation by Nishinippon Environmental Energy Co., Inc.

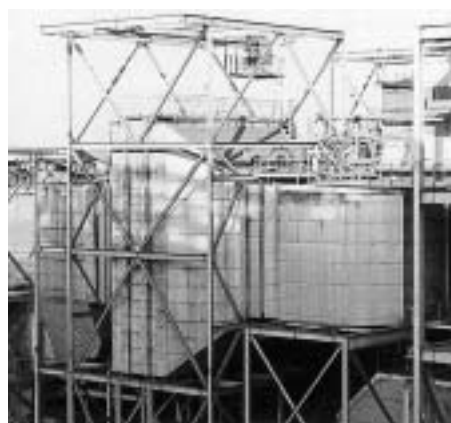
Nishinippon Environmental Energy Co., Inc. is engaged in a district heating and cooling project for the Momochi, Tenjin and Shimokawabata areas of Fukuoka City as well as in environment and energy related projects and consultation.

This company acquired ISO14001 certification on October 6, 2000 for its business activities, and is tackling the task of effective energy use, waste reduction and natural resource conservation through

recycling in order to contribute to global environmental preservation. Additionally, the company launched a consultation business on ISO14001 certificate acquisition in fiscal 2002 based on the standpoint that the knowledge and skills accumulated through its environmental management system should be given back to society for wider utilization.

Measures against air pollution by Tobata Co-operative Thermal Power Company, Inc.

Tobata Co-operative Thermal Power Company, Inc. uses LNG and residue gas with no impurities such as sulfur for power generation purposes, which in turn ensures that flue gas contains almost no SOx or particulates. The company adopted a two-stage combustion method and an exhaust gas re-circulation combustion method to reduce NOx emissions from the boiler. The NOx problem is also addressed by a low NOx burner and a denitrification facility installed in Unit 4. The flue gas is emitted from 200-meter joint high-stack outlets. The height helps to keep the NOx level very low at ground level.

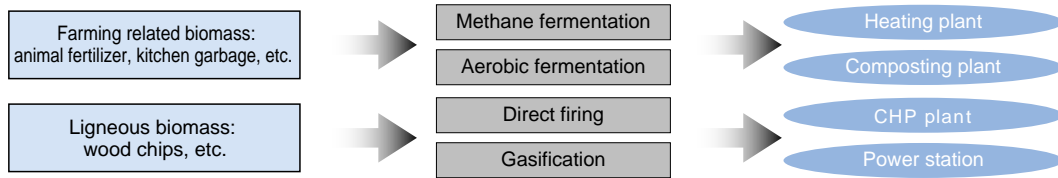


The denitrification facility

Comprehensive engineering for a biomass energy recovery plant by Nishinippon Plant Engineering and Construction Co., Ltd.

Nishinippon Plant Engineering and Construction Co., Ltd. has been involved with engineering elements of facilities for wind and photovoltaic power generation and dioxin control under the theme of harmony between energy and the global environment. Currently, efforts are being made in the field of biomass energy recovery in consideration of environmental issues and resource recycling. Biomass (wood chips, kitchen garbage,

animal fertilizer, etc.) originates from living organisms, and is drawing attention as a carbon-neutral recyclable energy which does not add to existing CO₂. The company is devoted to the engineering of biomass energy recovery facilities, such as those for biomass power generation and methane fermentation, by utilizing technologies accumulated from the construction and maintenance of power stations and environment-related fields.



Industrial waste recycling by Nishi Nihon Denki Tekkou Co., Ltd.

At the factory of Nishi Nihon Denki Tekkou Co., Ltd., hot dip galvanizing is included in the manufacturing process. This process requires a pretreatment of acid cleaning, where concentrated sulfuric acid is used after dilution. The purpose of acid cleaning is to remove rust from steel material, but concentrated sulfuric acid becomes unfit for use over time and becomes a waste product. This waste was once neutralized and disposed of as sludge. However, it is now sent to a special company and

treated for reuse. The treatment company incinerates it in a sulfur burner, transfers the exhaust gas to the sulfur production facility, and recovers the concentrated sulfuric acid that was once used. We purchase this concentrated sulfuric acid and use it for acid cleaning again. The residue from the sulfur burner is also used as material.

Launching of LNG (liquefied natural gas) sales by Kitakyushu Liquid Natural Gas Co., Inc.

LNG is an environmentally friendly, clean energy source that, when burned, emits no SO_x or particulates, and less NO_x and CO₂ compared to coal or oil. Kitakyushu Liquid Natural Gas Co., Inc. began LNG sales in April 2002 through Kitakyushu LNG Lorry. Gas is delivered to gas utilities using a tank truck.



(6) Business outline of the 27 Kyushu Electric Power Group companies

Company name	Main businesses	Contact number
Kyudenko Corporation	Design and construction of distribution lines, electricity, air conditioning pipes, information and telecommunications, and environmental facilities	81-92-523-6255
Nishinippon Plant Engineering and Construction Co., Ltd.	Construction, repair and operation of various power stations	81-92-533-0011
West Japan Engineering Consultants, Inc.	Comprehensive construction consultation	81-92-781-2831
Kyuken Co., Ltd.	Transmission line construction work	81-92-523-9123
Nishigi Kogyo Co., Inc.	Construction and maintenance of facilities for civil engineering; and manufacturing and installation of steel structures such as floodgate	81-92-711-8811
Koyo Denki Kogyo Co., Ltd.	Manufacture and sale of insulators, flashers, and streetlights for crime prevention	81-96-353-1268
Kyushu Koatsu Concrete Industries Co., Ltd.	Manufacture and sale of concrete poles and piles	81-92-771-3631
Kyushu Meter & Relay Engineering Corp.	Maintenance, adjustment and manufacturing of watt-hour meters	81-92-541-0465
Kyuhen Co., Inc.	Manufacture and sale of transformers, electric water heaters, etc.	81-940-42-1364
Kyuki Corporation	Manufacture and sale of watt-hour meters, current limiters and other supplementary services	81-92-551-1731
Nishimu Electronics Industries Co., Ltd.	Design and creation of information, telecommunications and control systems	81-92-461-0246
Nishi Nihon Denki Tekkou Co., Ltd.	Design, manufacture and sale of transmission towers and steel structures	81-92-771-2761
Kyudenh Sangyo Co., Inc.	Insurance, fuel receiving and management for power stations, and operation of environmental preservation facilities	81-92-781-3061
DENKI BLDG. CO. LTD.	Rental business for rooms, meeting places and parking lots	81-92-781-0681
Kyushu Rinsan Co., Inc.	Landscaping, planting, forestry and marine product industry	81-92-562-3013
Nishinippon Airlines Co., Ltd.	Transmission line patrol and material transport using helicopters	81-92-761-6257
Kyuden Transport Co., Ltd.	Transport of general freight and specific passengers and collection and transport of industrial waste	81-92-761-2523
Kyushu Information Services Co., Inc.	Development, sale and operation of software, and information system-related consultation and temporary personnel service	81-92-781-9671
Shinrintoshi Co., Ltd.	Real estate (sale and purchase, rental and introduction)	81-92-761-4060
Seishin Corporation	Wholesale materials for electrical and construction work	81-92-711-8151
Kyushu Highlands Development Co., Ltd.	Management of hotels and golf courses	81-977-84-3151
Tobata Co-operative Thermal Power Company, Inc.	Electricity wholesale and supply	81-93-871-6931
Oita Co-operative Thermal Power Company, Inc.	Electricity wholesale and supply	81-97-558-4314
Kitakyushu Liquid Natural Gas Co., Inc.	Receiving, storage, gasification, delivery and sale of LNG	81-93-882-8900
Oita Liquefied Natural Gas Co., Inc.	Receiving, storage, gasification, delivery and sale of LNG	81-97-522-1900
Nishinippon Environmental Energy Co., Inc.	District heating and cooling, energy solutions, dispersed power source operation	81-92-526-0601
Kyushu Telecommunication Network Co., Inc.	Telecommunications (private lines, phones, broadband, etc.)	81-92-981-7293

(7) Other group companies that deploy environment related businesses

Fluorescent tube recycling business Japan Recycling Light Technology & System

Japan Recycling Light Technology & System undertakes the recycling of fluorescent tubes and production and sale of recycled fluorescent tubes.

- Establishment: May 2000, Start of operations: October 2001
- Contact number: 81-93-752-2386



Confidential document recycling business Kyushu Environmental Management Corporation

Kyushu Environmental Management Corporation is engaged in recycling confidential documents, production and sale of recycled paper, and document storage.

- Establishment: May 2001, Start of operation: November 2001
- Contact number: 81-92-725-5208



II. Environmental Activities



1. Constant Thermal Output Operation at Nuclear Power stations

Constant thermal output operation will be adopted at all Kyushu Electric Power nuclear power stations because this method contributes to a more effective use of the existing power generation capacity and reduces CO₂ emissions.

(1) Description of constant thermal output operation

At nuclear power stations, electricity is made by generators connected to turbines rotated by steam produced from the heat emitted by the fission reaction of uranium and other materials. The operation method in question, which maintains the reactor thermal output at a rated value, is called the constant thermal output operation. Meanwhile, the conventional operation method, which maintains electric output at a constant value, is called the constant electric output operation.

Conventional operation method and constant thermal output operation

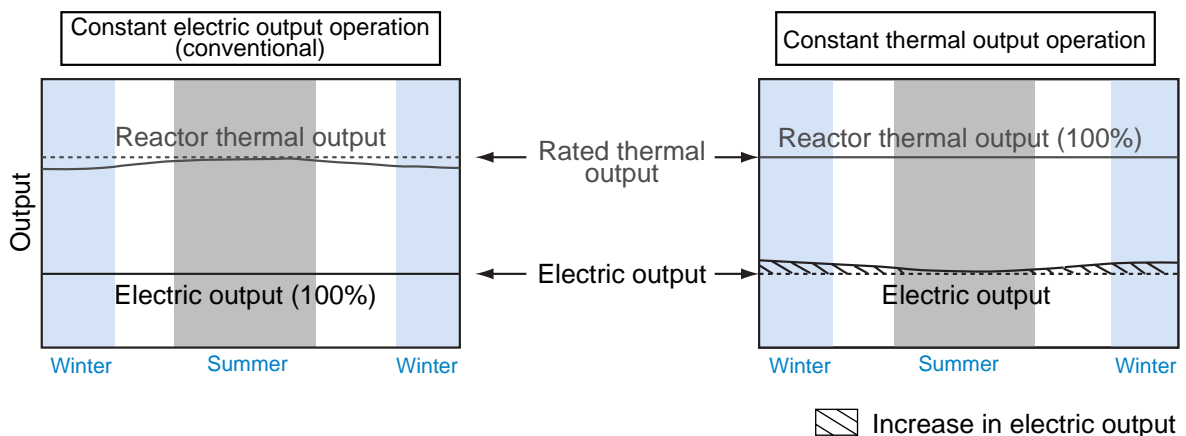
Conventional operation method (constant electric output operation)

In winter, seawater is naturally colder, therefore increasing nuclear power stations' thermal efficiency. Consequently, if the reactor thermal output is kept constant, electric output naturally rises, exceeding the rated electric output of 100%. Japan's nuclear power stations have typically responded to this issue by lowering reactor thermal output in winter and keeping electric output constant.

Constant thermal output operation

Constant thermal output operation is not a special operation system, but an operation method to keep the reactor thermal output at a rated thermal output of 100%, the value approved by the government. This method increases electric output about 1-4% over the 100% rated electric output in winter, when seawater temperature falls. In many countries such as the US, France, the UK, Germany and South Korea, nuclear reactors are commonly operated constantly at their rated thermal outputs. In addition, before beginning the constant thermal output operation, the safety and soundness of steam turbines and generators are evaluated at every relevant plant, and the results are reported to the government for confirmation that there are no safety problems.

Comparison between constant electric output operation and constant thermal output operation



2. Recycling of Nuclear Fuel (Plu-Thermal project)

Spent uranium fuel contains plutonium that is newly produced and can be used as a fuel. The Plu-Thermal project, therefore, aims to use the plutonium extracted and recycled from spent fuel in existing thermal reactors.

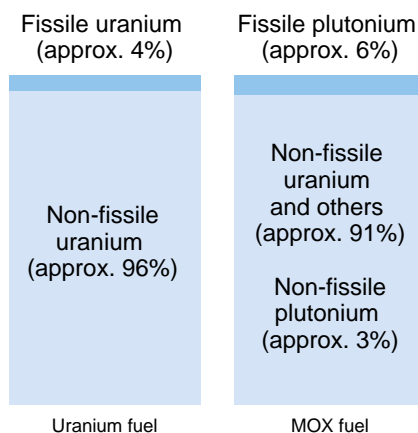
N.B. The term 'Plu-Thermal' comes from an abbreviation of the terms 'plutonium' and 'thermal reactor'

Kyushu Electric Power is aiming to apply plutonium use in thermal reactors at a plant by 2010 as the earliest possible date. We are currently undertaking an investigation to establish a specific timetable and to select the plant. After a plan has been established, we will give detailed explanations to the local communities near the plant, and proceed once we have gained their understanding.

(1) Effective use of uranium as a resource

Resources such as oil, coal, natural gas and uranium are limited, and Japan lacks natural resources. Japan's basic policy is therefore to extract and recycle remaining uranium and newly produced plutonium from spent uranium fuel in order to effectively use its limited resources.

(2) Uranium fuel and mixed oxide (MOX) fuel

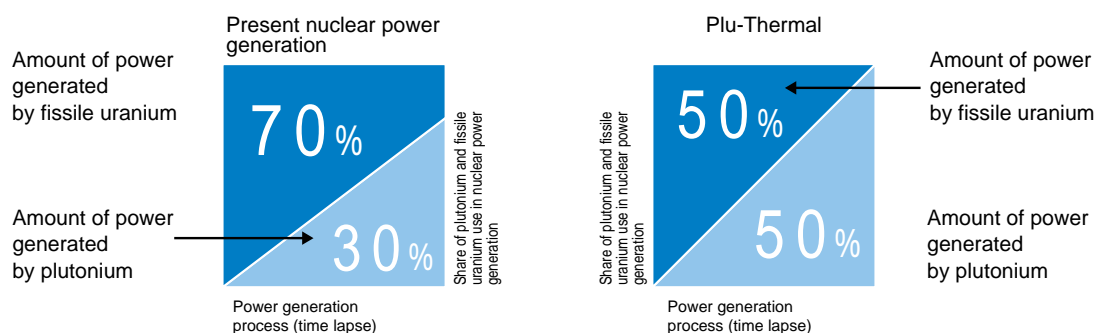


The spent uranium fuel used at nuclear power stations still contains about 94% reusable uranium and about 1% newly generated plutonium. In other words, about 95% of spent uranium fuel is recyclable. A mixture of uranium oxide and plutonium oxide called MOX (mixed oxide) fuel substitutes fissile plutonium (about 6%) for fissile uranium (about 4%), used for conventional uranium fuel. The remaining 94% is covered by non-fissile uranium or plutonium. Additionally, the other specifications of MOX fuel are almost identical to those of conventional uranium fuel.

(3) Safety of Plu-Thermal

Even at present nuclear power stations using uranium fuel only, some portion of the newly produced plutonium converted from non-fissile uranium during the power generation process has already been used in power generation. The amount of power generated by burning plutonium accounts for about 30% of the total power generated at nuclear power stations.

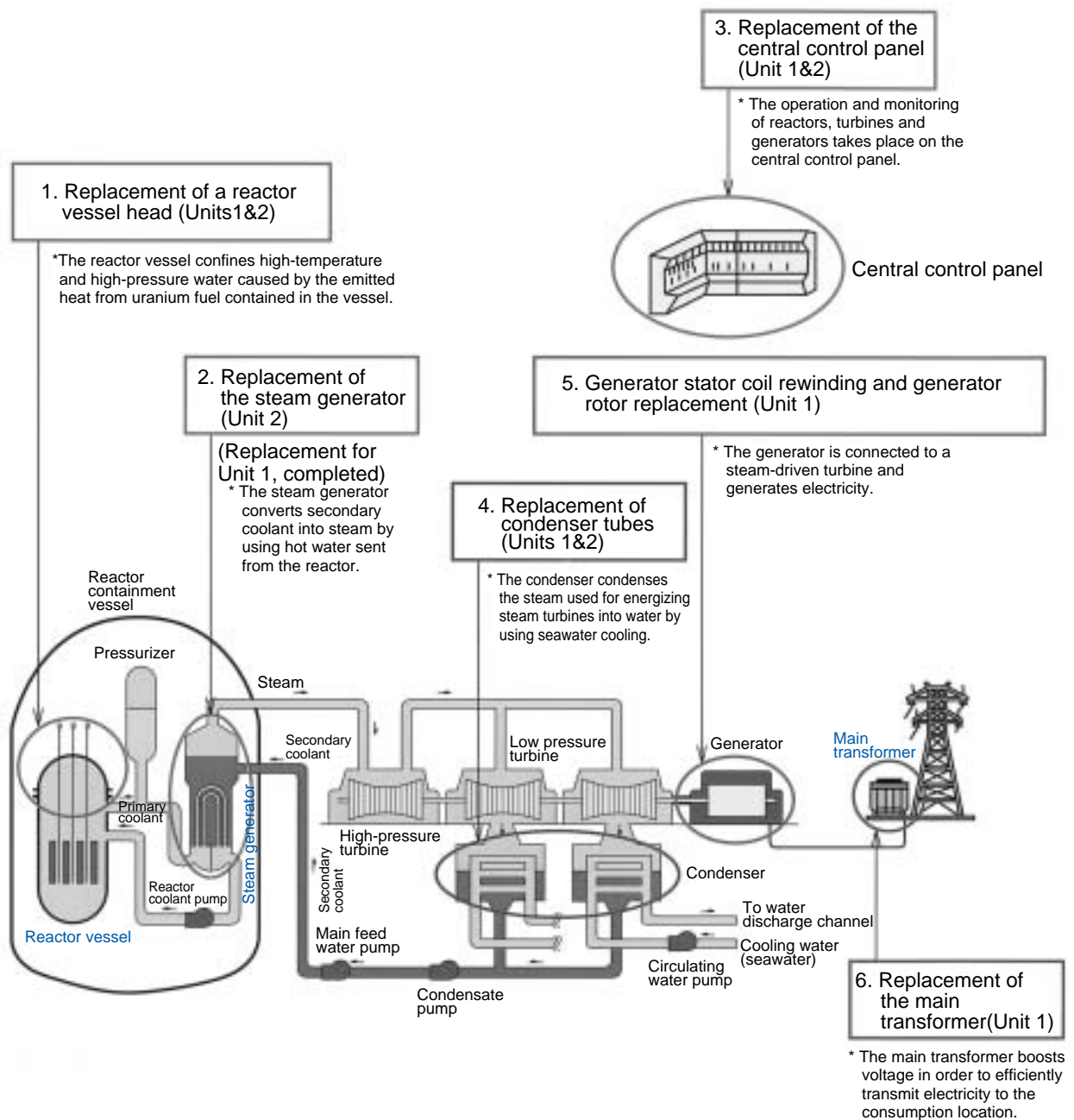
The use of MOX fuel may increase the share of plutonium used in power generation. The use of MOX at nuclear power stations, however, does not involve a major restructuring of operation techniques, but employs nearly conventional operation methods. Plu-Thermal application has been widely used abroad; and its reliability has been fully verified. In Japan, safety was also confirmed by trial use of Plu-Thermal at Mihama and Tsuruga Nuclear Power Stations.



3. Renewal of Main Components at Genkai Nuclear Power Station

Kyushu Electric Power renewed the main components of Units 1 and 2 at Genkai Nuclear Power Station during the units' 2001 periodical inspections. This renewal aimed to further improve the reliability of components and reduce the dose of radiation exposure to workers during inspections.

(1) Overview of Genkai Nuclear Power Station's plant system and renewal construction details



(2) Description of renewal work

1. Replacement of a reactor vessel head

Cracks were found at the control rod drive mechanism (CRDM) nozzles of a reactor vessel head at an overseas nuclear power station. Although no problems were confirmed during periodical inspections at domestic nuclear power stations, Kyushu Electric Power replaced the existing reactor vessel head with advanced one in order to further enhance component reliability and reduce radiation dose exposure to workers during inspection. The new reactor vessel head features a welding-free integrated structure and employs upgraded CDRM nozzle materials with a modified welding shape.

2. Replacement of a steam generator

The damage on the steam generator tubes for Unit 2 would not have posed safety or technological problems had they been continuously operated while undergoing periodical repair treatment. However, Kyushu Electric Power replaced the conventional steam generator with an advanced one featuring anti-vibration bars, upgraded tube material and a modified tube hole shape for the tube support plate. The reason behind this replacement was to reduce the radiation exposure doses to workers during repair work and to avoid an extension of the periodical inspection period.

3. Replacement of the central control panel

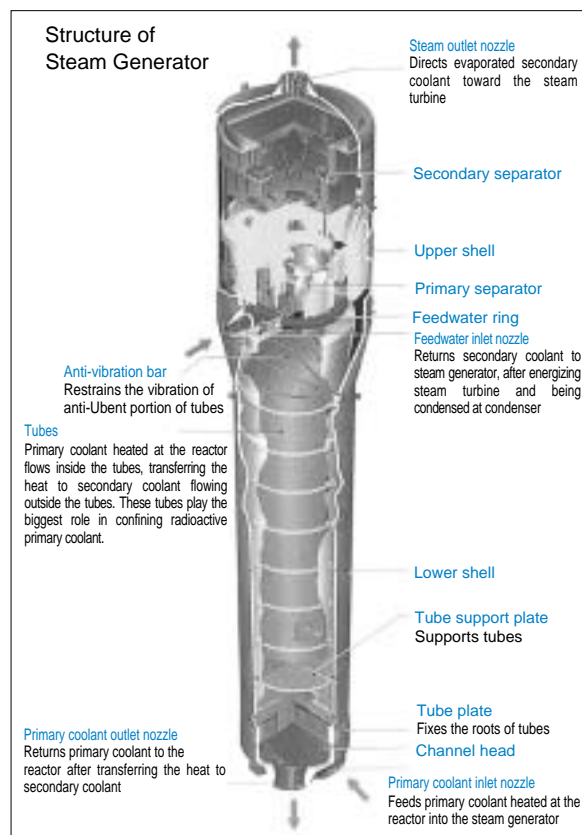
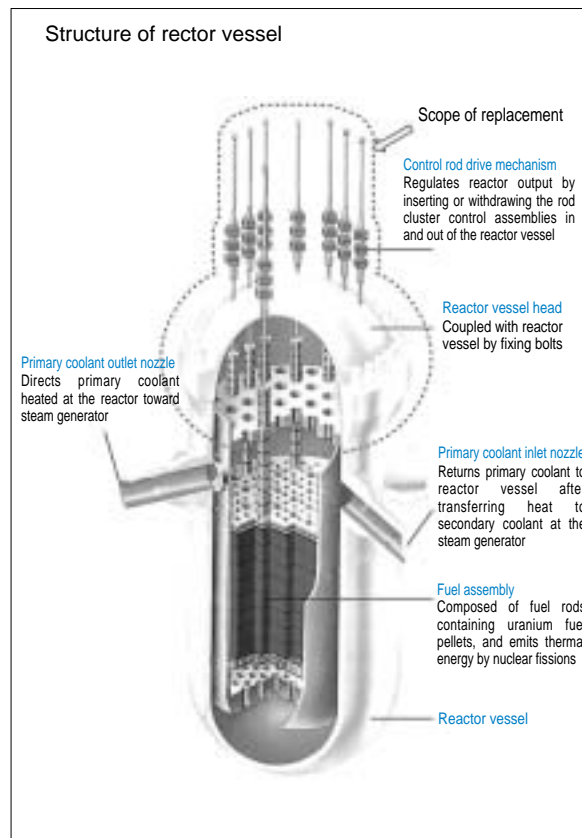
Kyushu Electric Power replaced the central control panels for Units 1 and 2 central control room with advanced control panels. The purpose of such replacement was to achieve higher reliability of plant operation performance and to further improve plant-monitoring performance. Further, the new control panels mainly focus on operability. We have increased the number of television displays equivalent to those currently used at Genkai Units 3 and 4, the most technologically advanced nuclear plant units in the company.

4. Replacement of condenser tubes

Kyushu Electric Power replaced conventional condenser tubes with more corrosion-resistant titanic tubes in order to further improve the reliability of Units 1 and 2 condensers. The change was motivated by an incident at Unit 1 when seashells and other substances contained in the cooling seawater caused cracks in the condenser tubes, resulting in seawater leaking into the condenser through the cracks.

5. Generator stator coil rewinding & generator rotor replacement; 6. Replacement of main transformer

Regarding the generator and main transformer of Unit 1, the generator stator coil was rewound; and the generator rotor and main transformers were replaced in order to achieve higher reliability for these components.



4. Characteristics of Power Sources Utilizing New Energy Sources (Wind and Photovoltaic)

New energy sources including wind and photovoltaic power generation are drawing attention since these are expected to help us efficiently use our limited resources and address global warming issues. It is important to understand the characteristics of new energy and use it effectively because new energy does pose some problems.

(1) Current status of wind power generation

Rapid increase in electric power production

The status of wind power generation in Japan is approximately 281.1MW as of the end of fiscal 2001, and is increasing rapidly due to the availability of large-sized windmills and the advent of wind farms. This is partially attributable to projects supported by New Energy and Industrial Technology Development Organization (NEDO) and power purchases by electric power companies under the terms for wind power generation contracts.

Generation cost varies depending on construction location and installation mode

Costs vary largely according to the installation location and mode

The cost of wind power generation varies widely depending on wind conditions at the installation location and the efficiency of maintenance and inspection costs (e.g. improved efficiency by concentrating the facilities in one location). The costs for a new, large-sized windmill (600kW-class) with an annual mean wind speed of 6-7m/s would be about 7-10yen/kWh, which leads to an assumption that this method of generation might be profitable under the right installation conditions.

Fluctuations in wind affect the quality of electricity

Power cannot be produced with wind power generation if there is no wind or if the wind is too strong. Changes in wind force also affect the quality of electricity generated (frequency and voltage). Quality electricity is very important for effectiveness. Wind power generation requires an electric power system of a certain size.

Kyushu Electric Power's wind power generation records

	Installed capacity (6 units) (kW)	Electric power production (kWh)	Capacity factor (%)
FY2000	1 750	3 572 238	23.3
FY2001	1 750	2 598 858	17.0

N.B. Additional plants of 1,500kW (300kW × 5 units) have been on trial run since fiscal 2001.

High expectations as an auxiliary power source in windy areas

Wind power generation is a clean power source with no CO₂ or SO₂ emissions, and its energy source is inexhaustible. It is essential to actively utilize wind power generation especially as an auxiliary power source in areas with strong, steady wind.

(2) Current status of photovoltaic power generation

Japan boasts the highest installed capacity in the world

Photovoltaic power generation in Japan accounts for approximately 317,000kW (tentative figure) as of the end of fiscal 2000. This is the highest total installed capacity in the world. The increase in the introduction rate for the past several years has been 150%, and it is largely due to the subsidy system for photovoltaic power generation offered by the national government.

Generation costs need to be cut further

Photovoltaic power generation requires further cost reductions.

Thanks to technological developments over the past 25 years, production costs for solar cells have drastically decreased to 2% of their former cost. The cost for the residential system introduction has also been lowered to approximately 850,000 yen/kW. However, the cost of photovoltaic power generation is still 60 yen/kWh according to fiscal 2000 records, which is still expensive in comparison to electricity rates of a little over 20 yen/kWh for residential services. Further technological developments towards cost reductions are required.

Weather affects power generation

With photovoltaic power generation, no power is generated at night, and only an extremely small amount of power can be generated on cloudy or rainy days. The power produced from this method is small compared to thermal or nuclear power generation, requiring a larger space in order to produce more electricity. For example, to produce electricity equivalent to that generated by a 1 million kW-class nuclear power station, a site equaling 1,900 Fukuoka Domes (1.3million m²) is required for photovoltaic power generation.

Kyushu Electric Power's photovoltaic power generation facility records

	Installed capacity (21units) (kW)	Electric power production (kWh)	Capacity factor (%)
FY2000	325	261 020	9.6
FY2001	325	253 072	9.5

N.B. Data regarding electric power production and capacity factors are for plants of 318kW (20 locations), which have instruments installed.

Active utilization and enhancement of environmental awareness

Photovoltaic power generation is a clean and inexhaustible power source like wind power generation, and is expected to become an auxiliary power source through the installation of facilities on the roofs of public buildings, companies and residential homes. A photovoltaic power generation facility itself is excellent environmental educational material when installed at elementary schools and homes. It enhances energy conservation and environmental awareness through its electric power production display and data recording function, as well as through the sale of surplus power.

(3) Measures by Kyushu Electric Power

The introduction of wind and photovoltaic power generation has steadily increased in Kyushu over the past several years in step with awareness of the environment, since these generation methods are clean and inexhaustible in nature. Kyushu Electric Power aims for further promotion of new energy sources through support for the Green Electric Power System, along with their installation within the company.

5. Policies and Plans for Optimal Combination of Power Sources

Kyushu Electric Power promotes well-balanced, optimal power source combination by placing nuclear power at its core, and by taking into account the reliability of power supply, economy and global environmental issues in a comprehensive manner.

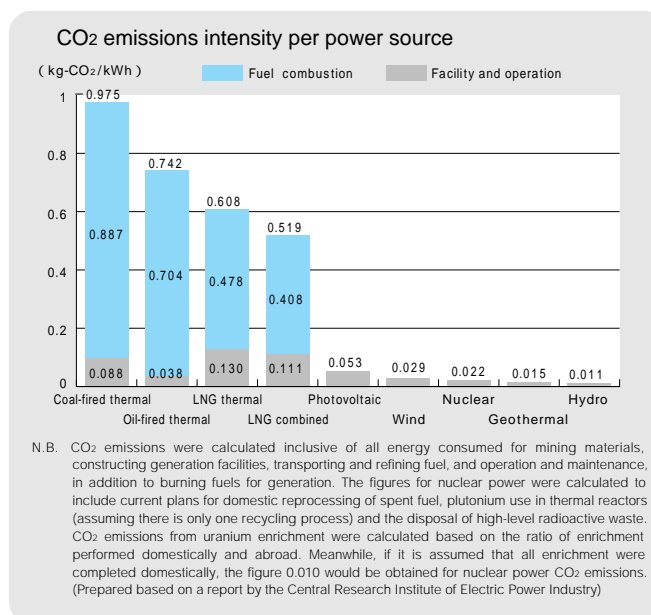
(1) Development plan for respective power sources

Nuclear power

Nuclear power generation is excellent for supply reliability and economy, and produces less environmental loads such as CO₂ emissions. The development of nuclear power generation will be promoted as a base-load power source, while holding safety in the utmost importance.

CO₂ emissions intensity per each power source during its lifecycle

CO₂ is emitted not only during fuel combustion for power generation, but also during other energy-consuming work such as constructing power stations, mining, transporting and refining fuel, as well as waste treatment. The chart shows the figures that are obtained by dividing the CO₂ emitted during the lifecycles of the plants including combustion and construction, by the amount of power production. Nuclear power generation is noted for its advantages in addressing global warming since its comprehensive CO₂ emission is significantly lower even when such indirect CO₂ emissions are taken into account.



Thermal power generation

Kyushu Electric Power will develop coal-fired thermal power generation to promote fuel diversification, while further pursuing improved energy efficiency and effective energy use.

Pumped storage power generation

Kyushu Electric Power will promote the development of pumped storage power generation as a power source to address peak demands and emergencies as the output can be easily adjusted depending on fluctuating power demand. Additionally less time is required for startup and shutdown with this method.

Hydro and geothermal power generation

In consideration of the environmental aspects of site selection and the economy, Kyushu Electric Power will further systematically promote R&D on hydro and geothermal power generation. These methods constitute renewable, domestic energy sources.

New energy sources

A new energy source will be pursued through technological development for practical use since this energy source boasts excellent environmental characteristics. The company will increase the installed capacity to 365kW, 3,250kW and 50kW respectively for photovoltaic, wind power generation and fuel cells by fiscal 2006, while exploring their economic aspects and characteristics. The promotion of new energy will be pushed through the introduction of the Green Electric Power System and other means.

(2) Plan for diversification of power sources

Kyushu Electric Power aims for the development of well-balanced power sources or an optimal combination of diverse power sources under the targeted power source composition set by taking into consideration the properties of each power source.

Target for power source composition (optimal combination of power sources)

	Composition of power source facilities		Composition of electric power production	
		FY2001 record		FY2001 record
Nuclear	Approx. 30%	24%	45 ~ 50%	43%
Geothermal		1%		
Hydro	Approx. 10%		Approx. 10%	6%
Pumped storage	Approx. 10%	13%		
Thermal	Coal	Share the remaining 50 % equally	Share depending on fuel situation	22%
	L N G			20%
	Oil			7%

6. Green Electric Power System

The Green Electric Power System is a fund established and maintained by Kyushu Electric Power and customers who wish to contribute to natural energy promotion. Subsidies from the fund are offered to facilities employing wind and photovoltaic power generation, thereby encouraging the further use of natural energy. The system started in October 2000 in 10 service areas of Japan's electric utilities, and the Kyushu Green Power Fund was established in conjunction here in Kyushu.

(1) Fund outlines

Application conditions	Customers who have entered a power supply contract with Kyushu Electric Power, and pay electric bills via direct debit	
Contribution amount	500 yen/month per share (no limit on the number of shares)	
Application method	Fill out the membership subscription form in the leaflet "Introduction to Green Electric Power System" and post it. Subscription forms are available at Kyushu Electric Power customer service offices, or the leaflet may be requested through the Kyushu Electric Power website.	
Operation of fund, operator	Kyushu Industrial Advancement Center (KIAC), a public corporation under the Ministry of Economy, Trade and Industry	
Use of fund	Use of the fund is determined based on discussions by the Kyushu Green Power Fund Steering Committee within the KIAC	
Subsidized facilities	Photovoltaic	General recipients: public facilities (schools, community centers, etc.) in Kyushu installed by local governments and public corporations Special recipients: public facilities in Kyushu installed in cooperation with civil groups and public institutions
	Wind	Successful bidders for large-scale wind power generation conducted by Kyushu Electric Power

N.B. One-time-only donations are also welcomed. Payment forms are available at Kyushu Electric Power customer service offices.

(2) Operation of the fund

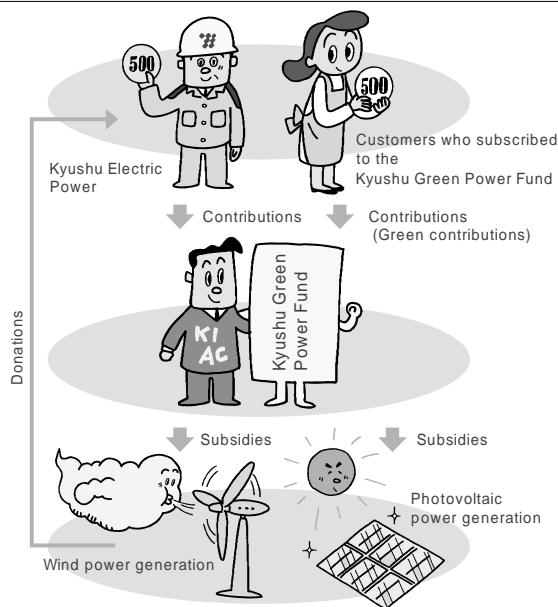
1. Kyushu Electric Power debits the subscriber's bank account monthly for the amount of the contribution (Green contribution: 500 yen per share), together with the electric bill. Meanwhile, one-time-only donations are directly transferred to KIAC's Kyushu Green Power Fund.



2. Kyushu Electric Power transfers the Green contribution drawn from the subscribers' bank accounts to the Kyushu Green Power Fund. Kyushu Electric Power matches the total amount of customer contributions and donates it to the Kyushu Green Power Fund.



3. KIAC accepts subsidy applications from photovoltaic and wind power generation facilities in Kyushu, and provides subsidies from the fund.



Kyushu Green Power Fund Steering Committee

Michihiro Nishi (Chairman):	Professor, Dept. of Mechanical and Control Engineering, Faculty of Engineering, Kyushu Institute of Technology
Koichi Abe:	Attorney At Law
Mami Oku:	Associate Professor, Faculty of Environmental Studies (Administrative Law), Nagasaki University
Hisafumi Koike:	Vice Chairman, Renewable Energy Promoting People's Forum West Japan Freelance writer
Sueko Takagi:	Counselor, Kyushu National Museum Promotion Organization Headquarters
Yasuaki Nagatomo:	Vice President, Kagoshima Chamber of Commerce and Industry
Hiromasa Nakamura:	Consumer life adviser
Yuriko Hisadome:	Copywriter
Kan Yoshida:	Executive Director, KIAC
Tamenori Yanagi:	

Contact:

Business Development Group, Environmental Affairs Dept., Kyushu Electric Power Co., Inc.
Phone: 81-92-726-1530, Fax: 81-92-761-7368

For information, please access our website below:

Kyushu Electric Power Co., Inc.
URL: <http://www.kyuden.co.jp/>
Kyushu Industrial Advancement Center
URL: <http://www.kiac.or.jp/>

7. Environment-Related Research and Development

Kyushu Electric Power implements Research and Development including effective use of industrial waste, prevention of global warming, and effective use of waste heat from power stations.

Research into effective use of coal ash

Kyushu Electric Power recycles coal ash generated during business operations mainly as a material for cement. Currently, research is underway for better and wider utilization such as for filling material and as a soil enhancer. New filling material has been developed in laboratory experiments, where cement and other substances are added to coal ash. The material will be put to a field demonstration test to confirm its strength and other properties.



Demonstration of the new filling material

Research into organic compost using waste

Kyushu Electric Power has been conducting research into the production of compost from power station waste such as shells, jellyfish, grass debris and other waste. Composting has been practiced on the waste from power stations by applying developed composting technology. We will test the effectiveness of the compost through plant cultivation in the future. Further testing is planned to determine if the developed technology may be applied to other power stations which produce different kinds of waste.



Development of chargers for mini electric vehicles

Electric vehicles are excellent for environmental conservation because they do not emit fumes during operation and are energy-efficient. There are high expectations for the widespread use of mini electric vehicles in the future, which can be easily charged from 100-volt electric outlets in homes. For this purpose, Kyushu Electric Power, together with three other electric power companies of Kansai, Tohoku and Hokuriku as well as PARK 24 Co.,Ltd and Japan Storage Battery Co., Ltd., have developed coin-operated charger stations and put them to a field test in rental parking spaces. Further improvements will be made based on the results to prepare them for practical use. Investigation is

underway for their nationwide installation in the future.



Charger station for mini electric vehicles

Research to evaluate *melia azedarah* trees' CO₂ fixation ability

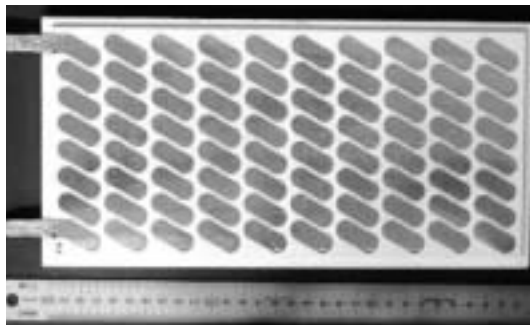
Utilization of plants' CO₂ absorption ability is one of the measures against global warming, and *melia azedarah* is noted for its excellence in this regard. *Melia azedarah*, growing throughout Kyushu at an altitude of 600m or less, is a highly valuable tree for it can be used for construction and furniture-making, just as zelkova and paulownia trees. Through tissue culture, Kyushu Electric Power has produced a large number of *melia azedarah* saplings with high CO₂ absorption ability and good timber quality. They were planted on company land for research and evaluation of their CO₂ absorption ability.



Two years after planting grew to be 5 meters or taller.
(The cedar seedlings in front were planted at the same time.)

Research on power generation systems utilizing unused energy from power stations

Kyushu Electric Power is presently conducting Research and Development into heat recovery equipment that converts other forms of energy into thermal energy using thermoelectric conversion elements. It aims for efficiency improvement by exploiting unused energy from power stations such as waste heat. So far, a thorough demonstration test verified the large heat recovery module developed as being a stable system. Further research is planned for module efficiency improvements and cost reductions, as well as for the development of a heat recovery system that collects a large untapped heat source.



Heat recovery module

Development and practical application of Matsugoro - electric shock-type pine wilting prevention system

Kyushu Electric Power has developed Matsugoro, a system that uses electric shocks to prevent pine wilting from nematode (*Bursaphelenchus sp.*), which is considered to be the main cause of pine wilting and tree mortality. The system applies HV pulse currents to trees to suppress nematode reproduction. Some of the features of the system are:

- Very little impact on the natural environment or ecological system compared to conventional control methods using chemical agents

- Simple design does not spoil the beauty of pine trees

- Easy installation and removal due to compactness and light weight

Time and energy savings since no complex maintenance is needed



Installed Matsugoro

III. Local Community



1. Measures under Unified Effort with the Community

Supporting energy and environmental education at the Onagohata Hydroelectric Power Station dam area

Environmental education is becoming more and more important, with ever-increasing social awareness of environmental issues. Given this situation, Kyushu Electric Power supports educational efforts on energy and the environment conducted at the company's Onagohata Hydroelectric Power Station dam premises in Amagase Town, Oita, which boasts rich natural resources, in addition to conventional study tour programs offered at its other power facilities.

This area has been the site of a hydroelectric power station since the early 20th century, and has been spared unnecessary development, while proper environmental preservation efforts have been made. As a consequence, the area is blessed with a rich natural environment, and is a habitat for many birds, insects and rare plants. The forestation project was launched in fiscal 2000 to restore the forest to its original state with the cooperation of citizens and the guidance of Professor Emeritus Akira Miyawaki of Yokohama National University.

In addition to the hydroelectric power facility tour, Kyushu Electric Power plans to organize activities on planting and undergrowth trimming, nature watching and hands-on forestry experience in order to support citizens' activities and school education on energy and the environment. Specific educational support programs are prepared by listening to the opinions and advice of experts from outside the company.

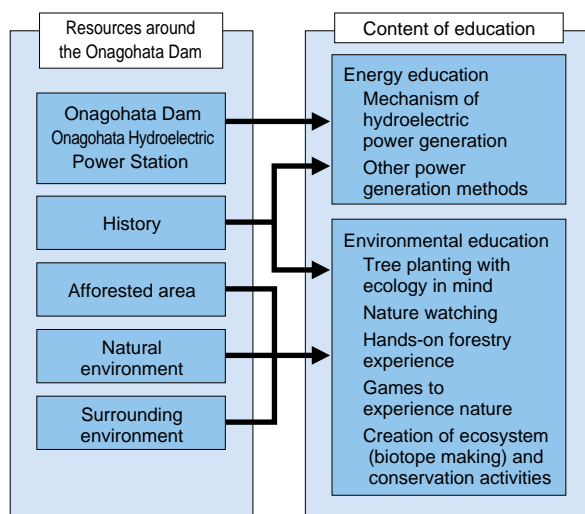


Nature watching in the Onagohata Hydroelectric Power Station dam area



Onagohata Hydroelectric Power Station (Hita Power System Maintenance Office)

Resources around the dam and educational content (diagram)



Conference with experts from outside the company (August 28, 2002)

Introduction of forestation measures at the International Congress of Ecology

Kyushu Electric Power participated in the 8th International Congress of Ecology held from August 11 to August 18, 2002 in Seoul, South Korea, and made a presentation. The presentation discussed native plant forestation that was conducted during the construction of Genkai Nuclear Power Station, the Kyushu Homeland Forestation Program implemented with community cooperation, and environmental education conducted by taking advantage of the Onagohata Power Station dam area.



International Congress of Ecology

Kyushu Electric Power received comments and opinions from participating ecologists and companies from various countries. They include: “We plan to use your case as a reference for Canada’s joint forestation activities with citizens.” “I would like more information on your environmental education program for research reference purposes.”

Agreement with local governments on measures against illegal waste dumping

Kyushu Electric Power takes measures for the realization of a recycling-based society, and offers cooperation and support to local governments to achieve this goal.

Agreements have been entered at 15 offices with 33 local governments that if the company’s staff members on outside duty find any illegally dumped waste, they will notify the local government.

This measure leads to the early discovery of illegal waste dumping and prevention of the expansion of such illegal action, and is considered to be a practical, effective measure for a recycling-based society.

Agreement conclusion (as of July 23, 2002)

Area	Office name	Local government name	Agreement conclusion date
Fukuoka	Maebaru Customer Service Office	Maebaru City, Shima Town, Nijo Town	March 14, 2001
Saga	Saga Branch Office	Saga Prefecture	July 31, 2001
	Saga Customer Service Office	Chiyoda Town	September 6, 2001
Nagasaki	Emukae Customer Service Office	Matsuura City	June 4, 2002
		Tabira Town	July 22, 2002
		Shikamachi Town	June 10, 2002
	Sasebo Customer Service Office	Sasebo City	March 20, 2002
	Arikawa Customer Service Office	Arikawa Town	July 16, 2002
	Isahaya Customer Service Office	Isahaya City	February 14, 2002
	Shimabara Customer Service Office	Shimabara City Nishiarie Town	March 1, 2002 July 23, 2002
Nagasaki Customer Service Office	Nagasaki City	November 26, 2001	
	Kinkai Town	July 17, 2002	
Oita	Saiki Customer Service Office	Saiki City	October 16, 2001
		Kamiura Town	October 1, 2001
		Honjyo Village, Naokawa Village	October 10, 2001
		Kamae Town	October 12, 2001
		Yonouzu Village	October 17, 2001
		Yayoi Town, Ume Town	October 19, 2001
		Tsurumi Town	October 24, 2001
	Kunisaki Customer Service Office	Kunisaki Town	June 7, 2002
Hita Customer Service Office	Hita City	June 28, 2001	
Miyazaki	Takanabe Customer Service Office	Takanabe Town	January 23, 2002
		Kawaminami Town	December 18, 2001
		Shintomi Town	December 25, 2001
		Kijo Town	January 10, 2002
		Tsuno Town	December 26, 2001
Kagoshima	Kanoya Customer Service Office	Kanoya City	May 31, 2002
	Kanoya Power System Maintenance Office	Kanoya City	May 31, 2002

2. Deployment of a Car-Sharing Project

Kyushu Electric Power plans to deploy a car-sharing project, using low-emission vehicles such as electric vehicles. The project is a collaboration with Fukuoka City and environmental NGOs and bases its operation in Fukuoka City and its surrounding area. In the car-sharing project, an automobile driver becomes a member of the administrative organization, and instead of owning a car, uses one that belongs to the organization whenever necessary. The following benefits can be expected from the system:

1. Economical effects for the user from not owning a car
2. Mitigation of traffic congestion
3. Measures against air pollution and CO2 reduction



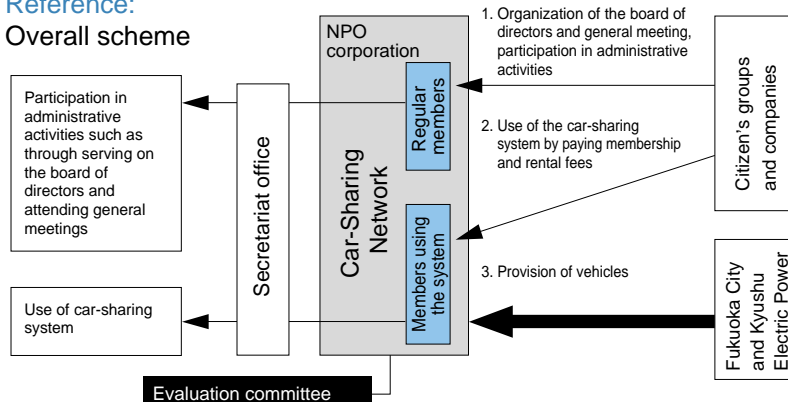
Test driving an electric vehicle within the premises of Kyushu University

A similar system has seen full-fledged business deployment in Europe, and its environmental benefits have been confirmed. However, it is still at the demonstration stage and has never been organized as a business in Japan.

Operational entity	NPO Car-Sharing Network (CSN)
Project period	Scheduled for October 2002-September 2005, however, the project may continue based on evaluation of the 3-year project
Project objectives	Awareness enhancement of global warming prevention and traffic issues Acquisition and collection of knowledge for the business model construction
Vehicles used	Approx. 30 electric, hybrid and other vehicles
Project characteristics	Japan's first collaboration between citizens' groups, a local government and a company Electricity from wind power generation is used for charging the electric vehicles through Green Power WIND certification (first such attempt in the world) Applications were accepted for the location of the charging stations
Kyushu Electric Powers cooperation	Contribution towards the expenses for about 20 electric and other vehicles Provision of expertise for electric vehicle demonstration and research Analysis of vehicle travel data

Reference:

Overall scheme



Press conference on the NPO corporation establishment (May 15, 2002)

3. Environmental Activities for Everybody (Household Eco-Account Book)

Kyushu Electric Power promotes the use of the Household Eco-Account Book for its employees and their families to review their lifestyle and enhance their environmental awareness.

For solving environmental issues such as global warming, resource exhaustion and waste problems, it is important for citizens, companies and the administration to fulfill their respective duties. Reviewing the lifestyle of a household from the perspective of CO₂ reduction is essential in this regard.

This Household Eco-Account Book helps calculate CO₂ emissions based on electricity, gasoline and other energy consumption and the amount of waste generated in our everyday domestic life. It enables us to see our progress in CO₂ emission reductions each month, thus encouraging efforts toward reduction.

The Household Eco-Account Book may be found at Kyushu Electric Power’s website. Please use it to achieve an environmentally friendly lifestyle.

Easy, Monthly Household Eco-Account Book

*Emission amount can be obtained by multiplying the CO₂ emission coefficient by the amount of consumption.

Item	CO ₂ emission coefficient	First month			Second month			Third month		
		Amount used	Amount emitted	Cost	Amount used	Amount emitted	Cost	Amount used	Amount emitted	Cost
Electricity (kWh)	0.371	Meter reading	(kg)	Yen	Meter reading	(kg)	Yen	Meter reading	(kg)	Yen
Utility/LP gas (m3)	2.1 LPG(6.3)	Meter reading	(kg)	Yen	Meter reading	(kg)	Yen	Meter reading	(kg)	Yen
Water (m3)	0.58	Meter reading	(kg)	Yen	Meter reading	(kg)	Yen	Meter reading	(kg)	Yen
Kerosene (liter)	2.5		(kg)	Yen		(kg)	Yen		(kg)	Yen
Gasoline (liter)	2.3		(kg)	Yen		(kg)	Yen		(kg)	Yen
Aluminum can (pc)	0.17		(kg)			(kg)			(kg)	
Steel can (pc)	0.04		(kg)			(kg)			(kg)	
Plastic bottle (pc)	0.07		(kg)			(kg)			(kg)	
Glass bottle (pc)	0.11		(kg)			(kg)			(kg)	
Paper container (pc)	0.16		(kg)			(kg)			(kg)	
Food tray (pc)	0.008		(kg)			(kg)			(kg)	
Trash (kg)	0.84		(kg)			(kg)			(kg)	
Total			(kg)	a		(kg)	b		(kg)	c
Monthly savings on family budget		b-a	Yen	c-b	Yen	Estimated annual savings		(c-a)X6	Yen	

How to use the Household Eco-Account Book

For monthly consumption of electricity, gas and water, check your meter or bill.

For aluminum cans, steel cans, plastic bottles, glass bottles, paper containers and food trays, count the ones you threw away instead of recycling and enter the number in the column ‘amount used’.

Multiply each ‘amount used’ by its corresponding CO₂ emission coefficient, then enter the number in the column ‘amount emitted’. This total is the amount of CO₂ emitted by your household.

Please try to reduce CO₂ emissions by 10% within three months. There are other causes of CO₂ emissions. Try to come up with your own eco-life.

In the ‘cost’ column, enter the cost of each item according to the amount used. Usually, bills are sent the following month for electricity and gas, and every other month for water. As emissions decrease, you should see a corresponding reduction in your bills.

Source: Ministry of the Environment Website

N.B. The CO₂ emissions coefficient for electricity (kWh) is taken from fiscal 2000 records excerpt from the ‘Environmental Action Plan of the Electric Power Industry’ by the Federation of Electric Power Companies, Sep. 14, 2001; and for other items, from fiscal 1999 values of the emission coefficients for the Household Eco-Account Book by the Ministry of the Environment.

4. Status of Environmental Load by Office

Status of the environmental load at thermal power stations

	Input						Industrial-use water for power generation (tons)	Business activities Electric power production (MWh)	Environmental load (upper column, unit: tons)/emissions intensity (lower column, unit: g/kWh)				
	Fuels								CO ₂	SO _x *	NO _x *	Particulates*	Industrial waste
	Coal (tons)	Heavy oil (kl)	Crude oil (kl)	LNG (tons)	LPG (tons)	Light oil (kl)							
Karatsu		5 472	27 289			3 885	158 460	127 784	100 x10 ³ 784	205 1.604	127 0.994	0.8 0.006	2.26 1.769
Shin-Kokura				1 008 499			588 279	5 714 506	2725 x10 ³ 477	0 0.000	260 0.045	0 0.000	2.18 0.038
Oita		7 402			6	1 084	108 432	29 045	24 x10 ³ 842	44 1.515	30 1.033	0.3 0.010	1.19 4.097
Karita	380 921	12 685				2 339	568 062	1 065 602	894 x10 ³ 839	75 0.089	194 0.231	12 0.014	56 559 53.077
Minato	305 132					754	250 120	824 280	724 x10 ³ 879	256 0.311	728 0.883	8 0.010	38 128 46.256
Ainoura		64 506	25 338				192 912	358 774	270 x10 ³ 753	654 1.823	259 0.722	5 0.014	77.6 2.168
Omura	169 268	8 740				706	188 416	371 459	329 x10 ³ 886	1 619 4.358	599 1.613	332 0.894	63 914 172.062
Sendai		35 094	94 084		21 549	4 932	207 408	608 272	432 x10 ³ 710	1 634 2.686	376 0.618	8 0.013	2.30 0.378
Buzen		42 307	75 302			7 631	208 266	486 643	350 x10 ³ 719	742 1.525	295 0.606	2 0.004	5.32 1.046
Matsuura	1 836 687	697				1 149	1 068 482	5 431 619	4 431 x10 ³ 816	1 653 0.304	1 098 0.202	74 0.014	237 462 43.718
Shin-Oita				1 522 299			484 070	10 420 862	4 100 x10 ³ 393	0 0.000	1 402 0.135	0 0.000	32.8 0.031
Reihoku	1 390 201	743		2 894		2 894	871 297	4 038 143	3 304 x10 ³ 818	1 157 0.287	1 065 0.264	81 0.020	193 600 47.943
Total	4 082 210	177 644	222 013	2 533 693	21 555	29 806	4 894 204	29 476 989	17 684 x10³ 600	8 039 0.275	6 433 0.220	523 0.018	592 069 20.086

*SO_x, NO_x and particulate emissions do not include those emitted during the trial run from power station construction. Electric power production for the emissions intensity calculation also excludes that during the trial run (Karita Power Station: 224,880 MWh).

Status of the environmental load at internal combustion power stations

	Input						Industrial-use water for power generation (tons)	Business activities Electric power production (MWh)	Environmental load (upper column, unit: tons)/emissions intensity (lower column, unit: g/kWh)				
	Fuels								CO ₂	SO _x *	NO _x *	Particulates*	Industrial waste
	Coal (tons)	Heavy oil (kl)	Crude oil (kl)	LNG (tons)	LPG (tons)	Light oil (kl)							
Total		3 11 213						1 388 081	913 x10 ³ 658	8 256 5.954	24 760 17.857	806 0.581	1 055 0.760

*SO_x, NO_x and particulate emissions do not include those emitted during the trial run from power station construction. Electric power production for the emissions intensity calculation also excludes that during the trial run (1,457 MWh).

Status of the environmental load in nuclear power stations

	Input		Business activities Electric power production (MWh)	Environmental load (upper column)/emissions intensity (lower column)	
	Nuclear fuel (tons)	Industrial-use water for power generation (tons)		Radioactive waste (upper column: pieces, each equivalent to one 200-liter oil drum)/lower column: pieces/GWh	Industrial waste (upper column: tons, lower column: ton/GWh)
Genkai	62	1 299 987	22 529 851	2 069 0.092	3 929 0.174
Sendai	40	500 536	14 194 955	86 0.006	526 0.037
Total	102	1 800 523	36 724 806	2 155 0.059	4 455 0.121

*Increase in amount is due to renewal of components at Units 1 & 2 of Genkai Nuclear Power Station

Status of environmental load by areas under branch offices (branch offices, customer service offices and power system maintenance offices)

Branch name	Input		Business activities Electricity sales (GWh)	Environmental load (upper column, unit: tons)/emissions intensity (lower column, unit: g/kWh)		
	Office power consumption (MWh)	Fuel consumption by company vehicles (kl)		CO ₂ from fuel consumption by company vehicles	Used paper	Industrial waste
Kitakyushu	14 283	362	12 002	889 0.074	166 0.014	2 146 0.179
Fukuoka	24 982	532	17 738	1 307 0.074	219 0.012	3 386 0.191
Saga	7 795	345	5 448	848 0.156	105 0.019	1 105 0.203
Nagasaki	11 660	365	6 930	898 0.130	133 0.019	1 114 0.161
Oita	11 716	500	7 663	1 228 0.160	148 0.019	1 467 0.191
Kumamoto	13 375	568	9 917	1 396 0.141	179 0.018	1 688 0.170
Miyazaki	10 722	437	6 605	1 073 0.162	138 0.021	841 0.127
Kagoshima	13 944	684	9 025	1 680 0.186	191 0.021	1 111 0.123
Total	108 476	3 794	75 328	9 322 0.124	1 113 0.015	10 712 0.142

N.B. Some branch offices may cover areas in more than one prefecture, such as in Saga and Nagasaki Prefectures.

5. Status of Environmental Impact Assessment

In fiscal 2001, Kyushu Electric Power conducted an environmental impact assessment for two locations at internal-combustion power stations (Tatsugo Power Station Unit 6 and Shin-Iki Power Station Unit 5), and two locations at hydroelectric power stations (Tsukabaru and Shin-Tamukae Power Stations).

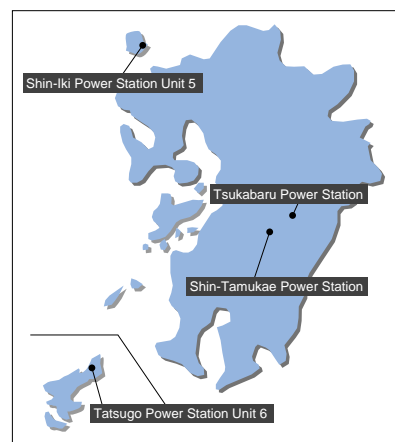
The Environmental Impact Assessment Law of the national government and ordinances on environmental impact assessment of respective local governments stipulate the subjects of the environmental impact assessment in relation to power station construction. If the planned power station falls within the range of their requirements, the implementation of an environmental assessment becomes compulsory.

Among the four locations of environmental assessment in fiscal 2001, assessment for the Shin-Iki Unit 5 is underway, following Nagasaki Prefecture's ordinance on environmental impact assessment. Although the other three cases were not subject to the Environmental Impact Assessment Law or environmental impact assessment ordinances, Kyushu Electric Power voluntarily conducted assessments in a manner following the laws and regulations on power stations for the purpose of environmental conservation. The results were explained and understood by local communities.

Status of environmental impact assessment

	Power station	Basis for assessment	Environmental status study period	Contents
Internal combustion	Tatsugo Power Station Unit 6 in Tatsugo Town, Kagoshima Pref. (10,000kW)	Voluntary	Mar. 2000 - Feb. 2001 (completed)	The current levels of SO _x , NO _x and suspended particulate matters in the air around the power stations, as well as the noise level on site borders are recorded. Based on examination and evaluation of their status since the addition of the power station, in consideration of environmental conservation measures, we confirmed minor environmental impact.
	Shin-Iki Power Station Unit 5 in Ashibe Town, Nagasaki Pref. (10,000kW)	Nagasaki prefectural ordinance	Dec. 2001 - Nov. 2002	
Hydroelectric	Tsukabaru Power Station in Morotsuka Village, Miyazaki Pref. (490kW)	Voluntary	Feb. 2000 - Jan. 2001 (completed)	The current water quality and growth status of stations and animals around the power stations are recorded. Based on examination and evaluation of their status since the addition of the power station, in consideration of environmental conservation measures for fauna and flora, we confirmed minor environmental impact.
	Shin-Tamukae Power Station in Mizukami Village, Kumamoto Pref. (4,700kW)	Voluntary	Jul. 2000 - Jun. 2001 (completed)	

N.B. Items for investigation, estimation and evaluation vary depending on the ordinances and regulations of local governments where power stations are located.



Power stations where environmental impact assessments were conducted in fiscal 2001



Investigation of noise (Tatsugo Power Station)

Measures for the preservation of valuable fauna and flora

Kyushu Electric Power endeavors to preserve local fauna and flora when constructing facilities for power generation and transmission.

Hodgson's hawk eagle (*Spizaetus nipalensis orientalis*) is a resident bird that inhabits forest areas from Hokkaido to Kyushu year round. It is designated as EN (endangered) IB in the 2002 Red Data Book of Japan by the Ministry of the Environment, and as a National Endangered Species in the Law for the Conservation of Endangered Species of Wild Fauna and Flora (enforced in April 1993).

When construction is done near their habitat, the company takes conservation measures based on consultation with the administrative organizations concerned, while monitoring Hodgson's hawk eagles whenever necessary with the guidance of academic experts.



Hodgson's hawk eagle (ENIB, Red Data Book)

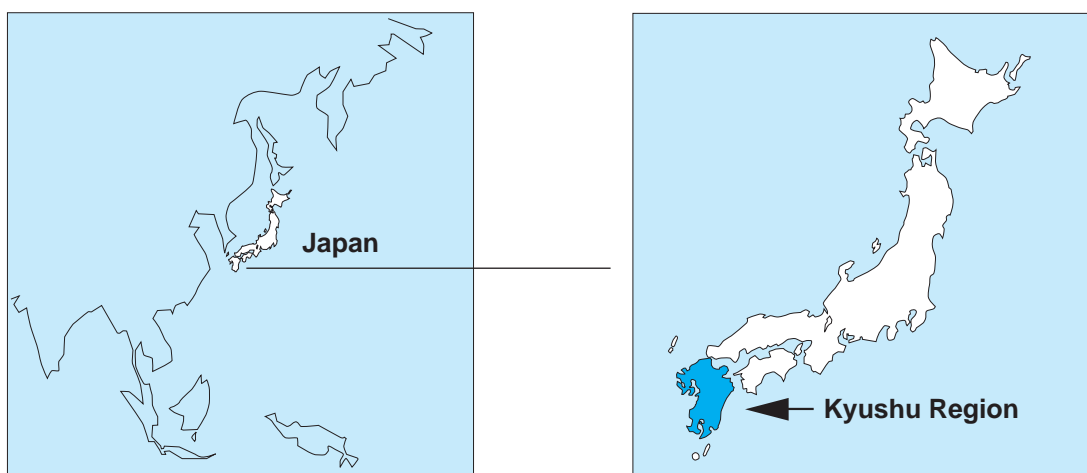
Company Profile – as of March 31, 2002

The Kyushu region includes the southwestern most of Japan's four main islands, and more than 1,400 smaller islands in the Japanese archipelago. With an area of 4.2 million hectares, the region is home to about 13 million people. As the closest part of Japan to continental Asia, Kyushu has traditionally been the nation's portal for cultural and technological exchange. Today, Kyushu is developing into a new industrial and cultural center, and is a well-known supplier of electronic products, fine ceramics and automobiles to Asia and the rest of the world.

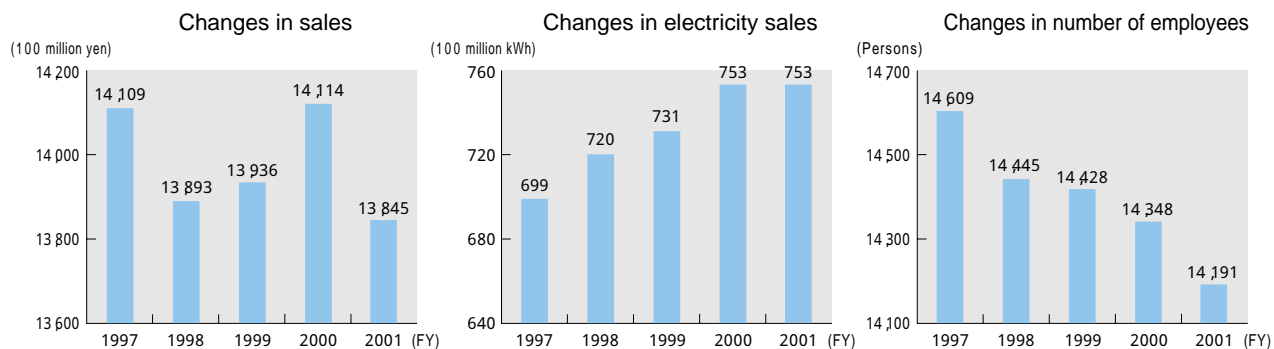
Kyushu Electric was formed on May 1, 1951, when the reorganization of Japan's power industry created nine new power companies throughout Japan engaged in power generation, transmission and distribution. Established during a period of rapid demand growth caused by the devastation after World War II and by the Korean War, Kyushu Electric worked hard to maintain a stable power balance amid stringent demand and supply conditions.

In the years that followed, high economic growth and lifestyle improvements caused demand to continue growing beyond all expectations. To ensure a stable power supply to users in the region, Kyushu Electric responded by developing a series of large-capacity hydroelectric power stations and advanced high-efficiency high-capacity thermal power stations. The oil shock of 1973 saw the company turning to the development of alternative energy sources to enable full-scale power diversification. Beginning in the mid-70s, we created a series of new facilities that let us add the optimum mix of energy sources to our mainstay, nuclear power. Unit 1 of our Genkai Nuclear Power Station began operation in 1975, and was followed by construction of Genkai Unit 2, Sendai Unit 1 and 2, and Genkai Unit 3. Genkai Unit 4 began operation in 1997.

Reflecting the steady increase in Kyushu's demand for power since our inception, our sales volume has risen from 4.1 million MWh in 1951, to 75.3 million MWh in fiscal 2001. To support this growth in demand, we have established a supply network throughout Kyushu that has been key in ensuring efficient supplies of power to the region since our establishment.



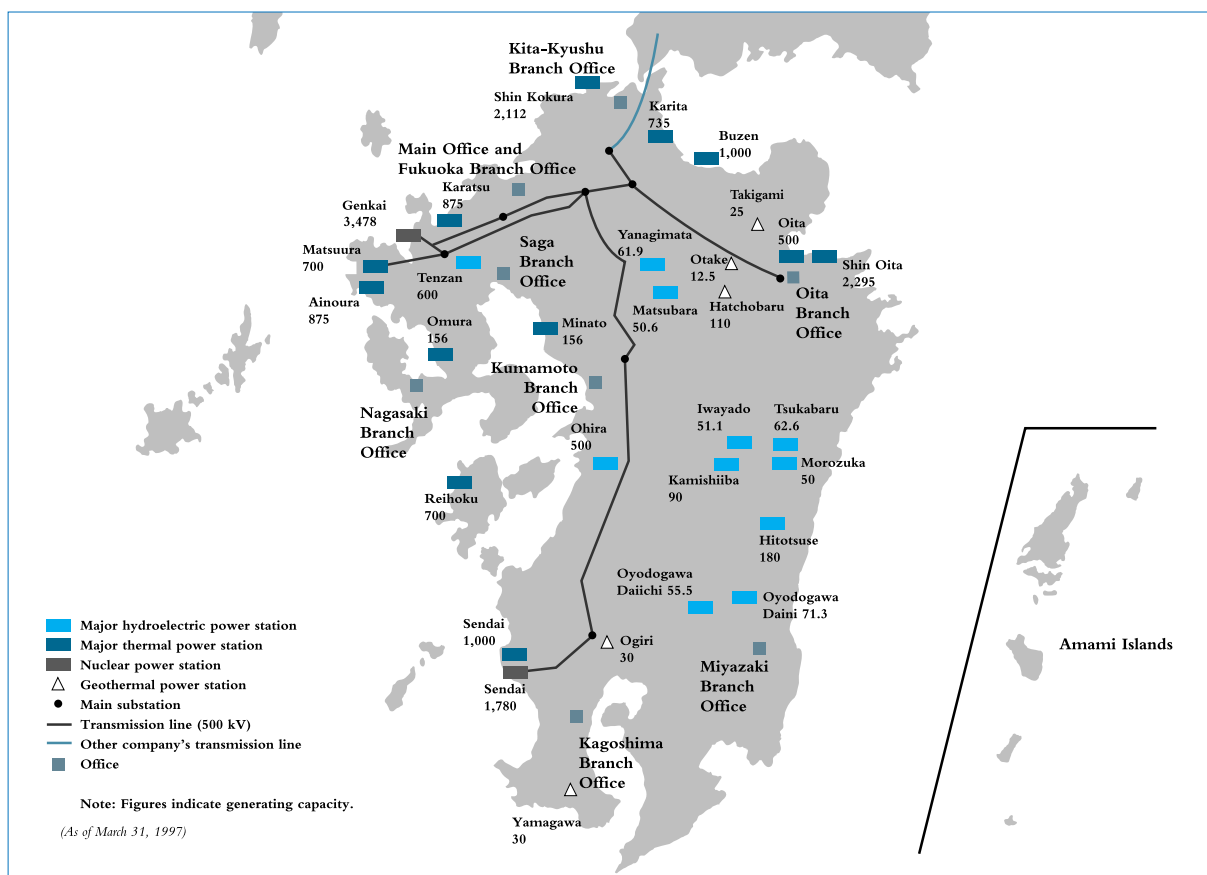
- Date of establishment: May 1, 1951
- Service area: Fukuoka, Saga, Nagasaki, Oita, Kumamoto, Miyazaki and Kagoshima Prefectures
- Capital: 237.3 billion yen
- Head office: 1-82, Watanabe-dori 2-chome, Chuo-ku, Fukuoka



Main offices

Office name	Address	Phone
Kitakyushu Branch Office	3-1, Kome-machi 2-chome, Kokurakita-ku, Kitakyushu	+81-93-531-1180
Fukuoka Branch Office	1-82, Watanabe-dori 2-chome, Chuo-ku, Fukuoka	+81-92-761-6381
Saga Branch Office	3-6, Kouno-higashi 2-chome, Saga	+81-952-33-1123
Nagasaki Branch Office	3-19, Shiroyama-cho, Nagasaki	+81-95-864-1810
Oita Branch Office	3-4, Kanaike-machi 2-chome, Oita	+81-97-536-4130
Kumamoto Branch Office	6-36, Kami-suizenji 1-chome, Kumamoto	+81-96-386-2200
Miyazaki Branch Office	2-23, Tachibana-dori Nishi 4-chome, Miyazaki	+81-985-24-2131
Kagoshima Branch Office	6-16, Yojiro 2-chome, Kagoshima	+81-99-253-1120
Tokyo Branch Office	7-1, Yurakucho 1-chome, Chiyoda-ku, Tokyo	+81-3-3281-4931

Main Facilities



Third-Party Review of the Environment Action Report

Kyushu Electric Power's 2002 Environment Action Report was subjected to a third-party review by Tohmatsu Environmental Research Institute Ltd. to improve the report's reliability.



Briefing of environmental administrators concerning environmental activity progress (Genkai Nuclear Power Station)



An environmental administrator explains the management status of a coal storage yard (Matsuura Power Station)

1. Report on the Review Results

Report from the Review of 2002 Kyushu Electric Power Environment Action Report

Starting this fiscal year, Tohmatsu Environmental Research Institute Ltd. implemented third-party review on the reliability of environmental activity records, environmental accounting and other related information described in "2002 Kyushu Electric Power Environment Action Report" by Kyushu Electric Power Co., Inc.

The main items found during the review process are listed below aside from those of the "Third-Party Opinions on the Environment Action Report". The figures in parentheses found in the descriptions below are the page numbers in "2002 Kyushu Electric Power Environment Action Report".

1. Merits

- (1) The status of the Kyushu Electric Power Group companies' environmental activities is included in the Related Information (pp.46-51) this year, in addition to that of Kyushu Electric Power. The Group companies made positive efforts in information disclosure.
- (2) A new idea for baselines (p.35) is introduced in environmental accounting this year to express the cumulative effects of environmental measures implemented over several years. It is a unique environmental accounting method adapted to the needs of the industry.
- (3) This year's Environment Action Report is compiled with consideration for the interests of stakeholders in addition to those of the Ministry of the Environment, and with reference to the guidelines set by the Ministry of Economy, Trade and Industry.

2. Items requiring further consideration

- (1) For environmental accounting, the disclosure of respective baselines that are set, as well as a comparison of environmental costs and their benefits from those of the previous fiscal year are desirable.
- (2) The basis of the report is the guidelines from the Ministry of the Environment and the Ministry of Economy, Trade and Industry. However, it is advisable to establish the company's own guidelines and standards for the Environment Action Report's preparation and to include them in the report.
- (3) Achievements on main targets are compared with those from the previous fiscal year. However, it is better to explain the status of progress and achievement in comparison to the guidelines and targets within the fiscal year.

2. Third-Party Opinions about the Environment Action Report



Report by Tohmatsu Environmental Research Institute

Mr. Michisada Kamata
Representative Director & President
Kyushu Electric Power Co., Inc.

Objective of our review

We have carried out a review of 2002 Environment Action Report of Kyushu Electric Power Co., Inc., which is the sole responsibility of the Company's management. Our objective was to express an independent view on the information contained in the report.

Our review procedures

In accordance with your instructions, we performed the following review procedures, which were agreed upon with the Company's management. Since our review is commenced in fiscal 2001, it is to be noted that data and information before fiscal 2000 are not included to our scope of review.

- (1) A review of the reasonableness of the procedures for collecting and collating the information contained in the report, and
- (2) Discussions with, and inquiries of, the Company's management and staff who have responsibility for the preparation of the report, a review of the minutes of the Company's relevant committee, site inquiries, and comparison of the information contained in the report with documents regarding ISO14001, other documents prepared internally, and available published information.
Concerning the environmental data from Kyushu Electric Power Group companies, perusal and collation of records submitted, and inquiries of the Company's staff responsible for the preparation of the data.

Our conclusions

Based on these procedures, our conclusions are as follows:

- (1) The data contained in the report was properly summarized from the data prepared by the Company in relation to their daily operations, and
- (2) The information contained in the report is consistent with the supporting data obtained during our review.

Tohmatsu Environmental Research Institute

Tohmatsu Environmental Research Institute
September 3, 2002

Cover photograph: The grand camphor tree of Kamou
(Kamou Hachiman Shrine, Kamou Town, Kagoshima Prefecture)



The grand camphor tree of Kamou was designated as a special natural monument on June 27, 1952. This tree was confirmed as the largest tree in Japan in a survey conducted by the Environment Agency (now the Ministry of the Environment) in 1988.

Age: about 1,500 years Height: 30m
Root circumference: 33.57m
Trunk circumference: 24.22m

In common usage, the word "sustainable" means continuing or steady. In 1987, since the World Commission on Environment and Development proposed "Sustainable Development", the term has become a keyword in environmental preservation. In this relation, the term means "able to implement development in a way that both satisfies the needs of future generations and answers the demands of today." The objective is to reduce environmentally damaging emissions to the extent that the Earth's auto-purification capacity can deal with them and therefore stimulate economic and societal growth while keeping the global environment intact.



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September 2002

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