

Ricoh Group's Corporate Environmental Accounting in fiscal 2004

Environmental conservation costs are classified according to "Categories corresponding to business activities" defined in the "Environmental Accounting Guidelines 2005" of the Ministry of the Environment.

Costs refer to expenditure on environmental conservation activities (in a broad sense), and consist of environmental investments and environmental costs (in a narrow sense).

● **Environmental investments**  
These investments correspond to "investments in fixed assets" in financial accounting. The amount of environmental investments is distributed as environmental costs over the service life of fixed assets in accordance with depreciation procedures.

● **Environmental costs**  
These environmental costs correspond to the "period cost" in financial accounting. (Depreciation cost of environmental investments is included.)

Effect on environmental conservation means the effect of activities to prevent and control the occurrence of environmental impacts and to eliminate and remove such environmental impacts. The Ricoh Group reports the amount of reduction in the emission of substances with serious environmental impacts for the current year as compared with the previous year (emissions in the previous year - emissions in the current year).

● **Conversion Coefficient**  
This is a weighting coefficient that is used in identifying environmental impact by totaling and weighting various types of environmental impact expressed in different units (CO<sub>2</sub> = 1). Values of coefficients are based on the Swedish EPS method.

● **Converted Quantity of Reduction/Converted Value of Impact**  
Converted quantity of reduction is obtained by multiplying environmental impact reduction by conversion coefficients and converted value of impact by multiplying total environmental impact by the coefficients. In other words, these values refer to the degree of seriousness of such environmental impact reduction and total environmental impact that are converted into figures in t-CO<sub>2</sub>.

● **Social Cost Reduction Values/Social Costs**  
Social cost reduction values represent financial figures obtained by converting the converted quantity of reduction into money and social costs by converting the converted value of impact into money. Computations are made using the factor of 108 Euro/t-CO<sub>2</sub> of EPS Ver2000.

Cost unit: ¥100 million (Exchange rate: \$1 = ¥107.58 €1 = ¥135.25)

Item	Costs		Economic Benefits		Effect on Environmental Conservation				Environmental Impact					
	Environmental Investments	Environmental Costs	Monetary Effects	Category	Item	Environmental Impact Reduction (t)	Conversion Coefficient	Converted Quantity of Reduction	Social Cost Reduction Values	Total (t)	Conversion Coefficient	Converted Value of Impact	Social Costs	
Business area costs	5.3	20.9	Pollution prevention cost ..... ¥398 million Global environmental conservation cost ..... ¥598 million Resource circulation cost ..... ¥1,094 million	5.3	a	Energy savings and improved waste processing efficiency	Environmental impact reduction at business sites							
				50.2	b	Contribution to value-added production	CO <sub>2</sub> ..... -6,766.5	1.0	-6,766	-0.99	CO <sub>2</sub> ..... 291,267	1.0	291,267	42.55
				59.4	c	Avoidance of risk in restoring environments and avoidance of lawsuits	NOx ..... 9.4	19.7	185	0.03	NOx ..... 172	19.7	3,384	0.49
Upstream/Downstream costs	0.5	84.6	Cost of collecting, disassembling, and recycling used products	103.9	a	Sales of recycled products, etc.	SOx ..... -0.6	30.3	-18	-0.00	SOx ..... 10	30.3	289	0.04
				[26.5]	S	Reduction in society's waste disposal cost	BOD ..... 8.9	0.02	0.2	0.00	BOD ..... 23	0.02	0	0.00
Administration costs	1.1	33.8	Cost generated by the division in charge of environmental conservation; cost to establish and maintain an environmental management system	21.1	b	Effects of media coverage and environmental education	Final waste disposal amount ..... 2.3	104.0	238	0.03	Final waste disposal amount ..... 841	104.0	87,468	12.78
Research and development costs	1.0	18.9	Research and development costs for environmental impact reduction	51.5	a	Contribution to gross margin through environmental research and development	PRTR substance emissions ..... (Ricoh standards per substance)		8,546	1.25	PRTR substance emissions ..... (Ricoh standards per substance)		50,839	7.43
				[6.4]	S	Reduction in user's electricity expenses thanks to an improved energy saving function and product performance	Environmental impact reduction through products CO <sub>2</sub> ..... 9,969.1 (t) NOx ..... 8.2 (t) SOx ..... 6.5 (t) Final waste disposal amount ..... 33,096.0 (t) Calculation for companies in Japan only							
Social activity costs	0.0	5.3	Costs of preparing environmental reports and advertisements	8.4	b	Publicity from environmental advertisements, etc.								
Environmental remediation costs	0.6	1.6	Costs of restoring soil and environment-related reconciliation	0.0	—	None								
Other costs	0.0	0.6	Other costs for environmental conservation	0.0										
<b>Total</b>	<b>8.7</b>	<b>165.7</b>		<b>299.8</b>	Sum of a:160.7, b:79.7, and c:59.4.									
				<b>[32.9]</b>	Total S's									

a: Substantial effect  
b: Expected effect  
c: Incidental effect  
S: Social effect  
(Customer benefits)

● **Environmental investment rate: 2.5%**  
[= environmental investment (8.7) /total capital investment (346.1)]

● **Environmental R&D cost rate: 1.7%**  
[= Total environmental R&D cost (18.9) /Total R&D cost (1,104)]

Data coverage ● **Companies: 93 Ricoh Group companies.** (See page 73.)

● **Period: From April 1, 2004 to March 31, 2005 (for costs and total environmental impact).**

\* Social cost is calculated using the factor of 108 Euro/t-CO<sub>2</sub> (14,607 yen/t-CO<sub>2</sub>).

\* Environmental impact reduction represents the difference between figures in fiscal 2003 and fiscal 2004.

Economic benefits refer to benefits that were obtained by environmental conservation activities and which contributed to the profits of the Ricoh Group in some form. Economic benefits are classified into four categories as follows:

- **Substantial effect (a)**  
This means economic benefits that fall into either of the following two cases:  
1) Cash or cash equivalent is received as a benefit. This corresponds to "realized gain" in financial accounting.  
2) The amount of savings in such costs that would have occurred if environmental conservation activities had not been conducted. This amount is not recognized in financial accounting.
- **Expected effect (b)**  
The expected amount of contribution in the case that expenditure on environmental conservation activities is assumed to have contributed to profits for the Ricoh Group. If environmental conservation costs are assumed to be costs that are indispensable for the Ricoh Group to conduct its operations, for example, it can be safely said that such cost contributed to profit in some form. In practice, the expected effect is computed by a certain formula for each item.
- **Incidental effect (c)**  
Expenditure on environmental conservation activities can help avoid the occurrence of environmental impacts. Therefore, it can be safely said that the expenditure contributed to the avoidance of such damage of environmental impact that would have taken place without the expenditure. In practice, the incidental effect is computed by multiplying the expected amount of damage by an occurrence coefficient and impact coefficient.
- **Social effect (S)**  
Social effect means such effect that is generated by expenditure on environmental conservation activities not for the Ricoh Group but for society. In practice, social effect means the amount of reduction in the expense of electric power and waste disposition that is enabled through environmentally conscious products for customers.

\* For the computation formulas, see page on the right.

<b>(1) Formula of Substantial Effect</b>		<b>(3) Formula of Incidental Effects</b>	
Reduction in heat, light, and water cost	Heat, light, and water expenses in the previous year - heat, light, and water expense in the current year	Amount of incidental effects	Standard amount × occurrence coefficient × impact coefficient
Reduction in waste disposal cost	Waste disposal expenses in the previous year - waste disposal expenses in the current year	Items to be calculated	Areas of improvement to prevent pollution
Sales value of valuable materials	Sales value of valuable materials sorted from waste	Standard amount	Amount set aside for lawsuits, suspension of operations, and restoration
Sales of recycled products and parts	Sales of recycled products and parts	Coefficient	Occurrence coefficient and impact coefficient to be set according to occurrence frequency and affected extent
Subsidies	Environmental subsidies from the government, etc.	<b>(4) Formula of Social Effects (customers' economic benefits from using products)</b>	
R&D profit contribution amount	Product gross margin × gross margin contribution rate calculated using environmentally conscious points	Total electric power	Electric power consumption of a product × number of products sold
<b>(2) Formula of Expected Effects</b>		Electric power cost reduction effect	(Total electric power for old models - total electric power for new models) × electric power unit cost
Contribution to value-added production	(Production output - raw material costs) × business area cost/manufacturing costs	Waste disposal cost reduction effect	(Weight of collected products - weight of final waste) × outside disposal unit cost
Effects on media coverage	Area of newspaper advertisement/newspaper page area × advertisement cost per page		
Effects of environmental education	Number of people attending internal environmental education seminars × seminar fee for outside participants		
Publicity from environmental advertisements	Number of visitors to environmental Web site × unit price of the sustainability report		