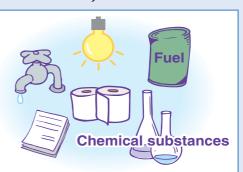


## 3 Progress in Environmental Activities

## 1 Diagram of Environmental Load Flow (FY2004 records)

**Amount of** resource input\*1

Electric power	204.7 million kWh*2
Fuel ( light oil, gas, A-heavy oil, et	tc) 12.0 thousandkl
Fuel ( light oil, gas, A-heavy oil, et ( LNG $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	2.4 thousand tons
Water	905.5 thousand tons
Paper ( photocopy paper )	96.3 million pieces
Paper ( photocopy paper ) ( toilet tissue )	147.5 thousand rolls
Chemical substances designated under PRTR Law () ( quantity handled )	30,645 kg







Environmental target management Promotion of energy conservation Reduction of greenhouse gas emissions Reduction of regulated freon emissions Reduction of air pollutant emissions Promotion of recycling Promotion of green procurement

GHG emissions reduction effect*	8.5 thousand tons-CO <sub>2</sub>
Regulated freon collection rate*4	100%
SOx (i) emissions reduction effect**5	1.4 thousand tons
NOx () emissions reduction effect*6	1.5 thousand tons
Industrial waste recycled	47.5 thousand tons
Industrial waste recycled Used paper recycled	47.5 thousand tons 0.6 thousand tons
·	
Used paper recycled	0.6 thousand tons

## **Amount of** environmental load<sup>3</sup>

145.2 thousand tons-CO<sub>2</sub> **GHG** emissions Regulated freon emissions 3.8 tons SOx (i) emissions 1.3 thousand tons NOx () emissions 1.8 thousand tons Industrial waste disposed 8.4 thousand tons Used paper disposed 0.2 thousand tons



- \*1: Major, available data was included in the calculation.

- \*2: The volume of electricity used in power stations was excluded.
  \*3: Calculated assuming the baseline to be the case without the use of new or unused energy sources, and only in the case emissions reduction effect was confirm
  \*4: Percentage of equipment from which mandatory level of GHG was collected at the time of inspection (mandatory level of pressure required to dispose equipment
- itting smoke (boiler, etc.), and only in the case emissions reduction effect was confin
- \*6: Calculated assuming the baseline to be the case without denitration procedures in facilities emitting smoke (boiler, etc.), and only in the case emissions reduction effect was confirmed

## Records and Targets of Environmental Load

Efforts are made to reduce environmental load ① in order to realize the group's unified targets, and use and manage regulated chemical substances based on the related laws and regulations.

## FY2004 Kyushu Electric Power Group's unified targets and records

We strive to reduce environmental load in order to meet the group's unified targets.

Unified targets for FY2004	Records	Unified targets for FY2004	Records
Power consumption at offices [1% decrease from prior yea]	2.8% increase	Used paper ① recycling rate ① [100%]	74%
Collection percentage of SFs ① collected at the inspection of equipment [97% or more]	(no inspection)	Usage rate of recycled copy paper ① [100%]	84%
Regulated freons ① collection Percentage at the inspection of equipment [100%]	100%	Usage rate of recycled toilet tissue [100%]	93%

Note 1: Calculations are based on data from the 40 companies that joined the Group Environmental Management Promotion Subcommittee (hereinafter referred to as the Subcommittee) by fiscal 2004. Certain unavailable data have not been provided.

## **Records of Environmental Load**

### **Energy use**

The Group companies strive to reduce energy consumption in order to achieve both the Group's unified targets and initiatively determined targets.

	T		FY	/2002 records	F١	/2003 records	FY	'2004 records
	Types of	energy and resources	No. of companies	Quantity consumed	No. of companies	Quantity consumed	No. of companies	Quantity consumed
power	Offices	(million kWh)	20	30.6	31	31.5	32	32.4
ric	Plants	(million kWh)	14	116.0	21	140.4	25	172.3
Electric	In-house use	at power stations (million kWh)	2	337.6	3	338.1	3	338.8
	Heaters and	I air conditioners (thousand $k\ell$ )	7	0.06	12	0.4	13	0.4
Fuel*	Vehicles	(thousand $k\ell$ )	19	2.5	22	2.6	34	9.1
교	Industrial	A-heavy oil (thousand $k\ell$ )	4	1.7	3	2.3	5	2.5
	use	LNG ①, LPG ① (thousand tons)	3	2.5	4	2.8	6	2.4
Water	Offices (thousand tons)		15	186.3	15	186.6	18	180.1
×	Plants	(thousand tons)	11	515.8	14	644.2	19	725.4

Note: Calculations are based on data from the 40 companies that joined the Subcommittee by FY2004 (figures for FY2002 and 2003 are based on data from the 26 original member companies; figures for electric power used in FY2003 are based on data from the 40 companies). Certain unavailable data have not been provided. "As for fuel information, each "quantity consumed" is the total of the consumed quantity of fuels which are measured by the same units.

## Greenhouse gases (i)

The Kyushu Electric Power Group takes every measure to collect the required level of GHG such as  $SF_6$  and HFC 1 from equipment at the time of inspection and also tries to reduce GHG emissions by curbing the consumption of various types of energies.

Croombourge masses	F۱	/2002 records	F	/2003 records	F۱	/2004 records
Greenhouse gases	No. of companies	Quantity emitted	No. of companies	Quantity emitted	No. of companies	Quantity emitted
Carbon dioxide (CO <sub>2</sub> ) (thousand tons-CO <sub>2</sub> )	24	66.9	38	74.0	40	104.5
Methane (CH₄) ⊕ (thousand tons-CO₂)	1	0.04	4	0.4	4	0.3
Nitrous oxide $(N_2O)$ (thousand tons-CO <sub>2</sub> )						
Hydrofluorocarbon (HFC) (thousand tons-CO <sub>2</sub> )	1	70.2	1	73.3	1	40.4
Perfluorocarbon (PFC) ( (thousand tons-CO <sub>2</sub> )						
Sulfur hexafluoride (SF6) (thousand tons-CO2)			2	0.2	1	0.02
Total (thousand tons-CO <sub>2</sub> )	24	137.1	39	147.9	40	145.2

Note 1: Calculations are based on data from the 40 companies that joined the Subcommittee by FY2004 (figures for FY2002 and 2003 are based on data from the 26 original member companies; some figures for CO2 emitted in FY2003 are passed on data from the 40 companies). Certain unavailable data have not been provided.

Note 2: Methage and nitrous original member during complexity of the provided of

### Substances contributing to ozone layer ① depletion

The Group companies ensure the recovery of substances that cause ozone layer depletion such as freons ① during the inspection of equipment containing such substances, and thereby, reduce their emissions.

0 dti		FY2002 record	ds	ı	FY2003 record	ds	ı	Y2004 record	ds
Ozone-destroying substances	No. of companies	Quantity contained	Quantity emitted	No. of companies	Quantity contained	Quantity emitted	No. of companies	Quantity contained	Quantity emitted
Specified freons (1)*1 (tons)	2	4.3	0	2	8.1	0.05	3	15.7	0.5
Alternative freons (i) (designated)*2 (tons)	12	41.1	4.3	22	46.0	4.10	25	51.2	3.3
Halons ()* (tons)	8	5.1	0	6	5.2	0	7	12.3	0

Note: Calculations are based on data from the 40 companies that joined the Subcommittee by FY2004 (figures for FY2002 and 2003 are based on data from the 26 original member companies). Certain upper provided the subcommittee by FY2004 (figures for FY2002 and 2003 are based on data from the 26 original member companies). Certain upper provided the subcommittee by FY2004 (figures for FY2002 and 2003 are based on data from the 26 original member companies). Certain upper provided the subcommittee by FY2004 (figures for FY2002 and 2003 are based on data from the 26 original member companies).

## Waste (recycling, etc.)

The Kyushu Electric Power Group strives to reduce waste and also increase recycling rates based on both the Group's unified targets and initiatively determined targets.

Waste		FY2002 records		F	Y2003 records	FY2004 records		
		No. of companies	Achievement	No. of companies	Achievement	No. of companies	Achievement	
Industrial	Quantity generated (thousand tons)	21	40.2	23	38.2	27	55.9	
waste (i)	Recycling rate (%)	21	73	7 23	77	21	85	
l Used paper l	Quantity generated (thousand tons)	10	0.7	OF.	0.8	40	0.8	
	Recycling rate (%)	19	48	25	56	40	74	

Note 2: Figures may not add to the totals due to rounding



## Paper products (green procurement ①, etc.)

The Group companies strive to reduce the consumption of paper products and improve green procurement rates (recycled paper use rate) based on both the Group's unified targets and initiatively determined targets.

D	Paper products		FY2002 records		Y2003 records	FY2004 records		
Pa			Achievement	No. of companies	Achievement	No. of companies	Achievement	
Photocopy	Quantity consumed (million pieces)		84.2	26	91.2	40	96.3	
paper	Usage rate of recycled paper (%)	26	60		72	40	84	
Tailet tiesus	Quantity consumed (thousand rolls)		135.0	10	137.9	27	147.5	
Toilet tissue	Usage rate of recycled paper (%)	16	86	18	93	21	93	

Note 1: Calculations are based on data from the 40 companies that joined the Subcommittee by FY2004 (figures for FY2002 and 2003 are based on data from the 26 original member companies). Certain unavailable data have not been provided.

Note 2: Figures may not add up to the totals due to rounding.

#### Chemical substances specified under PRTR Law (1)

The Group companies are committed to the proper use and management of chemical substances ① covered by PRTR Law in accordance with the related laws and regulations.

Cher	nical substances specified	under PRTR Law		FY200	FY2002 records			FY20	03 records	;		FY200	4 records	
Index No	Chemical substances	Major application	No. of companies	Quantity handled	Quantity released	Quantity transferred	No. of companies	Quantity handled		Quantity transferred	No. of companies	Quantity handled	Quantity released	
1	Water-soluble zinc compounds ①	Hot dip galvanizing (i) (kg)	1	1,280	72	88,995	1	1,405	72	73,003	1	1,432	72	82,004
40	Ethyl benzene (i)	Coating (kg)	1	1,453	1,453	0	1	1,087	1,087	0	1	1,200	1,200	0
43	Ethylene glycol (i)	Coolant (i) (kg)	1	6,263	6,263	0	1	4,992	4,992	0	1	8,342	6,038	2,304
63	Xylene (i)	Coating (kg)	2	7,713	7,713	0	2	6,871	6,871	0	2	7,363	7,363	0
144	Dichloropentafluoropropane (i)	Parts cleaning (kg)					1	2,475	2,475	0	1	2,400	2,400	0
227	Toluene ①	Coating(kg)	1	5,698	5,698	0	1	4,289	4,289	0	1	4,720	4,720	0
230	Lead and its compounds ①	Hot dip galvanizing and soldering (kg)	2	6,080	46	1,627	1	3,942	0	88	1	5,188	0	97
311	Manganese and its compounds (i)	Welding (kg)					1	1,000	0	60				

## Waste containing PCBs (i), etc.

Waste containing PCBs and other chemical substances are properly stored and controlled according to the related laws and regulations. This type of waste is slated to be treated and rendered harmless by the mandatory deadline of 2016 as set forth in the Law Concerning Special Measures against PCB Waste ①. Certain Group companies have started to implement such treatment.

Waste containing	FY	2002 records	FY	2003 records	FY2004 records					
PCBs, etc.	No. of companies	Quantity contained	No. of companies	Quantity contained	No. of companies	Quantity contained	No. of companies	Quantity detoxified		
Transformers	4	46 units	4	46 units	4	40 units	1	6		
Capacitors	13	92 units	14	93 units	13	73 units	2	20		
Stabilizers	5	493 units	6	531 units	6	575 units				
Others	4	1 units 369 ℓ ,27 kg	4	1 units 369 ℓ ,27 kg	4	1 units 369 ℓ ,27 kg				

Note 1: Calculations are based on data from the 40 companies that joined the Subcor Note 2: Waste containing trace amount of (confirmed) PCB () is excluded.

## Air pollutants (i)

Fair effort is made by companies to control air pollutants including SOx ① and NOx ① according to the related laws andregulations.

	Ata and the same	F	Y2002 records	F	Y2003 records	FY2004 records		
ı	Air pollutants	No. of companies	Quantity emitted	No. of companies	Quantity emitted	No. of companies	Quantity emitted	
	Sulfur oxides (SOx) (thousand tons)		1.5		0.7		1.3	
ı	Nitrogen oxides (NOx) (thousand tons)	2	1.3	3	1.8	7 3	1.8	

## Environmental Accounting

Environmental activity costs ① calculated at each Group company are summed on a Group basis in accordance with the Environmental Accounting ① Standards for the Kyushu Electric Power Group.

#### **Environmental activity costs**

(Unit: million ven)

Contraction desired, desired, and a series of the series o										
Classific		Main activities	FY2 environmenta	002 activity costs	FY2 environmenta	2003 I activity costs	FY2 environmenta	2004 I activity costs		
environmen	tal activities	Main activities	Investments	Expenses	Investments	Expenses	Investments	Expenses		
Global environmental	Global warming (i) prevention	Thermal efficiency $\textcircled{1}$ improvement, introduction and support for new energy $\textcircled{1}$ facilities, energy conservation (including low-emission vehicles $\textcircled{1}$ ) and SFe $\textcircled{1}$ emission control	255.5	6.8	8.7	24.3	26.7	48.6		
conservation	Ozone layer (i) protection	Measures for freon and halon recovery	0.1	10.5	1.2	9.8	6.9	10.6		
Local	Air pollution (i) prevention	Flue gas $\oplus$ treatment (desulfurization $\oplus$ , denitration $\oplus$ , particulate $\oplus$ reduction equipment) and use of fuel with low sulfur content	0.9	80.0	1,146.6	118.0	17.6	482.8		
environmental conservation	Water pollution (i) prevention	Wastewater treatment, counter measures for oil leaks	2.9	91.8	245.1	61.6	0.7	143.6		
	Noise and vibration prevention	Counter measures for noise and vibration at facilities	0	0.9	0	4.3	3.8	34.7		
	Counter measures	Reduction and recycling of industrial waste	0	36.3	0	29.1	0	186.1		
Resource	for industrial waste ①	Disposal of industrial waste and PCB ① storage	22.0	91.3	33.0	247.2	5.6	271.7		
recycling	Counter measures	Reduction and recycling of general waste	0	13.9	0.2	17.7	0	19.2		
for general waste		Disposal of general waste	0	63.9	0	76.0	0	75.1		
Green procuremen	ıt ①	Additional costs incurred by green procurement	0	0.2	0	0.7	0	1.0		
Environmental	Planning for environmental activities	Expenses for environment-related qualification acquisition, education ① and training, and personnel	0	47.5	0	43.3	0	67.9		
activity management	Introduction and maintenance of EMS (i)	Acquisition, implementation and maintenance of EMS (ISO14001 $ \mathbb{O}_{+}$ ISO-based system $ \mathbb{O}_{+}$	0	32.1	0	31.4	0	34.9		
	Environmental load ① measurement and monitoring	Monitoring and measurement of substances having environmental load	0	10.6	0	38.5	1.0	47.2		
Environment- related research	Environmental conservation	Effective use of waste	0	40.5	1.2	6.8	0	18.0		
	Greening of sites	Greening of company-owned land and facilities, and their maintenance and management	0	70.5	8.4	67.1	6.7	68.2		
	Maintaining quality townscapes and surroundings	Measures to keep buildings in harmony with the landscape of their surrounding environment	0	0	0	0	0.2	0		
Social activities	Environment Month (i) and others	Environment Month, planting activities	0	0.1	0	0.5	0	0.4		
	Supporting local environmental activities	Support for local environmental activities and environmental organizations ①	0	0.7	0	0.4	0	0.2		
	Environmental information disclosure	Creation of website related to the environment	0	0.1	0	0.2	0	0.2		
Penalty for environ	mental damage	Pollution load levy ① set by Law concerning Pollution-related Health Damage Compensation and Other Measures ①	0	235.8	0	198.4	0	145.0		
		Total	281.4	833.5	1,444.4	975.3	69.2	1,655.4		

Note: Calculations are based on data collected from the 40 companies that joined the Subcommittee by FY2004 (those for FY2002 are based on data collected from the 26 original member companies). The FYs 2002 and 2003 amounts were estimated by Group companies and summed on a Group basis.

## 4 Environmental Education and Sharing of Environmental Information

### **Environmental Education**

For further promotion of environmental management ①, joint seminars on environmental management, study tours to environmentally advanced model entities and lectures on the environment were organized to offer environmental education to the whole Group. These activities will be continued to ensure our progress.

## $\Sigma \, \text{Joint seminars on environmental management} \,$

In the first half, we had a seminar with a speaker from Mitsubishi Electric Corporation, Fukuyama Works in Fukuyama City, Hiroshima Prefecture. He introduced energy conservation and other environmental activities Mitsubishi Electric Corporation is involved in. In the second half, we had a workshop with personnel from the Environmental Affairs Department of Kyushu Electric Power to discuss Environmental Accounting Standards for the Kyushu Electric Power Group (held in November 2004 with 42 attendants from 36 Group companies).

## $\Sigma\,\text{Study}$ tours to environmentally advanced model entities

Personnel from the Group companies visited Toyota Motors Kyushu, Inc. in Miyata, Fukuoka Prefecture to learn how environmental activities including zeroemission ① and acquisition of ISO14001 certification were being implemented as well as a tour of their factories (held in August 2004 with 32 personnel from 30 companies).

## Σ Environmental lectures

Two Group companies, Kyuden Sangyo Co., Inc. and Kyushu Telecommunication Network Co., Inc. held a lecture with a speaker from the Environmental Affairs Department of Kyushu Electric Power under the theme "Kyushu Electric Power Group's efforts for environmental management" (Approximately 90 attendants from the two companies). In Environment Month, Kyushu Electric Power organized a lecture about "World inside Japan – Consider the Global Environment" with a speaker Mr. Jiro Hirano, a broadcast journalist and a former commentator for NHK (Japan Broadcasting Corporation). Many people attended the lecture

### **Sharing of Environmental Information**

Kyushu Electric Power Group's Environmental Information is available on Kyushu Electric Power Group's Information Network website, accessible by most Group companies. This is aimed to have environmental information shared among all Group companies in order to help environmental activities take root and be promoted in each Group company. Efforts will be made to improve the content in the future.

from Kyushu Electric Power and other Group companies

(held in June 2004 with 61 attendants from 31 companies).



## Measures for Global Environmental Issues

The Kyushu Electric Power Group implements various environmental measures to cope with global environmental issues 1. The measures include ensuring SF<sub>6</sub> gas recovery for the prevention of global warming, reduction of electricity use in offices and complete recovery of regulated freons 1 to protect the ozone layer, all of which are aggressively tackled, aiming for the unified targets of the Group.

Other measures taken to address the global environmental issues include the development and provision of eco-friendly products ① and services. Examples of such endeavors are introduced in specific cases below:

#### Kyushu Rinsan Co., Inc.

# Contribution to GHG ① Emission Reduction by Managing Kyushu Electric Power's Forests

Kyushu Rinsan Co., Inc. is responsible for maintaining and managing Kyushu Electric Power's forests of approximately 4,450 hectares and 6.57 million trees (as of April 2002).

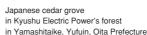
Properly managed forests or trees absorb CO<sub>2</sub> ① in the air and store it in the form of carbon compounds with the help of solar energy. If trees are cut down, the felled trees cease to absorb CO<sub>2</sub> anymore, but continue to retain absorbed carbon unless they are burned. Following the principle "plant new trees when trees are cut down," the overall amount of CO<sub>2</sub> absorbed will remain equal since the amount of CO<sub>2</sub> that would have been absorbed by the felled trees is made up for. The longer the use of felled trees lasts, such as for housing material, the longer contained carbon will be retained. Thus, trees are extremely ecofriendly resources that can be reproduced (reference books: "Recycling society ① and timber — one more forest in each city" and "Timbers protect environment and our health," written by Takanori Arima).

Forests owned by Kyushu Electric Power have about 6.57 million trees with a timber volume of 705 thousand m³ or so. Approximately 290

thousand tons of carbon (equal to 1.06 million tons of CO<sub>2</sub>) are estimated to be retained in the trees and approximately 8,000 tons of carbon (equal to approximately 30 thousand tons of CO<sub>2</sub>) are absorbed from the air annually.

The forests owned by Kyushu Electric Power have 85 years of history, supplying water for hydroelectric power generation and materials for utility poles. The forests have been adequately managed, and have played a part in preventing global warming by absorbing CO<sub>2</sub> from the air. As a result, our company-owned forests were recognized to be

properly managed and were awarded the Forest Management Certification ① by the Forest Stewardship Council (certification No.SA-FM/COC-1412) in March 2005. We will be devoted to caring for and increasing the number of functions and effects provided by forests.





## Nishinippon Plant Engineering and Construction Co., Ltd.

## Introduction of Wind Power Generation Seeking for CO<sub>2</sub> Emission Reduction

Nishinippon Plant Engineering and Construction Co., Ltd. is engaged in the construction of wind power generation facilities, and completed a wind power generation station in Karatsu City, Saga Prefecture to start commercial operation in March 2005 (1,500kW × 8 units from General Electric Wind Energy Corp. with total output of 12,000kW).

Wind energy is clean and inexhaustible, and produces no CO<sub>2</sub> emissions in power generation, though it has a few drawbacks such as weather dependency, low energy density and higher generation costs. If quantity equal to the annual volume of power produced in the wind power station were produced in a thermal power station\*, the wind power station can reduce CO<sub>2</sub> emissions by approximately 17,000 tons compared to a thermal power station. The company is currently considering the

possibility of constructing a wind power station on the ocean (sea area), which provides more advantageous conditions for wind (i.e. high average wind speed and constant wind).

Our vision for the future includes power generation projectsin addition to the construction of wind power stations. The company also plans to develop a combined system using new energy such as wind and photovoltaic power generation in order to offer an energy supply system that is eco-friendly and suitable for each region.

\*:A one million kW-class oil-fired thermal power station assumed

Hizen Wind Power Station under construction Hub (tower) height: approx. 65 meters Rotor (blade part) diameter approx. 71 meters



### **Nishimu Electronics Industries Co., Ltd.**

## Sale of the Remote Energy Management Service System to Support Customers' Energy Conservation Activities

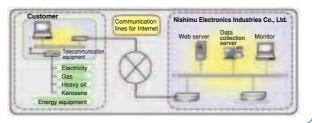
Since the Kyoto Protocol ① came into effect, fulfillment of the greenhouse gas reduction commitments became an urgent matter. One of the effective measures for such an endeavor is energy conservation.

Nishimu Electronics Industries Co., Ltd. offers support to customers in their energy saving activities by taking advantage of its accumulated control and telecommunication technologies as well as know-how in its 24-hour monitoring system at its maintenance centers.

The remote energy management service system developed is used for the company and its customers to control energy-related information including the status of electricity and fuel used by its customers via the Internet.

The customer's energy-related information is stored in the company's "data collection server" and sent to the customer as

needed, and is used to prepare an energy management report regarding the operating status of energy equipment. The energy management report stored on a Web server is accessible by the customers through the Internet at any time. These services enable customers to see the effect of energy conservation achieved by each customer and encourage them to continue energy saving efforts effectively. The company also offers a service to monitor energy equipment, and communicates malfunctions to the customer, when identified.



## 6 Measures for the Creation of a Recycling Society

The Kyushu Electric Power Group implements a variety of environmental activities to construct a recycling society ①. Particularly, aggressive efforts are continued in order to raise the recycling rate ① of used paper ① and the rate of recycled paper use ① for photocopy paper and toilet tissue and promote green procurement ① based on the Group's unified targets. The group, as a rule, practices green procurement for commodities such as commercially available office supplies if there is no price difference between eco-friendly products ① and regular goods.

Another measure taken to create a recycling society is to develop and provide eco-friendly products and services. Some examples describing our measures for realizing a recycling society are introduced below:

## Koyo Denki Kogyo Co., Ltd.

# Promoting Research Activity to Recycle Used Insulators

Koyo Denki Kogyo Co., Ltd. manufactures distribution insulators\* using Amakusa pottery stone as a main raw material. Pottery stone and clay are among natural minerals. High quality pottery stone and clay used in ceramic industries including insulator manufacturers are recently in a shortage situation. Recycling is required to address this issue, and will contribute to waste reduction.

Defective insulators identified in or after the manufacturing process are used as raw material for refractory bricks since such defective insulators are all porcelain quality. However, insulators used in distribution equipment are difficult to recycle because of to the porcelain area of the used insulator, and are mostly disposed of as industrial waste ①.

Given the above situation, the company now cooperates with Distribution Department of Kyushu Electric Power to research and develop the following:

 Method to implement efficient separation and sorting of porcelain area and metal parts,

- 2. Method to implement efficient crushing of the porcelain area, and
- 3. New usage of the crushed porcelain area.

We will endeavor to develop a method to recycle used insulators, as a material for ceramic products or as a material with new functions for other products in order to contribute to the building of a recycling society

\*Products (mostly made of porcelain) used to electrically insulate electric wires from a supporting structure.







Defective insulators

(stick-type metal parts are fixed in the middle)

## Japan Recycling Light Technology & System

## Creating Lamps from Lamps: Challenge of Recycling Material for Fluorescent Tubes

Japan Recycling Light Technology & System recycles used fluorescent tubes collected from companies, schools, local governments and households. After the used fluorescent tubes are reverted to original materials such as glass, metal, phosphor and mercury, recycled fluorescent tubes are made using such original materials for sale (by outsourcing).

In three years since the start of its operation, the company concluded agreements for treatment with 252 local governments\*1 as well as many companies and schools.

In November 2002, the company started selling recycled fluorescent tubes, manufactured using recycled phosphor. The sale was the first attempt in Japan. Also the company manufactured recycled fluorescent tubes "Yoka-Lamp" using recycled glass to market them in June 2004. The new endeavor pursued in June 2005 was sales of another recycled fluorescent tubes "Top Star" which satisfy the requirement under the Law on Promoting Green Purchasing ①. The "Top Star" product line is a three-wavelength\*2, energy-saving

fluorescent tube (Hf fluorescent tube) and is manufactured using recycled glass and phosphor as well as the Yoka-Lamp.

The company plans to recycle even more fluorescent tubes, improve the percentage of recycled materials used 3 in its products, and broaden its product range. Its ultimate goal is to establish a recycling system in which fluorescent tube materials are recycled based on "lamps from lamps" conception.

- \*1: It indicates the number of local governments before the recent, large-scale memory.
- \*2: It illuminates better and provides vivid colors due to appropriate blending of the phosphors of three primary colors; blue, green and red.
- '3: İt indicates a percentage of recycled materials used in fluorescent tubes. Percentage of recycled glass and phosphor used are roughly 1% and 30%, respectively.

New fluorescent tube product "Top Star"



## **Kyushu Environmental Management Corporation**

## Contributing to the Realization of a Recycling Society by Recycling Confidential Documents

Kyushu Environmental Management Corporation is engaged in eliminating secret information from and recycling confidential documents that used to be shredded and burned. The company also sells recycled photocopy paper and toilet tissue under a private brand, as well as stores the document.

In the recycling of confidential documents, an integrated system is used, which covers the collection, transportation, shredding, compressing, recycling (dissolving) for the production of paper products by affiliated paper manufacturers, and the sale of produced recycled paper products.

The company applies the best possible measures to ensure the security of the confidential documents it handles by using collection boxes that guard secrets and special vehicles equipped with functions to prevent the theft or scattering of documents. Its treatment facility meets the safety and confidentiality criteria of Japan Quality Assurance Organization (JQA) and was the first facility in Kyushu to receive a certification for conformity to safety measures as a recycling

and treatment center. The entrance into and exit from the treatment facility are controlled by an ID card and monitored using a security system employing surveillance cameras and temperature sensors, which operates 24 hours a day, seven days a week.

The company will address waste reduction, the prevention of air pollution ① and resource depletion (deforestation) by recycling confidential documents in order to help create a recycling society.



JQS-certified confidential document treatment facility Fukuoka Security Center



## 7 Environmental Activities in Cooperation with Local Communities

#### Participation in Kyushu Homeland Forestation Program

The Kyushu Homeland Forestation Program was started in fiscal 2001 to commemorate the 50th anniversary of Kyushu Electric Power under a concept that one million trees should be planted in ten years. Personnel from each Group company participate in the program as a voluntary activity. In fiscal 2004, a total of 925 employees from 24 Group companies joined the program and planted trees with local residents in the communities.



Tree planting in Fukiagehama, Hioki City, Kagoshima Prefecture

#### **Tree Planting Activity Overseas**

Kitakyushu Liquefied Natural Gas Co., Inc. implements tree planting and greening activities in Indonesia for the protection of tropical rain forests.

PT Badak Natural Gas Liquefaction Company (based in Jakarta), which supplies Kitakyushu Liquefied Natural Gas with LNG ①, has a liquefaction base in Bontang City in the eastern part of Kalimantan Island (Borneo) of Indonesia. Kitakyushu Liquefied Natural Gas Co., Inc. plants seedlings of trees native to Bontang such as Kandis and Nam-Nam in the Kitakyushu Liquefied Natural Gas Park constructed in the site of the liquefaction base.

The tree planting was suggested by the company's former president Ono. Since 1995, a total of 13 employees paid eight visits to the park to plant trees by themselves. So far, approximately 1,000 tree seedlings have been planted with growing appreciation from the local people.

The company plans to continue tree planting activity to assist local greening at home and abroad.



A tree planted by President Matsuo (right) of Kitakvushu Liquefied Natural Gas Co., Inc. in May 2001

#### **Cleaning of Communities**

KYUKI CORPORATION and Kyushu Meter & Relay Engineering Corp. voluntarily clean local areas together with the Kyushu Branch Office of the Japan Electric Meters Inspection Corporation and the Research Laboratory of Kyushu Electric Power in September and October every year.

The four companies described above are located close to each other, and cooperated to launch this cleaning program in fiscal 2003 to contribute to the local community. Cleanings have taken place twice so far. The four companies take turns acting as secretariat. Usually, about 180 employees clean roads scattered with empty cans and bottles and burnable trash in two hours.

The companies will continue the cleaning to restore local environment



Cleaning by the four companies in Minami Ward, Fukuoka City

## 8 Active Disclosure of Environmental Information

The records of various environmental activities are disclosed in the Environment Action Report and on Kyushu Electric Power's website. The Kyushu Electric Power Group is committed to promoting environmental management for the Group as a whole and further disclosing related information.

