

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.
- Kyushu Electric Power's group companies also take measures to establish a recycling-based society. They actively promote waste recycling such as used paper, confidential documents and used fluorescent tubes, as well as the green procurement system.

[See Related Information P66](#)

1 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. (March 2002)
- Four types of posters encouraging zero-waste are made for offices (Head/Branch Offices), Customer Service Offices and Power Stations. Posters targeted at customers are also made and displayed in the reception areas of each customer service office.



For Head Office and Branch Offices



For Customer Service Offices



For Customers



For Power Stations



For Power System Maintenance Offices

- Employees are encouraged to create slogans, which are displayed on promotional posters to enhance awareness regarding zero-waste. (1,212 slogans were collected and 2,406 employees voted electronically for the best slogans.)

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!

2 Industrial waste

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

Measures for "Reduce"

At thermal and nuclear power stations, a longer period between each equipment inspection is applied to reduce the number of parts to be replaced (incl. seal, bearing and gasket). In addition, the period between the change of equipment lubricating oil is lengthened to reduce the amount of waste oil discharged.

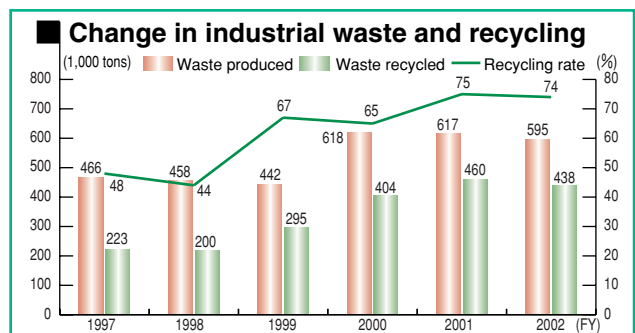
Measures for "Reuse"

For the materials and equipment removed during power distribution works, it is decided whether the materials have enough capability and quality to be reused based on the original criteria. Kyushu Electric Power promotes reuse of the reusable materials both as they are and after being repaired.

Measures for "Recycling"

The overall industrial waste generated in Fiscal 2002 was approximately 590,000 tons, keeping the same level since Fiscal 2000.

- The overall recycling rate was recorded at 74%, the same level as Fiscal 2001.
- The 440,000 tons recycled at Kyushu Electric Power in Fiscal 2002 are equivalent to 1% of the amount of annual waste for final disposal in Japan. (White Paper on the Environment for Fiscal 2003 shows that the amount of annual waste for final disposal in Japan totaled 45 million tons.)
- To achieve a total recycling rate of 95% or more in 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.



Industrial waste by category at Kyushu Electric Power (FY 2002)

	Waste produced (tons)	Amount recycled (tons)	Recycling rate (%)	
Coal ash	475,241	322,622	68%	
Other industrial waste	Heavy and clued oil ash	745	738	99%
	Gypsum	91,271	91,271	100%
	Sludge	4,849	2,557	53%
	Waste oil	1,908	1,846	97%
	Waste plastic	312	194	62%
	Scrap metal	9,041	8,724	96%
	Discarded concrete poles	10,411	10,411	100%
	Waste glass and ceramics	785	28	4%
	Industrial waste subject to special control	13	0	0%
	Other waste	87	32	37%
Subtotal	119,422	115,801	97%	
Industrial waste total	594,663	438,423	74%	

3 General waste

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

Measures for "Reduce"

The amount of used paper generated is minimized through using double-sided photocopy, avoiding miscopying and utilization of electrical documents, as well as reducing the use of paper cups.

Measures for "Reuse"

Reusing the blank-side of used paper, files and stationery is also conducted.

Measures for "Recycling"

◇used paper

In Fiscal 2002, Kyushu Electric Power began to make company-wide efforts to achieve 100% used paper recycling by ensuring used paper recycling routes.

- A total of 1,781 tons of used paper was generated and collected during Fiscal 2002. Of this, 1,780 tons were recycled and the remaining ton was incinerated.

Collection of used paper at Kyushu Electric Power (FY 2002)

Type of used paper	Amount collected (tons)
Newspapers	185
Magazines	74
Cardboard	105
Confidential documents	392
Others*	1,025
Total	1,781

*Others include used photocopy paper and envelopes.

- Through the above efforts, the used paper recycling rate was improved from about 50% in Fiscal 2001 to about 100% in Fiscal 2002.
- Part of the collected used paper is recycled by Kyushu Environment Corporation to produce photocopy paper, paper string and toilet rolls with Kyushu Electric Power's corporate logo.



Products made from collected used paper

◇Encouragement of other general waste recycling

Recycling of other general waste is actively encouraged:

- Bottles, cans and plastic bottles are collected separately.
- Shells collected at power stations and driftwood collected at dams are fully utilized; the volume of kitchen garbage discharged from cafeterias is reduced or composted.
- Old, worn work clothing is collected for recycling.



Composting facility installed at Education & Training Center

4 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 phosphorous and other materials.
- Other group companies of Kyushu Electric Power also participate in the recycling of used fluorescent tubes; Japan Recycling Light Technology & System recycled about 80,000 fluorescent tubes in Fiscal 2002.

Materials crushed and recycled



Confidential document recycling group company

Kyushu Environmental Management Corporation

- Under strict security, confidential documents are collected, stored for a limited duration and then their information is erased. The treated paper is then dissolved and recycled.
- Other group companies of Kyushu Electric Power also promote recycling of used confidential documents; Kyushu Environmental Management Corporation recycled about 1,300 tons of documents in Fiscal 2002.



Used paper with confidential information being erased under strict security

5 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.

[See Related Information P54](#)

- The green procurement system encourages the use of eco-friendly goods and cooperates 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 eight categories: miscellaneous goods, fixtures and furniture, electric appliances, stationery, other expendables, printing, office equipment and clothing. More categories will be included in the future.
- Criteria was established in Fiscal 2002 for electricity related materials and equipment to help the company purchase materials and equipment that cause less environmental damage.

