# 3. Establishing a Recycling-based Society - challenges towards zero-waste

Kyushu Electric addresses the challenges of "zero-waste" by promoting the three "R's" (reduce, reuse and recycle) to establish a recycling-based society.

The recycling rate for general and industrial waste shall be improved.

Kyushu Electric is planning to establish a recycling system and recycling-based businesses, with the cooperation of the group companies.

Appropriate management and disposal methods shall be implemented for waste that cannot be recycled using modern technology.

#### (1) Industrial waste

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

The amount of industrial waste generated in fiscal 2000 was 620,000 tons, an 180,000-ton increase over that of fiscal 1999. This was due to the higher operating factor of coal-fired thermal power plants, resulting in a 150,000-ton increase of coal ash. The overall recycling rate remains 65%, the same as in fiscal 1999.

	Waste produced (1,000 tons)	Ratio of waste	Amount recycled (1,000 tons)	Recycling rate	Target (FY 2003)
Coal ash	481.3	78%	286.1	59%	
Gypsum	92.1	15%	92.1	100%	Total recycling rate of 90% or more
Sludge	16.8	3%	1.5	9%	
Scrap metal	13.8	2%	13.3	97%	with the aim of zero-
Discarded concrete poles	9.1	1%	9.1	100%	waste in the future
Others	4.5	1%	2.3	50%	
Total	617.6	100%	404.4	65%	

Industrial waste by category at Kyushu Electric (FY 2000)

Kyushu Electric aims to achieve zero-waste. Meanwhile, the company is working towards achieving a recycling rate of 90% or more by fiscal 2003. The use of coal ash as a material for cement production will be expanded, while research is underway to examine coal as a soil enhancer. The Kyushu Electric group's measures towards achieving zero-waste are discussed at the Kyushu Electric Group Company Environmental Management Promotion Association.





# (2) General waste

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

A total of 2,000 tons of used paper was generated during fiscal 2000. Of this, 738 tons or about 40% was collected through special boxes for used paper, and through periodical collection activities. Efforts are also made to reduce paper use and to promote the use of recycled paper. For example, regular photocopy paper and toilet paper at Kyushu Electric has been replaced almost entirely with recycled paper.

The recycling system is to be established at all offices in fiscal 2002, and 100% of used paper will be recycled. Waste other than used paper is collected by type. To address kitchen garbage, the company is examining the possibility of installing a compost facility for business offices with cafeterias, which generate a large amount of kitchen garbage.

Collection method	Amount collected (tons)	
Used paper collection b	218	
Sorting used paper	Newspapers, magazines	170
	Cardboard	111
	Others	21
Old documents sorted t	218	
Total	738	

Collection of used paper at Kyushu Electric (FY 2000)

Use of recycled paper at Kyushu Electric (FY2000)

	Photocopy paper	Toilet paper
Amount of paper used	551 tons	237,000 rolls
Amount of recycled paper used	528 tons	231,000 rolls
Ratio of recycled paper used	96%	97%

## (3) Organizing recycling as a business

With the cooperation of the group companies, Kyushu Electric has established several waste recycling businesses.

#### Fluorescent tube recycling business

Japan Recycling Light Technology & System was established in May 2000. Used fluorescent tubes are collected, sorted, crushed and recycled as glass, metals, mercury and other materials.

Scheme for fluorescent tube recycling

#### Confidential document recycling business

Kyushu Environmental Management Corporation was established in May 2001. The company collects confidential documents, erases confidential information, dissolves and recycles the papers under strict security.

Scheme for confidential document recycling



### (4) Promotion of green procurement

When purchasing stationary, expendable office automation supplies or work clothing, Kyushu Electric prefers to choose environmentally friendly goods. The company is examining the possibility of constructing a green procurement system to give greater priority to environmentally friendly materials and suppliers.

The green procurement system provides a more comprehensive view of goods procurement, and helps reduce the amount of goods procured. In this system, evaluation is made of the supplier's environmental measures and the environment load imposed by the material itself, in addition to conventional evaluations of quality, price and delivery time.

