

Mitsubishi Electric Group
Environmental
Sustainability
Report

2003



Changes for the Better



Mitsubishi Electric Group Environmental Sustainability Report 2003

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Editorial Policy

To date, Mitsubishi Electric has published the Environmental Sustainability Report in accordance with the “Environmental Reporting Guidelines,” prepared by Japan’s Ministry of the Environment, and the guidelines of the GRI^{*1}. This year information regarding the Company’s activities in the area of corporate social responsibility has been added. The report is divided into four main sections: Environmental Management, Environmental Management System, Environmental Activities, and Social Relations. The section that previously reported the activities of affiliated companies has been incorporated into the overall activities of the Mitsubishi Electric Group.

*1 GRI: Global Reporting Initiative

Report Coverage

Period : April 1, 2002–March 31, 2003

Companies : Mitsubishi Electric and 82 affiliate companies
(65 domestic, 17 overseas)

Company Outline (as of March 31, 2003)

Name: **Mitsubishi Electric Corporation**

With the exception of auditing and related matters of joint stock-owned companies, upon request Mitsubishi Electric excludes companies with committees established according to Section 2 Paragraph 4 of the Commercial Law.

Head Office : Mitsubishi Denki Building, 2-2-3 Marunouchi,
Chiyoda-ku, Tokyo 100-8310, Japan

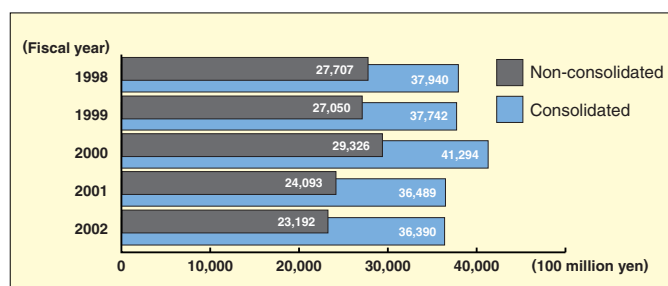
Date Established : January 15, 1921

Paid-in Capital : 175.8 billion yen

Employees : 110,279 (consolidated) 35,457 (non-consolidated)

Sales : 3.6390 trillion yen (consolidated)
2.3192 trillion yen (non-consolidated)

Sales



“Creating together...” Towards a Sustainable Society

Having entered the 21st century, people around the world began expressing the common recognition that it is indispensable to create a sustainable socio-economic system harmonized with the global eco-system. In an effort to create a sustainable society where the natural environment suffers as little negative impact as possible and scarce resources are more efficiently utilized, various measures are being planned and implemented around the world. The Mitsubishi Electric Group made public its first “Environmental Plan” back in 1993, and has continued to develop systematized means to help protect the global environment and to implement them in its corporate environmental management activities.

The Mitsubishi Electric Group is moving ahead with what we call “Balanced Corporate Management”, focusing on “Operational Soundness”, “Profitability and Efficiency” and “Growth” as a key management policy. It is my belief that these three objectives are important for environmental management as well. First, “Operational Soundness” is achieved by continuing to abide by all current environmental compliance requirements; second, “Profitability and Efficiency” by making more efforts to further reduce the environmental load that our plants, physical distribution and products turn out. How can we produce maximum added value using minimum resources and energy? I am confident that this will be accomplished by combining various advanced technologies that the Mitsubishi Electric Group is in possession of, in particular its essential technologies along with associated application technologies for solutions. The most important point in “Growth” is to create new environmental-related businesses. We are developing original and unique technologies and putting them into practical use; for example, commercializing business models on renewable energy for prevention of global warming and mechanisms for recycling limited resources more efficiently than ever.

We have developed a new standard that allows us to measure our development results quantitatively, called “Factor X.” Factor X is, in essence, an index that indicates the degree of improvement in eco-efficiency. It was originally introduced for the purpose of gauging the level of improvement in products, but is now being expanded for use company-wide for other than just products. We are now working on applying it to every business field, product and corporate activity, and will continue to fine-tune it in the years to come.

(A further explanation of Factor X is provided on pages 7 and 18 of this report.)

As a means to ensure that efficient, positive measures are ongoing in the Company’s environmental management activities, the head office acquired ISO14001 certification in 2002. For 2003, acquisition by all branch offices is being promoted so that the Mitsubishi Electric Group will have a single, solid foundation from which it tries to help preserve the global environment.

This year, in addition to reporting our environmental activities and accomplishments, the new Environmental Sustainability Report has been expanded to include information on corporate social responsibility such as our social action programs and the relationships between our employees and society.

As reflected in the Company’s corporate statement, “Changes for the Better,” it is the resolve of the Mitsubishi Electric Group to “Continually innovate for the better.” To achieve this, it is required that we obtain the understanding and support of our customers, stockholders, employees, suppliers and the public, all of which are vital stakeholders in our operations. “Creating together” with all our stakeholders is what will realize a Sustainable Society. This is what we at the Mitsubishi Electric Group are endeavoring to accomplish.

June 2003



President and CEO
Tamotsu Nomakuchi

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For A Better Future—Growing Together and Branching Out

Nurturing a multitude of MET blossoms on the environmental management tree and the resulting wealth of fruits in eco-products

Environmental Management Vision

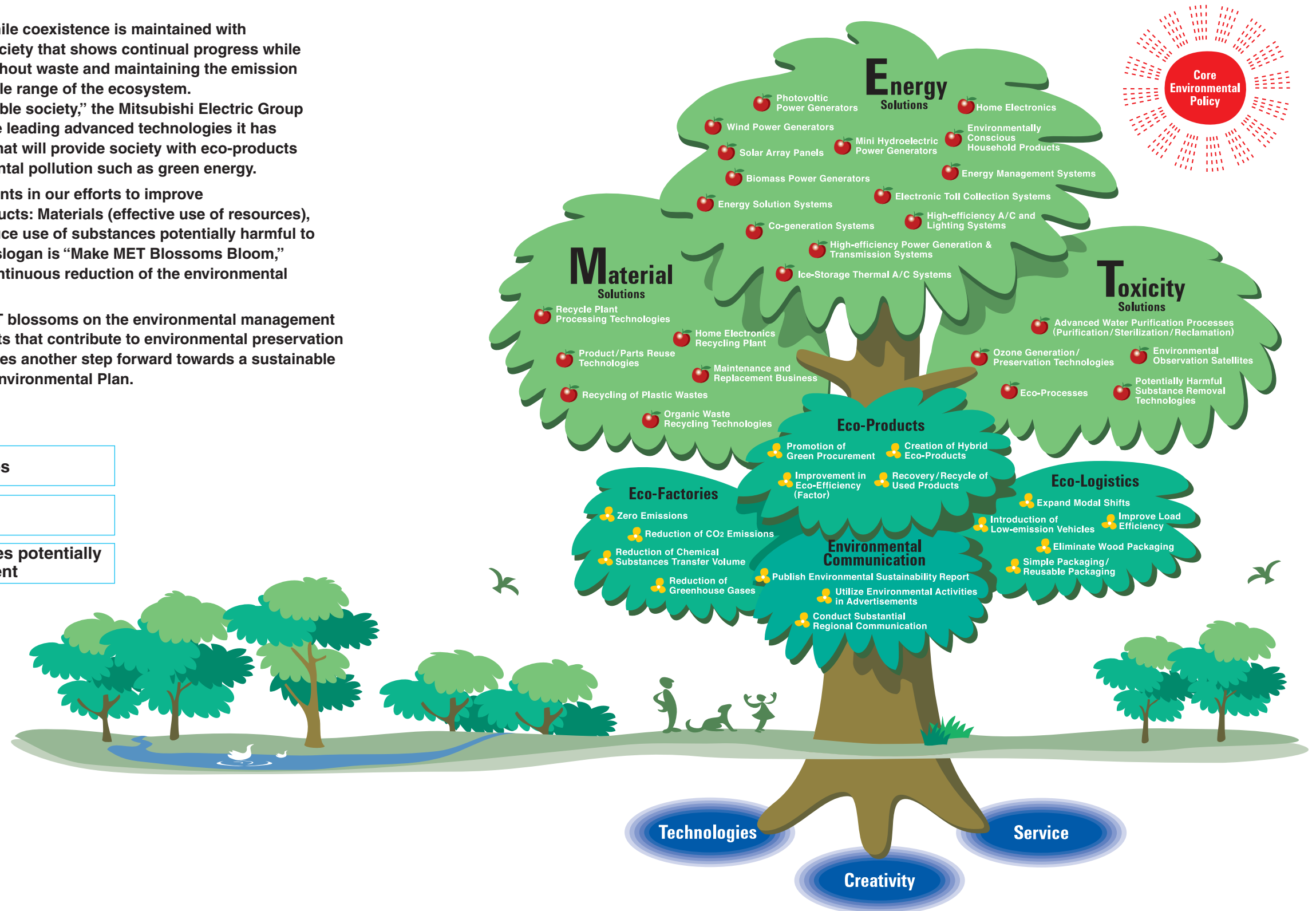
A society where lifestyles continue to improve while coexistence is maintained with the natural environment—That is, a sustainable society that shows continual progress while circulating and utilizing resources and energy without waste and maintaining the emission of pollutants to that which is within the permissible range of the ecosystem. In humankind's challenge to "actualize a sustainable society," the Mitsubishi Electric Group believes that it can best contribute by utilizing the leading advanced technologies it has already fostered and creating new technologies that will provide society with eco-products of superior eco-efficiency or cause no environmental pollution such as green energy.

Careful consideration is always given to three points in our efforts to improve the eco-efficiency of business activities and products: Materials (effective use of resources), Energy (efficient use of energy) and Toxicity (reduce use of substances potentially harmful to the environment).¹⁾ Our environmental activities slogan is "Make MET Blossoms Bloom," and activities are implemented to promote the continuous reduction of the environmental load resulting from our business operations.

Looking forward to the desired fruition of the MET blossoms on the environmental management tree 10 years from now—technologies and products that contribute to environmental preservation and restoration—the Mitsubishi Electric Group takes another step forward towards a sustainable environment with the implementation of the 4th Environmental Plan.

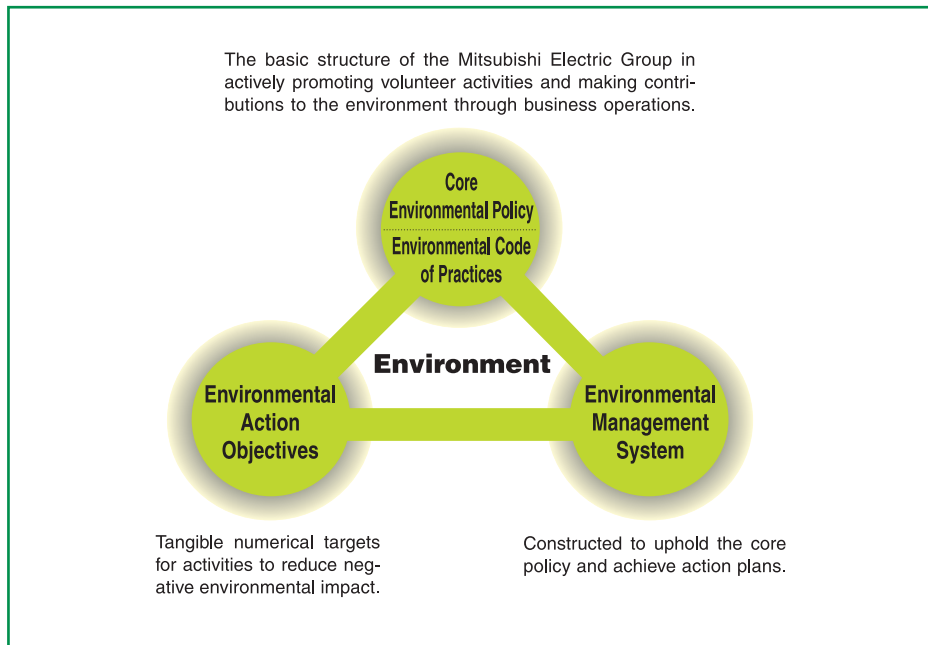
*1)

M : Materials	Effective use of resources
E : Energy	Efficient use of energy
T : Toxicity	Reduce use of substances potentially harmful to the environment



Core Environmental Policy

Under the international principle of “sustainable development,” the Mitsubishi Electric Group is committed to protecting and improving the global environment through all business activities and employee actions utilizing knowledge accumulated in the past as well as technologies yet to be developed.



Environmental Code of Practices

1

We will strive to reduce any negative environmental impact resulting from our products and activities. We will develop technologies and processes that are compatible with the environment. Products will be fully assessed over their entire lifecycle, and our facilities will promote resource efficiency, conservation and recycling.

2

We are committed to understanding environmental problems and contributing to a universal awareness of the need for businesses to integrate their activities with the natural cycles of nature.

3

We will establish environmental management systems at all of our business sites and operate them according to accepted standards. At the same time, we will continually improve environmental controls through environmental audits and similar methods.

4

We will educate, train and motivate employees to be good environmental stewards in their own right, as well as support employees when they engage in activities that promote environmental protection.

5

We will foster active communication and cooperation regarding environmental protection worldwide.

Outline of Corporate Environmental Management

Mitsubishi Electric Group and Business Sites – Construction of Dual Environmental Management Systems

Corporate environmental management in the Mitsubishi Electric Group is based on two cycles: an environmental management cycle at the group level, and the other cycle at the business group/site level and which includes affiliated companies. These two cycles operate in unison to carry out Mitsubishi Electric's Plan→Do→Check→Action (PDCA) cycle and promote environmental activities throughout the entire group.

Corporate Environmental Sustainability Group

●Promotion System

The Company's basic policies and measures it introduces regarding environmental sustainability have been implemented to ensure that the environmental committees of each business group take responsibility for their environmental management activities. The Corporate Environmental Sustainability Group provides support for related activities horizontally throughout the Mitsubishi Electric Group and represents the company for matters related to the environment.

Activities of the Corporate Environmental Sustainability Group

Measures related to environmental sustainability have become increasingly important in management strategies. Focusing on a means of strengthening the administration of matters related to the environment, the Corporate Environmental Management Department was reorganized into the Corporate Environmental Sustainability Group

in May 2003. Under the supervision of the Environmental Director, the Corporate Environmental Sustainability Group works with the environmental managers assigned to each business group, site and affiliated company to promote the basic policies and measures of the Mitsubishi Electric Group and evaluates the activities introduced for the purpose of actualizing overall goals. This group is also responsible for maintaining effective company-wide communications related to environmental activities. The Environmental Technologies Committee and Engineer's Society work as special mechanisms to promote continuous horizontal in-house communications regarding technologies.

Environmental Technologies Committee

This committee is an advisory organ to the Environmental Director that addresses technological topics necessary for meeting environmental objectives and promotes the development of evaluative techniques and common technologies that can be used throughout the company. It is comprised of four subcommittees: Design for the Environment, (design technologies compatible with environmental sustainability), Waste Disposal and Recycling, Chemical Substance Control, and Energy Conservation.

Engineer Societies

Engineer societies have been setup to allow employees to train themselves as highly specialized engineers as well as for the entire Group to develop and accumulate autonomous technologies and personally meet to exchange information among participating members. Regarding the important themes of environment and IT, a liaison conference has been introduced to promote horizontal communications in the 11 societies. There are six special societies related to environmental activities.

Continuous Reform at the Business Group/ Site Management Level

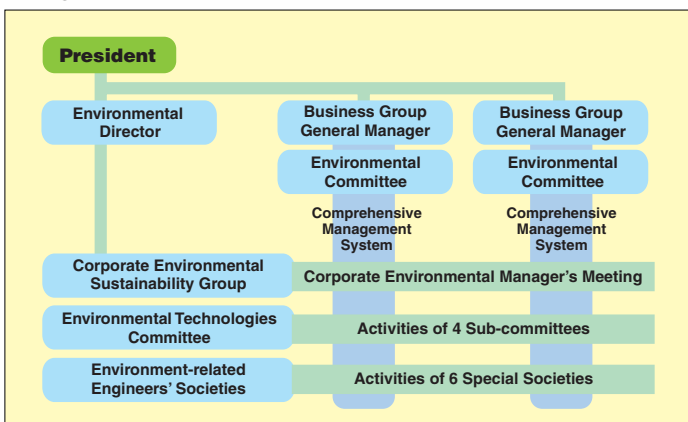
Business groups/sites and affiliated companies establish and operate their environmental management systems in accordance with ISO 14001 international standards and utilize Mitsubishi Electric's P→D→C→A cycle.

In fiscal 1998, all the production and research sites of Mitsubishi Electric acquired ISO14001 certification. The head office attained ISO14001 certification in fiscal 2002, bringing the total number of sites having received certification to 28. In terms of ISO14001 acquisition by affiliated companies, 37 companies and 40 sites domestically and 12 companies and 12 sites overseas have obtained certification.

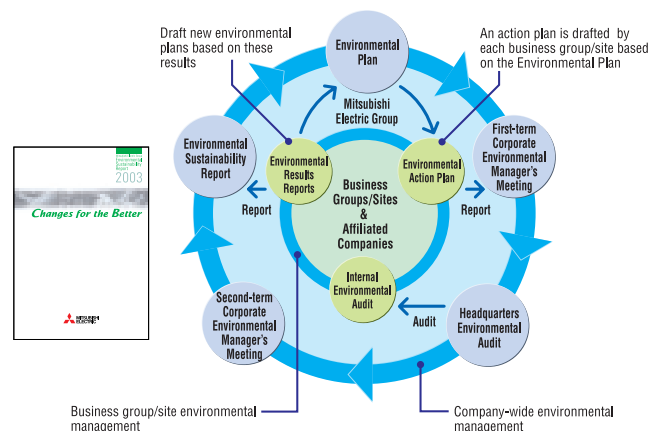
Mitsubishi Electric Head Office Acquires ISO14001 Certification

The head office of Mitsubishi Electric acquired ISO14001 certification on March 20. We have attained goals for 38 cases of 71 items the Company is presently focusing its attention on to improve the eco-efficiency of daily business. These include promoting green procurement of production materials (Procurement Department), the sales of energy-saving products (Sales Department) and the utilization of lead-free solder (Manufacturing Department) among others. Other activities include publishing an environmental manual, regulations and the text "General Environment Training," developed for educating more than 3,000 employees, on the Company's Intranet.

■ Organization Chart



■ Environmental Management System



3rd Environmental Plan Results

Positive Results in Environmental Measures

Environmental Management Successfully Expanded

In addition to ISO14001 certification of the main production facilities of domestic and overseas affiliate companies, the head office of Mitsubishi Electric obtained certification in fiscal 2002. We are now working to acquire ISO14001 at sales bases and to increase the activities of the Environmental Committees as a part of the environmental management strategies of each business group.

Negative Environmental Impact of Manufacturing Processes and Products Effectively Reduced

The activities to reduce negative environmental impact at business groups/sites were mostly successful. We drafted and published the "Green Procurement Standards Guideline" as a part of the measures to reduce this environmental load caused by products. Design for the Environment and Lifecycle Assessment (LCA) are evaluation methods that are utilized as guidelines at actual design sites in the Group. A home electronics recycling plant (Higashi-hama Recycle Center) began full-scale operation in May 1999, and the data and experience obtained from the operations are fed back to design activities as a means of contributing to the manufacture of products with minimal negative environmental impact.

Disclosure of Environment-related Information Increased

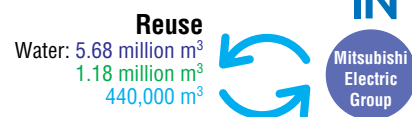
In order to expand the dissemination of environmental information overseas, in addition to the English edition, a Chinese version of the Environmental Sustainability Report is now published. Furthermore, product environmental information is now released on the corporate web site in the form of the "MET-Profile" and we participate in the Eco-Products environment exhibition. Plans are to release the environmental information of the Mitsubishi Electric Group utilizing many various opportunities in the future as well.

■ Main Environmental Data (Fiscal year 2002)

Mitsubishi Electric
Domestic affiliated companies
Overseas affiliated companies

IN

Water	[14,810,000 m ³ , 2,930,000 m ³ , 1,420,000 m ³]
Electricity	[1.6 billion kWh, 420 million kWh, 230 million kWh]
Gas	[24 million m ³ , 1.6 million m ³ , 11 million m ³]
Natural gas	[2,500t, 3,800t, 2,400t]
Oil (crude oil conversion)	[22,900kl, 9,000kl, 200kl]
Chemical substances targeted for control	[4,726t, 2,034t, 1,672t]



OUT

IN

Emissions to Water

Water	[14,320,000 m ³ , 2,430,000 m ³ , 1,190,000 m ³]
Chemical substances	[23t, 0.5t]
COD (Chemical oxygen demand)	[51t]
BOD (Biological oxygen demand)	[78t]
Nitrogen	[147t]
Phosphorus	[10t]

Emissions Released into the Air

Carbon dioxide (CO ₂)	[790,000t-CO ₂ , 210,000t-CO ₂ , 190,000t-CO ₂]
Chemical substances targeted for control (excluding amounts contained in other wastes)	[577t, 204t]
Including volatile organic compounds	[484t, 168t]
Greenhouse gases	[660,000-CO ₂ , 330,000-CO ₂]
Ozone-depleting substances	[0.150DP-t, 0.0040DP-t]
SO _x	[12t]
NO _x	[108t]

Wastes

Total emitted	[77,500t, 39,300t, 39,000t]
Recyclable resources	[70,500t, 30,700t, 23,700t]
Waste disposal services	[5,100t, 8,500t, 15,300t]
Including final disposal amount	[600t, 3,100t, 2,700t]
Internal reduction	[1,900t, 100t, 30t]

Corporate Factor-1.10

Mitsubishi Electric calculates a product's eco-efficiency improvement utilizing the Factor X index. (Refer to pg. 18 for more details.) This year, we have attempted a trial calculation to determine the eco-efficiency improvement of Mitsubishi Electric (non-consolidated) over the three years of the 3rd Environmental Plan, giving the rating as "Corporate Factor." The results were a factor rating of 1.10, meaning that the eco-efficiency of the company improved approximately 10% in the three-year period. This reflects the fact that we have managed to reduce the negative environmental impact to a point that outweighs the decrease in sales. We will continue our efforts to steadily improve the Corporate Factor value on a yearly basis from this time forward.

[Calculating the Corporate Factor]

Denominator: Negative environmental impact (integrated in MET, same as products)

$$\begin{aligned} \text{Corporate Factor} &= \frac{\text{Increase in Sales}}{\text{Reduction in negative environmental impact}} \\ &= \frac{23192/27050}{1.349/1.732} \\ &= 1.10 \end{aligned}$$

	Fiscal year 1999	Fiscal year 2002
Combined value	1.732	1.349
M	1.000 (2040t)	0.294 (600t)
E	1.000 (800,000t-CO ₂)	0.987 (790,000t-CO ₂)
T	1.000 (532t)	0.872 (464t)

M: Final waste disposal

E: CO₂ emitted

T: Discharge transfer of chemical substances targeted for control*1

*1 Total discharge transfer of toluene, xylene and styrene are determined for factor T.

Numerator

	Fiscal year 1999	Fiscal year 2002
Sales (100 million yen)	27,050	23,192

Environmental Accounting

Environmental Protection Costs and Results in Numerical Figures

Environmental Accounting Standards of the Mitsubishi Electric Group.....

In December 1999, Mitsubishi Electric drafted and adopted a set of environmental accounting standards that includes clear definitions of expenditure items to be calculated and the range to which the standards would be applied. The important principles of the company's standards are listed here.

1 The revenues and expenditures of environmental businesses and products that are designed to reduce negative environmental impact are not included.

The costs for lowering the negative impact on the environment in the company's business activities (centering on manufacturing activities) are calculated. However, not included are costs for environment-related business like photovoltaic power generation or the development and production expenses of Eco-Products or proceeds from their sales.

2 Coverage is limited to activities of which the main purpose is to reduce negative environmental impact.

There are many activities with the compound objectives of increasing production efficiency and reducing negative environmental impact, however, our basic policy is to isolate and count only the portion intended to reduce the load on the environment. When it is impossible to make clear distinctions, judgment is determined by the main objective of development.

3 The entire value of a capital investment is included in the total of the year in which it was actually implemented.

The entire value of a capital investment is included in the figures for the year in which the investment is implemented and calculations for depreciation are not made. If the results of a particular investment will continue to provide returns over multiple years, an estimate of the expected results for up to a maximum of three years will be added to the total of the first fiscal year in which the results are realized.

4 Revenues are limited to those that can be calculated on the basis of reliable supporting data.

We do not include hypothetical calculations of risk avoidance effects (so-called "equivalency effects") such as estimates of the compensatory value of not pursuing a particular environmental policy. Instead, we only include the results that are actually achieved such as savings from energy conservation activities or sales profits achieved due to the reuse of resources.

Upper row: Mitsubishi Electric Group
Lower row: Mitsubishi Electric (non-consolidated)
(Unit: 100 million yen)

■ Environmental Protection Expenditures

Item	Capital Investment	Operational Expenses ¹	Total	Compared to Previous Fiscal Year	Main Contents
Business area activities	19.4	57.9	77.3	▲22.5	
	14.2	42.6	56.8	▲18.3	
Pollution prevention	5.4	27.6	33.0	▲7.8	Expansion and maintenance costs of facilities for exhaust gases and wastewater treatment, and costs for preventing noise and soil pollution, etc.
	3.3	21.2	24.5	▲7.0	
Global environmental conservation	12.2	1.9	14.1	▲10.8	Reinforcement and maintenances costs for recovering greenhouse gases such as SF ₆ and PFC, improvements in works facilities control for energy conservation, etc.
	9.8	1.3	11.1	▲7.8	
Resources circulation	1.8	28.4	30.2	▲3.9	Costs for water recovery and reuse, and reduction, disposal and reuse of wastes, etc.
	1.0	20.2	21.2	▲3.5	
Activities up/downstream of production ²	2.8	3.7	6.5	▲0.5	Costs for requiring manufacturing facilities to use lead-free solder, costs for reduction/reuse of packaging materials, etc.
	2.8	3.6	6.4	▲0.2	
Environmental management activities	0.0	32.9	32.9	3.7	Costs associated with construction, maintenance and operation of environmental management systems, cost of employee environmental education, etc.
	0.0	26.5	26.5	4.1	
R&D for environmental conservation ³	0.0	17.5	17.5	▲1.5	Costs for developing fuel-cell battery technology, water reuse technology, lead-free solder technology, HCFC substitute refrigerant technology, environment-polluting gas elimination technology, etc.
	0.0	17.5	17.5	▲1.4	
Social activities	0.0	0.2	0.2	0.0	Regional volunteer activities, etc.
	0.0	0.2	0.2	0.0	
Environmental restoration	0.2	1.3	1.5	▲0.7	Expenses related to environmental surveys and cleanup activities, etc.
	0.2	1.2	1.4	0.1	
Total	22.4	113.5	135.9		
	17.2	91.6	108.8		
Compared to previous fiscal year	▲18.9	▲2.6	▲21.5		
	▲14.3	▲1.4	▲15.7		

*1 R&D costs have been incorporated into Operational Expenses.

*2 Under the entry "Activities upstream and downstream of production" in the above chart, for "the costs related to the recycling, collection, reuse and proper processing of products produced and/or sold" and their related effects, the earnings figures of recycling business conducted inside the Mitsubishi Electric Group have been excluded.

*3 Regarding R&D expenses, only costs related to the development of basic technologies that reduce negative environmental impact are included; the development costs of specific products are not included in these calculations.

■ Economic Effect of Environmental Protection Activities

Upper row: Mitsubishi Electric Group
Lower row: Mitsubishi Electric (non-consolidated)
(Unit: 100 million yen)

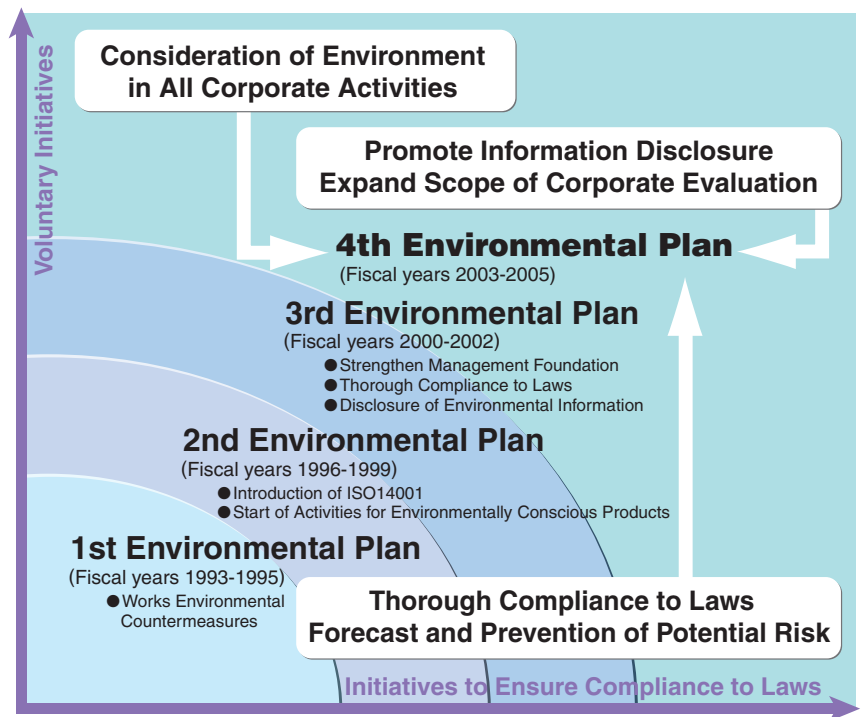
Item	Amount	Compared to Previous Fiscal Year	Main Contents
Profit	10.9	2.8	Profits generated from recycling, such as the sale of scrap metal, etc.
	6.8	0.8	
Savings	39.9	0.6	Savings from reductions in electricity charges through energy conservation, water charges through water reuse, disposal charges through waste reduction, chemical expenses through reductions in the use of chemical substances, etc.
	25.7	▲0.4	
Total	50.8	3.4	
	32.5	0.4	

4th Environmental Plan

4th Environmental Plan Initiated

The Aim: Actualization of a Sustainable Society

The Mitsubishi Electric Group created its first Environmental Plan in fiscal 1993 for the purpose of addressing issues related to preserving the global environment utilizing a systematic means from mid- and long-term points of view. Since the introduction of the first plan, we have worked to construct a solid foundation for our environmental management systems and maintained our commitment to developing technologies and products that contribute to the reduction of negative environmental impact. The 3rd Environmental Plan ended with the closing of fiscal 2002, and we initiated the activities of the 4th Environmental Plan from April 2003. With this new plan, we will focus on more actively promoting existing activities, creating new businesses related to energy solutions and recycling, giving careful consideration to the negative environmental impact of our products throughout the entire lifecycle, and providing more information regarding our activities to society, all for the purpose of contributing to the actualization of a sustainable society.



3 Basic Items to Achieve 4 Objectives

The 4th Environmental Plan sets out four objectives to be attained. Previously existing are the objectives of "improving eco-efficiency" and "enhancing risk management", and newly added are "deeply integrating and internalizing management" and "contributing to the company and business results and improving brand value."

We have identified three basic items required to achieve the objectives. Setting a goal of fiscal 2005 to achieve the objectives, the Mitsubishi Electric Group will set targets that can be measured tangibly. Interweaving these environmental measures at the core of corporate operations, employees will contribute to achieving the objectives as they perform their normal work duties.



Steady Progress of Tangible Targets to Attain 3 Basic Items

*Planned achievement of the objective is the end of fiscal year 2005 unless mentioned otherwise.

Item 1: Strengthen Global Environmental Management Foundation

Improve Management System

- Promote environmental management that utilizes the special features of each business group.
- Concerted use of the latest measures throughout the Mitsubishi Electric Group.

Enhance Risk Management

- Thorough compliance to laws.
- Maintain transparency in risk information, Promote the disclosure of information and risk communication.
- Forecast potential risks, Complete standardization of management system as a risk prevention measure.

Item 2: Full Consideration for Environment in All Corporate Activities through Environmental Best Practices

Eco-Factories	Effective use of resources	<ul style="list-style-type: none"> ● Promote zero emissions ● Final disposal amount controlled to within less than 1% of total emissions. ● Reduction of total emissions ● Reduce total emissions by 6% as compared to fiscal 2002 (t/net sales)
	Energy conservation	<ul style="list-style-type: none"> ● Reduction of CO₂ emissions (carbon-equivalent energy consumption/net sales) ● Reduce emissions 25% by fiscal 2010 as compared to fiscal 1990 ● Reduce emissions 20% by fiscal 2005 as compared to fiscal 1990 Mitsubishi Electric: Improvement of over 1.5%/yr Domestic affiliated companies: Improvement of over 1.0%/yr
	Reduction of chemical substance emissions	<ul style="list-style-type: none"> ● Reduction of total chemical substance emissions ● Reduce total emissions by more than 18% compared to fiscal 2002 ● Publicize business group/site data ● Reduce emission of ozone-depleting substances and greenhouse gases [Substitute HCFC^{*1}, HFC^{*2}] Control emission into the air at business sites to less than 0.2% of that utilized onsite. ● [SF₆^{*3}] Control emission into the air at business sites to less than 3.0% of that utilized onsite.
Eco-Products	Promotion of Green Procurement	<ul style="list-style-type: none"> ● Expand promotion of green procurement through partnerships with suppliers ● Eliminate and reduce the use of substances that are potentially harmful to the environment in procured materials (production materials)
	Reduction in Negative Environmental Impact of Products	<ul style="list-style-type: none"> ● Increase the ratio of products conforming to environmental standards (Eco-Products) to more than 70% of production volume. ● Create advanced products with superior conformance to environment standards (Hybrid Eco-Products). ● Continue promotion of product 3R (reduce, recycle, reuse) in all areas including packaging ● Improve energy efficiency of products ● Eliminate the use of HCFC as a foaming agent by the end of fiscal 2004, Eliminate the use of HCFC as a refrigerant by the end of fiscal 2010
	Compliance to Extended Producer Responsibility	<ul style="list-style-type: none"> ● Construct a recycling system that conforms to European WEEE^{*4} directive ● Eliminate the use of six substances prohibited for use in devices in accordance to European RoHS^{*5} directive (lead, hydrargyrum, cadmium, chromium hexachloride, PBB^{*6}, PBDE^{*7})
Eco-Logistics	Reduction in Negative Environmental Impact of Transportation	<ul style="list-style-type: none"> ● Reduction of CO₂ exhaust ● Reduce amount by 20% as compared to fiscal 2001
	Reduction in Negative Environmental Impact of Packaging	<ul style="list-style-type: none"> ● Eliminate the use of wood in the packaging of major products ● Reduce the volume of packaging materials used/net sales ● Reduce the volume by 10% compared to fiscal 2001

Item 3: Promote Cooperative Creation with Stakeholders, Create New Environment-related Businesses

Communication with Stakeholders

- Increase the disclosure of environment-related information
- Utilize stakeholders' opinions to improve environmental management system
- Increase regional environment-related communications
- Increase philanthropic activities related to the environment

New Environment-related Businesses

- Promote energy solutions businesses based on compliance with the Kyoto Protocol
- Create a conservative circulatory business model

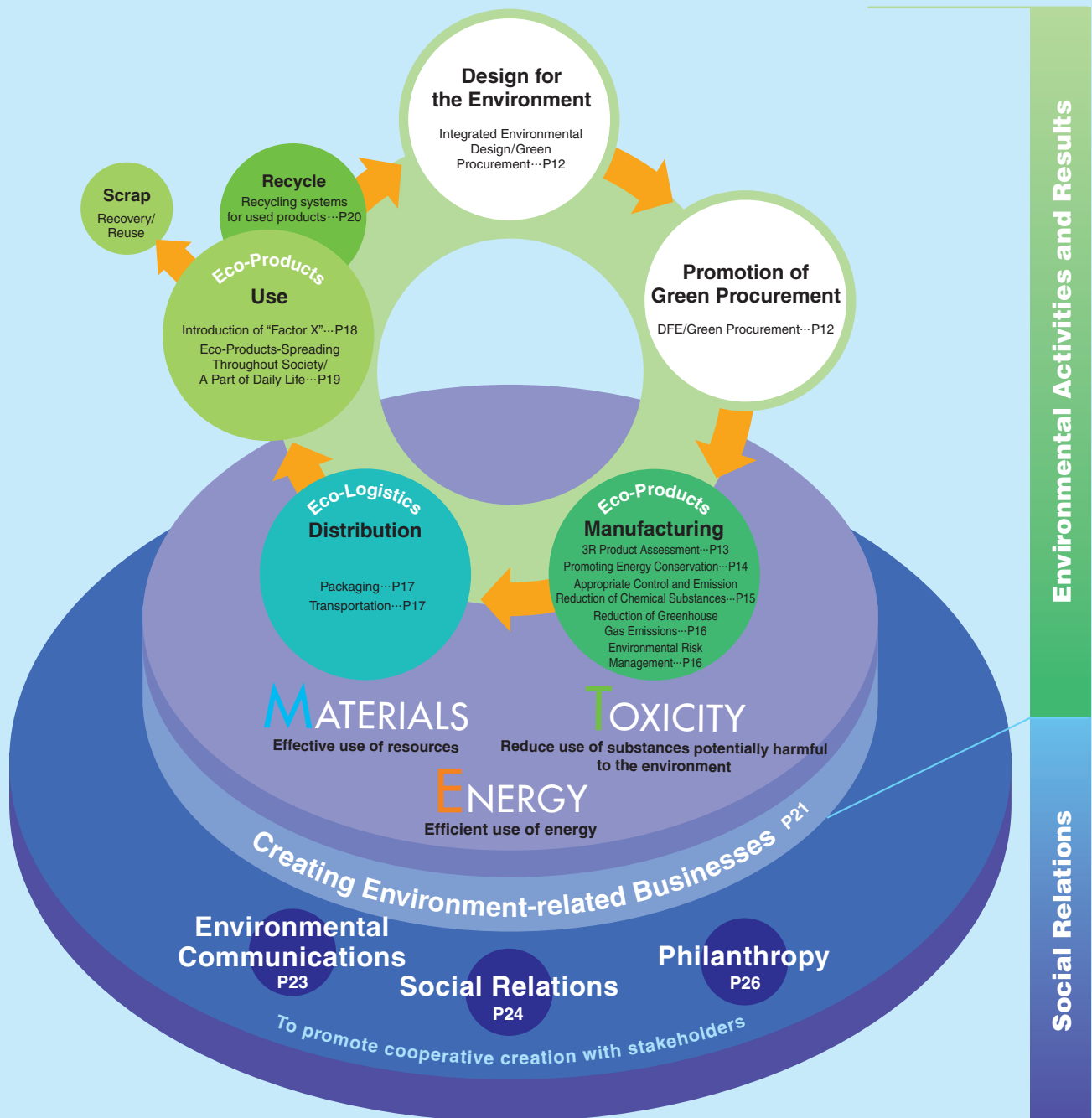
Reform Environmental Consciousness and Foster Individual Talent

- Expand environment-related training
- Plan and foster specialists, such as individuals that show potential for advancement in the environment field

*1 HCFC: Hydrochlorofluorocarbon, *2 HFC: Hydrofluorocarbon, *3 SF₆: Sulfur hexafluoride, *4 WEEE: Waste Electrical and Electronic Equipment, *5 RoHS: Restriction of the Use of Hazardous Substances, *6 PBB: Polybiphenyl bromide, *7 PBDE: Polydiphenyl bromide ether

The Mitsubishi Electric Group conducts its business activities understanding that “economics,” “environment” and “society” are the three vital aspects that must be taken into consideration to realize sustainable development at the corporate level. Complementary to this, we are striving to improve our technologies, services and creative power in order to contribute to the actualization of a sustainable society.

The following pages present information on the activities the Mitsubishi Electric Group has devised and implemented, or has plans to implement in effort to maintain its commitment to environmental preservation and enhancement of social well-being as well as the results achieved thus far. Presented from the full product-lifecycle viewpoint of design→procurement→manufacture→distribution→use→disposal/recycle, the “Environmental Activities and Results” section explains the tangible measures and environment-related businesses introduced by the Group. In the “Social Relations” section are presented the communications, philanthropic and employee volunteer activities Group companies are involved in.



DFE/Green Procurement

Progressing with Design for the Environment

Among the 111 product groups*¹ that Mitsubishi Electric manufactures and sells, 72 product groups in the categories of home electronics and industrial mechatronics are the focus of Design for the Environment (DFE²) activities. To create Eco-Products, the entire lifecycle of each product is closely reviewed and design and evaluation standards are determined applying the MET criteria: **Materials, effective use of resources (reduce, reuse, recycle); Energy, efficient use of energy; and Toxicity, reduce the use of substances potentially harmful to the environment.**

Environmentally Conscious Procurement Based on Green Procurement Standards

Mitsubishi Electric published the "Green Procurement Standards Guideline" in fiscal 2000 and began requesting suppliers to abide by the MET policy when providing parts and materials. Surveys regarding the types of chemical substances contained in materials have been added recently to further promote green procurement through the partnerships created with suppliers.

3R Product Assessment Enforced for All Products

The Reduce, Reuse and Recycle (3R) Product Assessment Plan was introduced with the revision of the DFE Guidelines. The DFE standards and targets to be achieved are decided for each product, and in fiscal year 2002, good results were obtained for 1,165 cases, equivalent to 85% of the product groups. The 3R product assessment process includes 14 large classification items, such as LCA³, and 51 intermediate classification items that are utilized for review at the product design level and ensure that a product meets DFE standards.

More than 70% of Products to be Eco-Products

As stipulated in the 4th Environmental Plan, the entire Group will devote the utmost effort to develop and introduce to the market Eco-Products and Hybrid Eco-Products, goods with improved eco-efficiency that reduces negative environmental impact throughout the entire lifecycle of the product. It is forecasted that the ratio of Eco-Products will rise to more than 70% by the end of fiscal year 2005. Even now all business groups are planning to create Hybrid Eco-Products.

Eco-Products and Hybrid Eco-Products



***3 Categorized as an Eco-Product if it satisfies one of the following conditions and is approved by in-house procedures:**

1. Introduces a new concept or innovative technology that contributes to sustainability.
2. Achieves a factor rating higher than 2.
3. Is awarded special recognition for contribution to environment-related matters, such as excellence award for environmentally conscious design.

***4 Product that satisfies one of the following conditions:**

1. Satisfies quantitative standard determined by taking both degree of Factor X improvement and degree of social contribution into consideration.
2. Receives commendation as an industry-leading product or for contributing to environment-related matters.

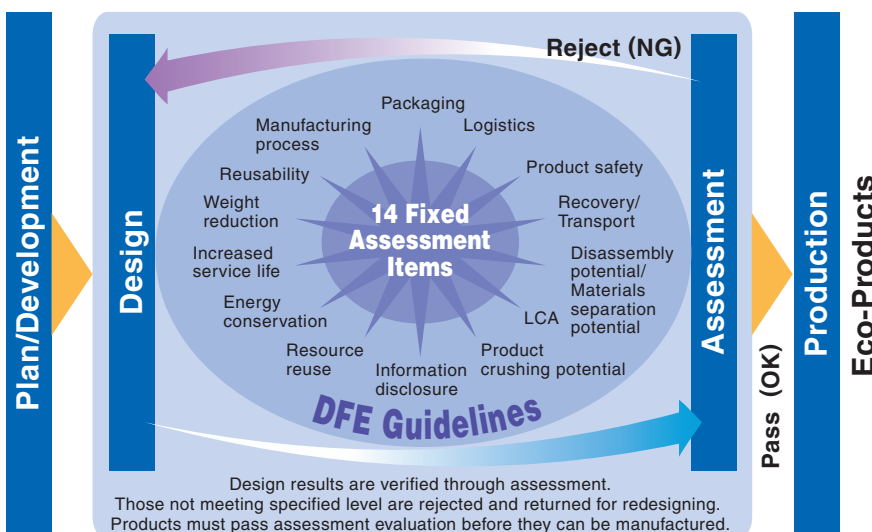
***5 Product that provides direct improvement to the environment via use.**

*1 Categorized in Fiscal 2001 Sales Report.

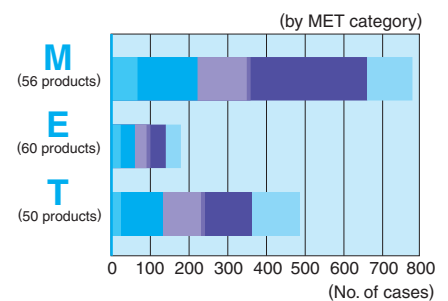
*2 DFE: Design for the Environment—Design of products and services that have less negative environmental impact.

*3 LCA: Lifecycle Assessment

3R Product Assessment



Achievements in Fiscal 2002



- Energy and Electric Systems (19 products)
- Industrial Automation Systems (18 products)
- Information and Communications Systems (11 products)
- Electronic Devices (6 products)
- Home Appliances (20 products)
- Affiliated Companies (25 products)

Reduce, Reuse and Recycle (3R) Product Assessment

Working Towards Zero Emissions-Progress in the Effective Use of Resources

The goals required to attain a truly sustainable society include the controlled use of natural resources and minimal emission of waste into the environment. We are advancing our 3R activities towards the realization of zero emissions.

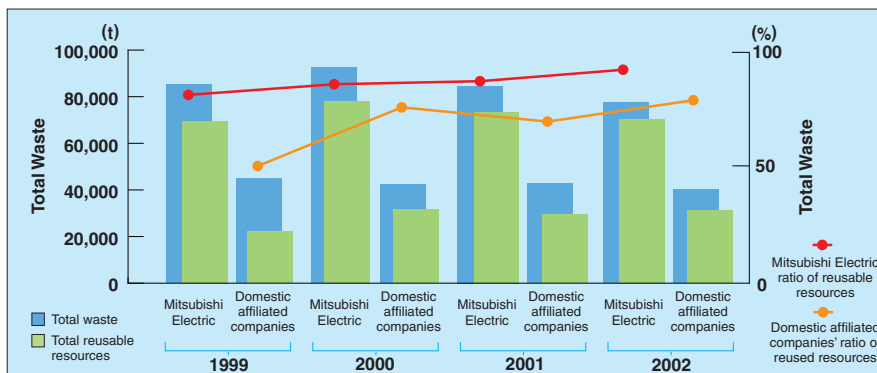
Meticulous Goals Set to Control Waste Generation and Resource Recycling

The Mitsubishi Electric Group sets goals to control the generation of waste and the recycling of resources under the environmental management system (ISO14001) devised based upon the business operations of each business group/site. Tangible results include product design and manufacturing process improvements such as transition from utilizing solvent-based to powder-based paints, redesigning of containers and jigs utilized exclusively for injecting resins, and reducing terminal materials and painting area through the review of baseboard mounting processes.

66% Reduction in Waste Disposal Consignment as Compared to Fiscal 1998

The total waste emitted by Mitsubishi Electric in fiscal 2002 was 77,500t, a reduction of 8.4% as compared to the previous fiscal year. Total waste consigned for disposal services was 5,100t, a figure that is 6.6% of the total waste emitted. Compared to fiscal 1998, that is a 66% reduction, which achieves the goal of the 3rd Environmental Plan-reduce the volume consigned to disposal services

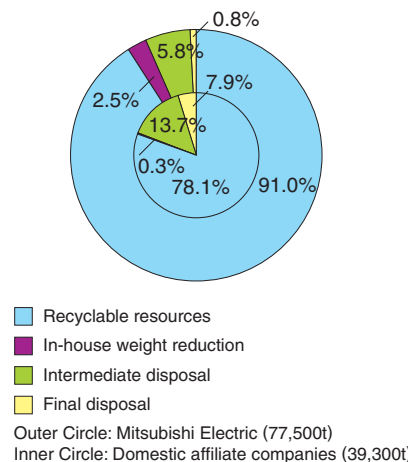
■ Trend in Total Waste Emission Over Time



by 30% as compared to fiscal 1998, a figure that is to be less than 10% of the total waste emitted. The volume of recyclable resources was 70,500, for a recyclable resource ratio of 91%.

The total waste emitted by affiliated companies was 30,700t, and the ratio of recyclable resources 78%. Improving this recyclable resource ratio is now one of the main themes of activities.

■ Waste Breakdown



- Recyclable resources
- In-house weight reduction
- Intermediate disposal
- Final disposal

Outer Circle: Mitsubishi Electric (77,500t)
Inner Circle: Domestic affiliate companies (39,300t)

Continuing the Drive Towards Zero Emissions

Plans are to maintain the development work being conducted in the area of recycling technology for sludge, glass, incinerated ash, and other materials that are difficult to recycle through joint development of new recycling routes, with the final goal being to obtain the condition of zero emissions.

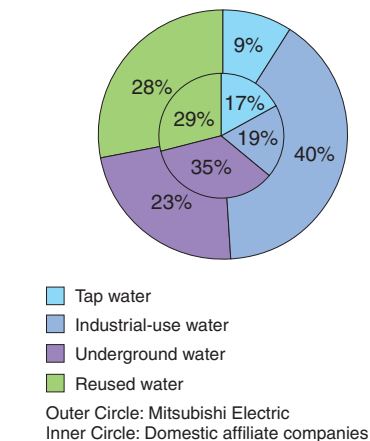
Promoting the Effective Use of Water Resources

Mitsubishi Electric newly utilized 14.81 million m³ of water in fiscal 2002. This is a reduction of 400,000m³ of water as compared to fiscal 2001; a reduction realized through water conservation activities realized by better understanding water use in manufacturing processes and reviewing necessary supply volumes. The ratio of water reuse was 28% of the overall volume used, 20,490,000m³.^{*1}

Affiliated companies newly utilized a total of 2.93 million m³, a reduction of 90,000m³ as compared to fiscal 2001. The ratio of water reuse was 29% of the overall volume used, 4.11 million m³.

*1 Overall volume= Newly utilized water (tap water, industrial-use water, underground water) + reused water

■ Water Use



- Tap water
- Industrial-use water
- Underground water
- Reused water

Outer Circle: Mitsubishi Electric
Inner Circle: Domestic affiliate companies

Effective Use of Paper Resources Saves an Equivalent of 1.09 million Trees in 4 Years

Activities promoting the effective use of paper resources, such as reducing the use of paper, expanding the use of recycled paper and requesting fully segregated collection, resulted in a savings of some 200,000 living trees (14cm dia., 8m height) in fiscal 2002.

Promoting Energy Conservation

Saving Energy Through Advanced Technologies and Loss Reduction

Reduction in the energy required for all business activities is a priority consideration for the Group's environmental activities. Each business group/site is moving forward with activities that are realizing thorough reductions in energy loss and improving productivity simultaneously.

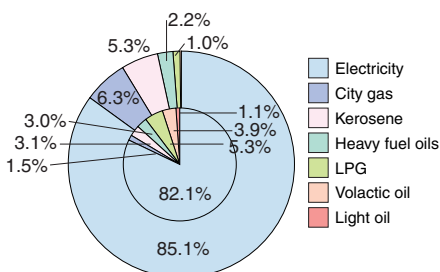
Setting Long-term, Mid-term and Fiscal Year Goals

The environmental management systems (ISO14001) of each business group/site promote activities that target reducing energy use. We have established long-term (voluntary action plan) and mid-term (4th Environmental Plan) goals that determined corporate direction, and fiscal-year goals that allow tracking the level of improvement.

CO₂ Emission of 790,000t-CO₂

Electricity is the largest form of energy utilized by Mitsubishi Electric and its affiliates, accounting for a share of more than 80% of the total energy used. Accordingly, activities to reduce energy use have been developed with this factor in mind. Our efforts in fiscal 2002 included changing to the use of low-loss converters and promot-

Energy Use by Source



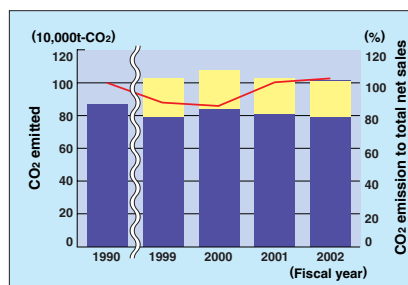
Outer circle: Mitsubishi Electric
Inner circle: Domestic affiliated companies

ing the introduction of liquid-crystal monitors and highly efficient lighting fixtures among others. The energy conservation activities of business groups/sites have resulted in developments leading to the repair of leaks in compressed air systems and recovery of used high-temperature steam. These activities enabled us to reduce CO₂ emissions to 790,000t-CO₂ in fiscal 2002, a 1.7% reduction as compared to last year. CO₂ emissions from domestic affiliated companies last year totaled 210,000t-CO₂, approximately the same as fiscal 2002. In terms of emissions compared to net sales, there was a 2.3% improvement at Mitsubishi Electric compared to fiscal 1990 and 2.1% compared to last year.

Energy Conservation Analysis Conducted by Energy Conservation Subcommittee

The Energy Conservation Subcommittee, which is composed of the energy management supervisors appointed at each business group/site, is an integral part of the Environmental Technologies Committee. In terms of emissions compared to net sales, five business sites reported worse figures due to excessive energy use, and thus cooperative energy conservation analyses were conducted at each of these sites. As a result, approximately 30 items that were not recognized by the onsite staff were pointed out as possible areas of improvement each time. Plans are to carry out analyses at all business groups/sites by the end of fiscal 2004.

Trend in CO₂ Emission Compared to Net Sales



■ CO₂ emitted (domestic affiliated companies, no data for fiscal 1990)
■ CO₂ emitted (Mitsubishi Electric)
— CO₂ emitted compared to net sales (Mitsubishi Electric, fiscal 1990 is set at 100)

Marked Reduction in Energy Loss Obtained Utilizing Eco Monitor II

We began attaching Eco Monitor II (a product of Mitsubishi Electric) units to equipment to measure electricity consumption. This digital wattmeter has a memory function that enables close review of power fluctuation. Eco Monitor II units were installed on machines at works targeted for energy conservation analysis, and data was collected for a period of 1-3 months. Areas of energy loss not previously recognized were clarified. Eco Monitor II will now be utilized in the daily management of all business groups/sites to collect data and provide a more precise understanding, so as to lead to further improvements.

Eco Monitor II—Multi-circuit Wattmeter



Expanding Activities to Manufacturing Processes and Facilities

As stipulated in the goals of the 4th Environmental Plan, energy conservation measures are being utilized in manufacturing processes and facilities in order to reduce consumption related to both production volume and fixed energy use (i.e., that not related to manufacturing). The know-how developed through the energy conservation activities of the various business groups/sites is being compiled and standardized for use throughout the entire Group.

Appropriate Control and Emission Reduction of Chemical Substances

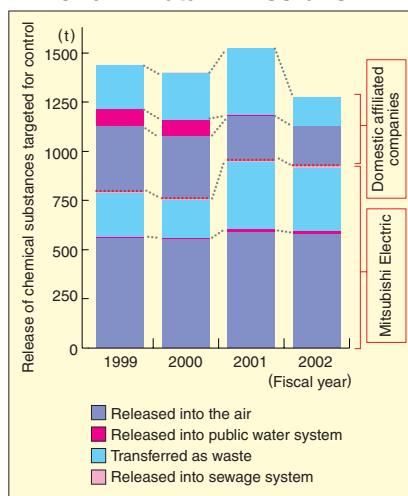
Utilizing Chemical Substances in Appropriation

Following the policies of "Refrain from utilizing chemical substances that are potentially harmful to the environment as much as possible" and "Recover and eliminate wastes that are harmful to the environment," we are working to ensure the appropriate control and reduction of chemical substances utilized in manufacturing processes.

Efficient Use of Mitsubishi Electric Chemical Substance Control List and Control System

In September 2000, the Mitsubishi Electric Group created the "Mitsubishi Electric Chemical Substance Control List," to which substances to be controlled have been added in addition to those stipulated in the PRTR Law^{*1}, and has been controlling the use of chemical substances based on this list. The chemical substance control system developed by the company enables us to know the amount of chemical substances handled in operations on a real-time basis as well as automatically compute how much of a substance is being emitted into or transferred to the natural environment.

■ Trend in Total Emissions^{*3}



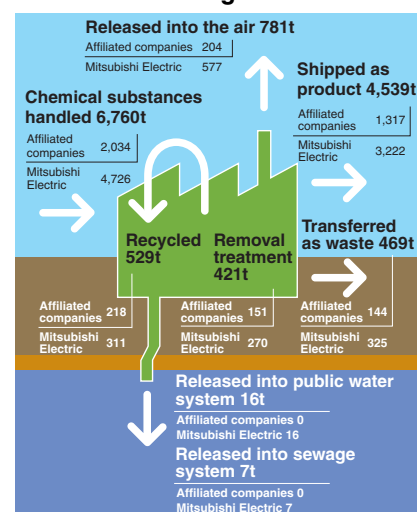
6,702t of Chemical Substances Used in Fiscal 2002. Total Emissions^{*2} of 1,273t- Impressive Year-on-Year Reduction

The Mitsubishi Electric Group used 108 chemical substances in fiscal 2002, 96 varieties being used by Mitsubishi Electric. The total chemical substances by weight used by the Company was 6,760t and the total emissions produced was 1,273t, approximately 19% of that handled. The total emissions by companies of the Mitsubishi Electric Group dropped by 16.5% compared to the previous year. Of this, Mitsubishi Electric reduced its total emissions by 3% and affiliated companies by 39.1%. This reduction was achieved by recycling the resist removal solution utilized in the manufacture of liquid-crystal panels.

Toluene, Xylene, Styrene- Diligently Reducing Chemical Wastes Released into the Air

Volatile organic compounds (VOCs) such as toluene, xylene and others are primarily utilized for product coating and washing processes. We have worked continuously to reduce the release of these and other substances. The following are typical examples.

■ Materials Balance of Chemical Substances Targeted for Control



●Alternative Substances

Switch from liquid-based paint to powder-based paint, Development of water-soluble undercoating, Adoption of coating with low VOC content

●Process Changes

Reduction in printed board washing cycles, Adoption of dry-type washing process for painting jigs

●Reduction in Redundancy Loss

Reduction in product coating requirements by replacing steel plate with stainless steel, Reduction of chemical substance volume through controlled ordering procedure applied under the Chemical Substance Control System.

Through these activities, VOC amount released into the air in fiscal 2002 totaled 652t, a reduction of 10.6% compared to fiscal 2001 and 11.9% compared to fiscal 1999.

Controlling and Reducing Chemical Substance Use at Overseas Sites

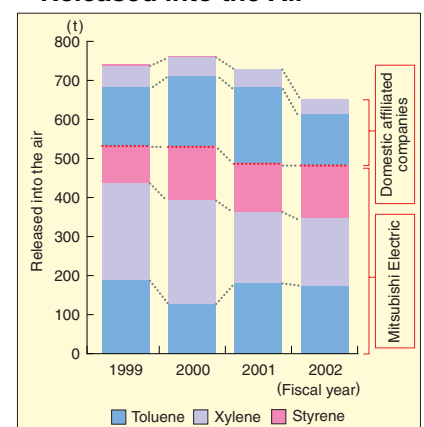
Through the introduction of water-soluble coating materials, a solution to remove wire coating and the adoption of a non-solvent washing process the use of chlorinated hydrocarbon solvents was eliminated at 15 overseas sites in December 2002.

*1 Pollutant Release and Transfer Register (law related to understanding the release of specific chemical substances into the environment and improving the control thereof) is a list of 354 substances that are potentially harmful to human health and the ecosystem.

*2 Total emissions=Amount released into the air + Amount released into public water + Amount transferred as waste + Amount released into sewage system

*3 Corrected aggregated value from 705t to 925t for Mitsubishi Electric in fiscal 2001 as the result of Material Safety Data Sheet (MSDS) disclosure and changes in coverage.

■ Trend in Total Emissions Released into the Air

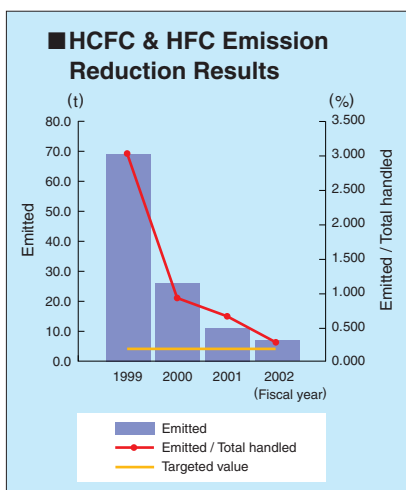


Success Means Reducing Both Amount Released into the Air and That Transferred as Waste

Of the total amount from operations, emissions released into the air and that transferred as waste comprise 98%. Mitsubishi Electric's 4th Environmental Plan calls for the introduction of a system to remove VOCs. The feasibility of reusing large-volume wastes such as resist removal substances like 2-aminofetanol is also being examined.

Reduction of Greenhouse Gas*1 Emissions

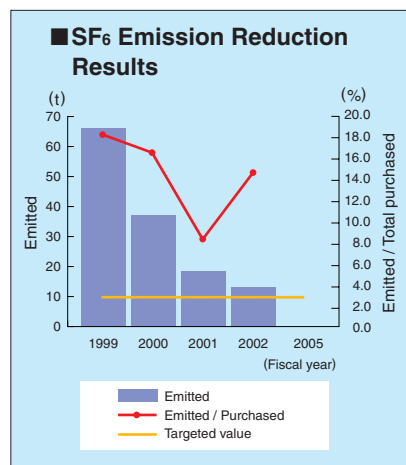
We have improved the recovery rate for the greenhouse gases used in air-conditioners and refrigerators.



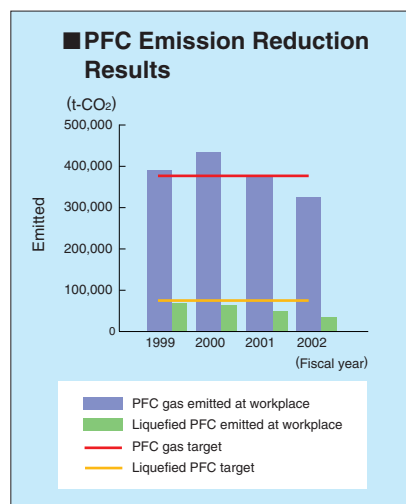
	Substance Name	Global Warming Coefficient (assuming CO ₂ as 1)
HCFC	Hydrochlorofluorocarbon	Several 100 to several 10,000 times
HFC	Hydrofluorocarbon	
SF ₆	Sulfur hexafluoride	23,900 times
PFC	Perfluorocarbon	5,000–10,000 times

*1 Based on a law promoting measures to prevent global warming.

Release of SF₆ Gas Reduced by Recover and Recycling Measures for Greenhouse Gases.



The goal of significantly reducing liquid and gas PFCs emitted into the air has been achieved.



Our aim is to minimize environmental risk and ensure smooth communications.

In handling matters related to soil and underground water pollution, chemical substances, dioxins, PCBs*², wastes, etc., the Mitsubishi Electric Group has voluntarily adopted control policies that are more severe than standards set forth in governmental laws and regulations. We are working to minimize environmental risk through environmental management systems specially tailored to the various risk elements arising from our business operations, local

conditions at each business site, and drainage, exhaust and behavioral characteristics of each type of waste. Now that PRTR³ data is openly disclosed to the public, it has become increasingly important for each business group/site to communicate with surrounding communities in effort to deepen mutual understanding regarding environmental risks. In fiscal 2002, training and awareness activities within the Mitsubishi Electric Group were further enhanced with the establishment of a risk communications guide that provides actual examples of domestic and overseas situations and other risk-related information.

We are undertaking measures to decontaminate polluted soil and underground water.

Soil and underground water can become polluted with chlorinated hydrocarbons. Mitsubishi Electric and its domestic affiliated companies eliminated their use by the end of fiscal 1999 and spring 2001, respectively. In December 2002, the overseas subsidiaries and affiliated companies eliminated their use as well.⁴ Voluntary groundwater inspections were conducted at domestic sites from 1998 through 2000. Sites where polluted underground water has been discovered have been reported to local authorities, and decontamination measures are currently proceeding under the direction of said authorities.

Out of the 29 sites inspected, decontamination measures for pollution caused by chlorinated hydrocarbons are now underway at 11 locations. The processes utilized vary depending on the level of contamination, but basically include pumping and aeration of the groundwater, ozone treatment and removal of soil gases via suction technology. Decontamination to a level nearly within environmental standards has been achieved at some of the sites. We will remain focused on such decontamination activities until fully completed.

*2 PCB: Polychlorinated biphenyl

*3 PRTR: Pollutant Release and Transfer Register

*4 The following 10 chlorinated hydrocarbons have been totally eliminated from use in business operations.

- Dichloromethane
- Carbon tetrachloride
- 1,2-Dichloroethane
- 1,1-Dichloroethane
- cis-1,2 Dichloroethane
- 1,1,1 Trichloroethane
- 1,1,2 Trichloroethane
- Tetrachloroethylene
- 1,3 Dichloropropane

However, this does not include the use of reagents for analytical applications, etc. as stipulated in specifications and standards, as well as those difficult to substitute.

Eco-Logistics

Ensuring the Delivery of Products by Environmentally Conscious Means

Effective logistics ensure the safe delivery of products to customers as requested and at minimal cost. In recent years, an important factor in the equation has been the need to include consideration of environmental impact of logistics operations. Therefore, it has become indispensable to implement an environmentally friendly logistics system. Under the banner of "Eco-Logistics" (Economy and Ecology Logistics), the Mitsubishi Electric Group is developing an environmentally compliant logistics system to minimize overall costs by focusing on the areas of transportation and packaging. Our Eco-Logistics activities are being promoted in collaboration with Mitsubishi Electric Logistics Corporation, which is responsible for the logistics of the entire group.

Eco-Logistics 1: Reducing Negative Environmental Impact through Packaging

We have reduced the use of packaging materials by 19.6% in only 4 years.

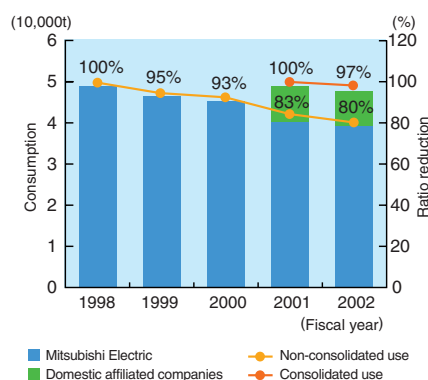
We are promoting the following activities in our efforts to further reduce the utilization of packaging materials.

- Increasing collaboration with product engineering sections
- Changing packaging specifications after reviewing logistics processes and transportation environments
- Promoting utilization of materials by recycling following use and simplifying final waste disposal processes
- Utilization of returnable containers

One of the goals of the 3rd Environmental Plan was to reduce the amount of packaging materials 10% by the end of fiscal 2002 as compared to fiscal 1998. In terms of the volume of materials utilized from fiscal 1998 to 2002, conservation activities achieved a reduction of 8,500t in wood materials, and an overall reduction in materials of 19.6%. The current goal is to reduce packaging materials 10% by the end of fiscal 2005 as compared to fiscal 2001. This will be accomplished by selecting representative products of each business group and pro-

moting activities that will achieve a thorough reduction in packaging volume and cost.

■ Trend in Packaging Materials Use



Efforts are being made to reduce the use of wood.

Countries like China, Europe and the United States have stipulated strict regulations for wood packaging utilized in the export of products including requiring heat treatment thereof. Considering the export destinations and transportation means, we have switched from the use of wood materials to the utilization of other materials such as steel and cardboard for packaging major, heavyweight products. In the 4th Environmental Plan, we are positively promoting activities to utilize the new materials mentioned above for the packaging of products destined for domestic delivery as well.

■ New Packaging for Processing System for Export to Europe and the US



Previous: Wood-frame packaging



New: Steel-frame packaging

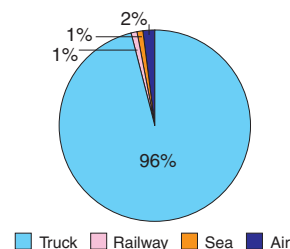
Eco-Logistics 2: Reducing Negative Environmental Impact Due to Transportation

We are working to reduce CO₂ emissions.

Carbon dioxide (CO₂) is emitted during the transportation of products. After determining the CO₂ emission volume (t/km) per means of transportation, the Mitsubishi Electric Group began working to reduce CO₂ emissions based on product transportation (distribution of products for sale) in fiscal 2001.

In fiscal 2002, a group-wide modal shift (switch to railway and sea transportation) resulted in a 9.5% reduction in terms of CO₂ t/km. Plans are to promote the further reduction of CO₂ emissions through modal shift applications and the utilization of large vehicles.

■ CO₂ Emissions per Transportation Means in Fiscal 2002



Introduction of "Factor X"

Factor X-Doing Our Best to Ensure Ongoing Improvements

Mitsubishi Electric developed and introduced Factor X (eco-efficiency improvement ratio) as a tangible tool that can be utilized to assist in actualizing a sustainable society. It is an index that evaluates the eco-efficiency of a product from the viewpoints of both improvement in lifestyle affluence and the reduction of negative environmental impact. The Group is now doing its best to develop and bring to the market "Eco-Products" and is challenging to attain the goal of "Factor 4."

A numerical means of measuring the improvement in eco-efficiency has been introduced.

Factor X indicates the degree of improvement in a product's eco-efficiency: the larger the value, the higher the level of improvement in efficiency and quality and the lower the level of its negative environmental impact. Standardization of the computation and evaluation methods has only recently begun, and the technology itself is still at the trial and error stage. In December 2001, Mitsubishi Electric was the first company in Japanese industry to announce environmental information about its products based on the results of trial calculations. However, the company calculates Factor X utilizing a unique method based upon "MET," which lies at the core of its environmentally related activities.

Factors are calculated utilizing the degree of reduction in negative environmental impact.

The computation of eco-efficiency is generally calculated by determining the degrees of improvement in environmental load and performance using the following equation: Eco-efficiency=Product performance ÷ Environmental load.

However, if innovative improvements are made in a product's performance while the reduction of environmental load is minimal, the value obtained for environmental

efficiency may be high. This results in ambiguity when factoring environmental load. Taking into consideration that product performance is a constant (denominator-1), we decided to introduce a "factor" from the environmental efficiencies of old and new products based on the MET concept. First, taking the indices of the standard product (effective use/reduction of resources, efficient use of energy and reduce use of substances potentially harmful to the environment), the three indices of the product being evaluated are synthesized and the vector length of the present product and standard product is calculated to obtain the environmental load. The factor value is then obtained from the equation: Eco-efficiency of present product ÷ Eco-efficiency of standard product. As a part of the internal equation, 3R product assessment results are included in the index effective use/reduction of resources.

Our target is "Factor 4" to actualize a sustainable society.

At Mitsubishi Electric, the factor value was introduced in-house as a designated standard for Eco-Products. However, factor definition, standard product, calculation equation, etc. are different in each company, which makes it difficult to make comparisons using numerical values. Mitsubishi Electric is a member of a standardization project initiated by the Ministry of Economy, Trade and Industry, and is examining the required improvement in product performance indices that should be utilized as part of its 4th Environmental Plan. In order to actualize a sustainable society, our challenge is to attain the goal of "Factor 4."

Basic Factor Computation of Mitsubishi Electric Group

- Comparison is made with standard product (fundamentally manufactured by company in 1990).
- Product performance improvements are taken into account.*1
- Based on MET environmental improvement concepts (effective use of resources², efficient use of energy, and reduce use of substances potentially harmful to the environment) synthesized into a vector length.

*1 If the degree of improvement in product performance cannot be clearly provided numerically, the value given is 1.

*2 Index for effective use of resources

= Virgin resource volume + weight of non-recyclable resources (volume disposed of instead of being recycled)
= (Product weight - weight of recyclable materials and parts) + (Product weight - Weight of recyclable resources)

Product Eco-efficiency = Product performance / Negative environmental impact
Factor = Eco-efficiency of present product / Eco-efficiency of standard product

Example Mobile Telephone

Factor 1.82

M: Effective use of resources E: Efficient use of energy T: Reduce use of substances potentially harmful to the environment

Standard product	Analog Mova D 1991 model	1	1	1
Present product	Mova D 2511 2002 model	0.42	0.24	0.82
Improvements		Reduction of virgin resources 58% Reduction in non-recyclable resources 60%	Electricity consumption Reduction at time of regular use 66% Reduction at standby time 96%	Reduction in lead of solder 18%

I_{91} (negative environmental impact of standard product)
= $\sqrt{1^2 + 1^2 + 1^2} = 1.73$

I_{02} (negative environmental impact of present product)
= $\sqrt{0.42^2 + 0.24^2 + 0.82^2} = 0.950$

Factor = Eco-efficiency of present product / Eco-efficiency of standard product
= $(1/I_{02}) / (1/I_{91})$
= $(1/0.950) / (1/1.73)$
= **1.82**

Negative environmental impact of present product
= $\sqrt{0.42^2 + 0.24^2 + 0.82^2}$

Negative environmental impact of standard product
= $\sqrt{3}$

Degree of social contribution	Reduction in Virgin Resources Used ³ Resources: 232t	Reduction in Electricity Consumption ⁴ 12.12GWh	Reduction in Potentially Harmful Substances ⁵ 0.92t (lead)
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*3 Reduction in Virgin Resources Used = Amount reduced per unit × Quantity of units shipped
*4 Reduction in Electricity Consumption = Amount reduced per unit (Regular use time + Standby time) × Quantity of units shipped × No. of years estimated lifetime
*5 Reduction in Potentially Harmful Substances = Amount reduced per unit × Quantity of units shipped

● Mova is a registered trademark of NTT DoCoMo Corporation.

Eco-Products

Spreading throughout Society and Daily Life

Combining the electricity savings of all of the latest-model refrigerators shipped by Mitsubishi Electric throughout the full product lifecycle, there would be sufficient energy to serve approximately 72,000 average-sized homes in Tokyo for one year.*¹ From items produced for residential use to those manufactured for society, we're contributing to the actualization of a sustainable society by providing Eco-Products that are designed and manufactured giving the utmost consideration to energy consumption, resource conservation and reduction of chemical substances potentially harmful to the environment.

*¹ Based on the company's trial calculation value: Per unit electricity consumption of the MR-S45D refrigerator (280kWh/yr) at a shipment figure of 65,750 units. Average product lifespan before delivery to a home appliance recycling plant of 12 years. Electricity demand of average-sized home: Electricity use and change in power fee as determined by Tokyo Electric Power Company.

Daily Life

Refrigerators

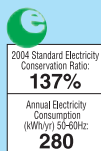
Introduction of Non-CFC Refrigerant to Prevent Global Warming

Factor: 1.82

Degree of Social Contribution:

Virgin resource reduction 100.7t, Energy reduction 43GWh, CFC reduction (refrigerant, insulation materials) 9.8t, Lead reduction 0.01t

The MR-YL38ND refrigerator was developed with the aim of creating a product that is environmentally friendly. It utilizes a non-CFC isobutene refrigerant, R600a, which has a very low global warming coefficient and substitutes cyclopentene as the insulation material to achieve an ozone-depleting coefficient of zero. Furthermore, the reduction in energy consumed has been reduced to approximately one-fourth of that 10 years ago, allowing a reduction in CO₂ emissions from electric power plants, which thereby contributes to the prevention of global warming.



MR-YL38ND



Hitoshi Maruyama
Technology Section,
Refrigerator
Manufacturing
Department,
Shizuoka Works

The task of developing a refrigerator that utilizes the new refrigerant was a real challenge. A number of factors were involved, such as ensuring that the product is environmentally friendly, providing customer satisfaction in terms of energy savings, and of course maintaining food freshness and ease of use.

Photovoltaic Battery Module

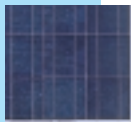
Drastic Reduction in Lead Using Lead-free Solder

Factor: 1.61^{*1}

Degree of Social Contribution:

Virgin resource reduction 20t (packaging materials), Lead reduction 3.3t

A first among Japan's domestic crystallized silicon photovoltaic battery manufacturers, Mitsubishi Electric has attained an amazing reduction in the utilization of lead through the use of lead-free solder manufacturing processes and galvanization of various components. The reduction in manufacturing processes and improvement in yield gave a combined effect that amounted to a 5% savings in energy consumption. Enhanced module energy conversion efficiency has led to the anticipation of increasing electricity generation by approximately 400MWh^{*2}.



PV-MR130B

Keiichiro Utsunomiya
Module Technology Section, Photovoltaic
Light Generation System Business
Center, Nakatsugawa Works



We developed a tipless solder for the photovoltaic battery cell, the first of its kind in Japan, in order to actualize the use of lead-free solder and lower cost simultaneously. We focused on optimizing the module's composite material to improve moisture resistance, which is also promoted using the tipless solder.

*¹ Factor is calculated by adding the degree of performance improvement (improvement in electricity generating efficiency) to the denominator.
*² Mitsubishi Electric simulation results.

Mobile Telephone

Excellent Functionality and Reduced Weight in a Single Package

Factor: 1.82

Degree of Social Contribution:

Virgin resource reduction 2.32t, Energy reduction 12.15GWh, Lead reduction 0.9t

The Mova D251i is a folding-type mobile telephone with a built-in camera and external memory port. Even though boasting advanced features, the body is thin, compact and lightweight (approx. 115g). Compared to the 1991 Analog Mova D model manufactured by Mitsubishi Electric, the new phone is 57% lighter. Electricity consumption during use has been reduced by 66% and that in standby mode by 96%.

● (Mova) is a registered trademark of NTT DoCoMo Corporation.



Mova D251i

Kazuya Miyoshi
Second Technology Section,
Second Technology Department,
Mobile Terminal Works



It was difficult to integrate new functions into the phone, while at the same time, ensuring quality and getting it to the market in a timely manner. Our goal was accomplished, however, and evaluations are high among the NTT DoCoMo 251i series.

Machine Room-less Elevator

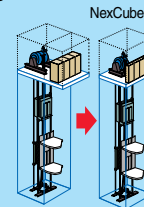
Size Reduction, Energy Conservation and Lead Reduction

Factor: 1.11

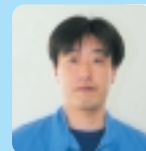
Degree of Social Contribution:

Virgin Resource Reduction 4.3t, Energy reduction 1.47GWh, Lead reduction 0.59t, Traction motor gear oil 21.3t

Mitsubishi's NEXCUBE elevator requires only half the machine room space needed for the size of the former model, enabling reductions in device specifications and resources. Utilizing the "Group Management" function, standby electricity has been reduced to approximately 1/10th that of former Mitsubishi Electric products (produced in 1992) by shifting the system to "sleep mode" when no one is using it. The use of lead solder and vinyl chloride resin has been reduced as well.



Hiroyuki Takagi
Control Development Section,
Development Department,
Inazawa Works



I was in charge of designing the mode of electricity conversion inside the control panel. Miniaturization was also accomplished owing to the introduction of a low-loss trench GBT for inverters. The matter regarding heat was resolved by ensuring that the inside of the control board is cooled efficiently.

Recycling System for Used Products

Evolving Recycling Systems is a Corporate Responsibility

In the effort to actualize a sustainable society, the creation of used product recycling mechanisms has begun in countries around the world. Based on the concept, "We are responsible for that which we produce at the end of the product lifecycle," Mitsubishi Electric is utilizing the technological prowess it has cultivated in the recycling field in Japan to create resource recycling mechanisms for its home electronics, personal computer and secondary battery products.

Home Electronics Recycling Supported by Joint Efforts of Six Companies

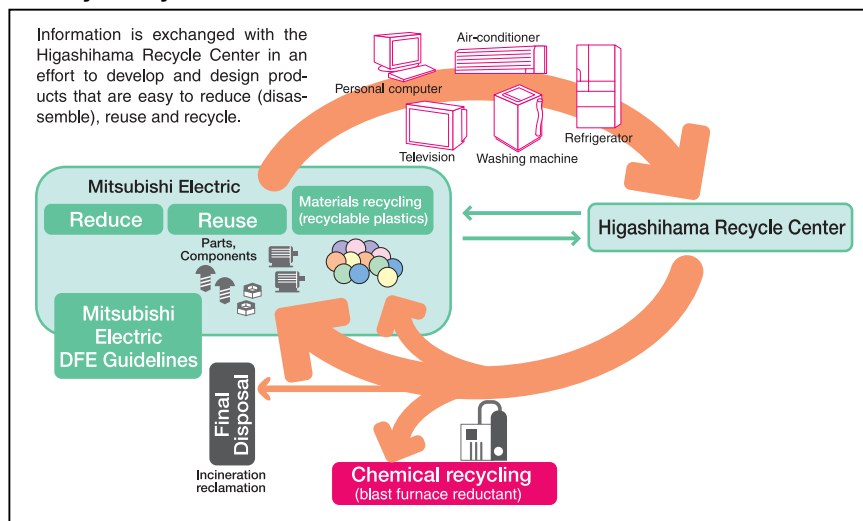
Prior to the enactment of the Electrical Home Appliances Recycling Law in April 2001, Mitsubishi Electric established the Higashihama Recycle Center in Ichikawa City, Chiba Prefecture. Cooperating with five other companies¹ in the electrical and electronics products industry, a network of 15 processing facilities has been set up in Japan to ensure the effective recycling of home electronics products through mutual cooperation. The Higashihama Recycle Center operates as an environmentally conscious processing facility and acquired ISO 14001 certification in April 2001.

¹ Fujitsu General Ltd., Hitachi, Ltd., Sanyo Electric Co., Ltd., Sharp Corporation and Sony Corporation (in alphabetical order)

Advances in Personal Computer Recycling

Japan enacted the Law for Promotion of Effective Use of Resources in April 2001, and manufacturers began to collect and recycle used personal computers in accordance with the regulations. The Mitsubishi Electric Group joined together with other personal computer manufacturers, waste management companies and waste collection and transportation companies, and established a nationwide collection and recycling network for used personal computers utilized for business. An extension of this, in August 2001, the "Information Device Recycling Service," which utilizes the Internet as a communications medium, was introduced. In August 2002, Mitsubishi

Recycle System



Home Appliance Products Recycled (Fiscal 2002)

	Air-conditioners	Televisions	Refrigerators	Washing machines
No. collected (Unit: 1,000s)	210	272	285	164
No. recycled (Unit: 1,000s)	208	272	284	162
Total weight of refrigerants recovered (CFC, etc.) (t)	98	-	25	-
Total weight of recycled products processed (t)	9,061	7,171	16,058	4,716
Total weight of recyclable resources (t)	7,255	5,807	10,024	2,918
Percent of products recyclable (%)	80	81	62	62

Personal Computer Products Recycled (Fiscal 2002)

	Desktop	Notebook	CRT display	LCD	
Collected (kg)	67,408	2,865	66,551	110	
No. of units collected	4,494	573	4,437	22	
Reusable resources (kg)	46,713	1,072	45,321	64	
Reusable resource ratio	Actual (%)	69.3	37.4	68.1	58.2
	Required by law (%)	50	20	55	55

Electric Information Technology and NEC-Mitsubishi Electric Visual Systems, which participates in related operations, received commendations for conforming to the Law for Promotion of Effective Use of Resources. We are currently approaching manufacturers that do not have their own corporate recycling systems and requesting their participation in this cooperative operation. Further to this matter, in cooperation with the Japan Electronics Information Technology Association (JEITA) and Japan Postal Service, a collection and recycling system for home-use personal computers will begin operation in October 2003.

Creating Environment-related Businesses

Increasing Contributions to Environmental Preservation through Products and Services

Having in its possession a vast array of original advanced technologies, the Mitsubishi Electric Group has determined its most important mission to be the provision of products and services that contribute to ever increasing vibrancy and affluence in society. Accordingly, our means of contributing to the actualization of a sustainable society is to provide said products and services in forms that are not harmful to the ecosystem. In addition to improving and expanding our lineup of environment-conscious Eco-Products, it is our obligation to openly offer society the MET solutions we have developed utilizing the technologies and knowledge accumulated in the Mitsubishi Electric Group-This is the environmental management policy of Mitsubishi Electric.

Energy SOLUTIONS

(Efficient use of energy)

Researching Clean Energies to Reduce CO₂ Emissions

We are manufacturing more efficient wind power generation systems.

Mitsubishi Electric and Mitsubishi Heavy Industries have a long history in the field of wind power generation facilities, having manufactured and delivered more than 1,000 systems since 1982. In addition to producing guidance generators, a multi-polar guidance generator incorporating a permanent magnet that enables optimum operation at variable wind speeds has been introduced for more efficient power generation. The latest wind power generation system (2,000kW class) can supply up to 4.27 million kWh of electricity, which is approximately equivalent to the electricity consumption of 1,000 homes in a year.

We have developed and produced a highly effective mini-hydroelectric generator.

Until recently, large-scale dams were required for hydroelectricity projects. However, Mitsubishi Electric has developed and is now manufacturing a compact hydroelectric power generation system that operates effectively with a small water flow and requires a height difference of only several meters. Water flows previously not thought applicable for hydropower production, such as small rivers, industrial-use water, water pipelines and even sewage lines, can now be utilized to produce electricity. One hydropower plant with an electricity output of 100kW can result in a CO₂ emissions reduction of 626t per year.

Our photovoltaic power generation systems realize energy savings and help to prevent global warming.

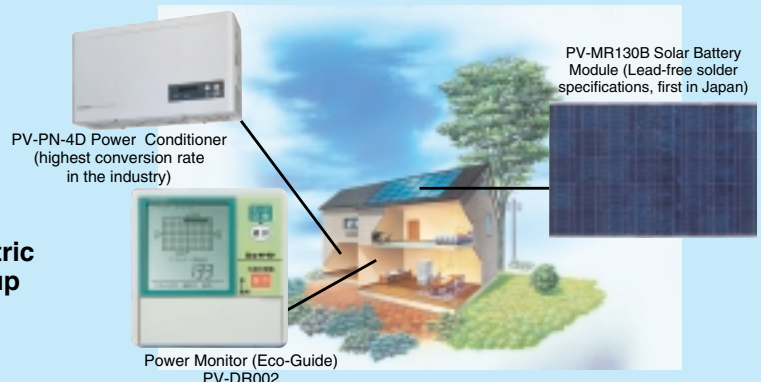
The company manufactured a 24MW photovoltaic power generation system in fiscal 2002. Using this system, a CO₂ emissions reduction of 4,218t per year is anticipated.*1 Additionally, in October 2002, we began marketing the industry's first residential-use power monitor with built-in "energy chart" and "environmental contribution degree display" functions. Using the monitor will contribute to effective energy conservation activities at the public level.

*1 Mitsubishi Electric simulation.

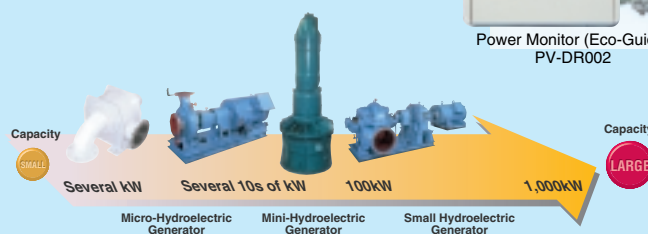
■ 2,000kW Class Wind Power Generation Facility for Okinawa New Energy Development Company



■ Residential-use Photovoltaic Power Generation System



■ Compact Hydroelectric Power System Lineup



Material SOLUTIONS

(Effective use of resources)

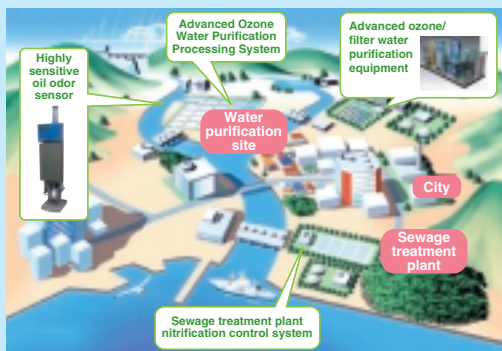
Promoting Effective Use of Resources by Openly Applying New Biosphere Technologies

Water Monitoring and Control System^{*1}—Applying the Latest Purification Technologies for Effective Use of Water Resources

Safe water that has both a clean taste and is healthy to consume is a requirement in the area of supplying processed water recycled from the sewage industry. In addition to its original ozonizer processing systems, Mitsubishi Electric has developed a water monitoring and control system that enables careful supervision of water purification processes and an advanced package-based water purification processing device. Through application of the technologies, we have created a water recycling envi-

ronment that controls water use and recovery from the delivery of tap water through sewage plant facilities and purification processes, all done giving due consideration to protecting the global environment.

Water Monitoring and Control System



Highly Sensitive Oil Odor Sensor

The introduction of a quartz resonator system has made it possible for the system to sense oil via odor at a degree that is nearly undetectable by humans, being able to do so in only 15 minutes.

Advanced Ozone/Filter Water Purification Equipment

By combining the use of ozone and filters, the required filter area has been reduced to one-fifth that of the former model. The package form design also resulted in a drastic reduction in construction cost.

Sewage Treatment Plant Nitrification Control System

This system removes nitrogen and phosphorus from the water, which can cause water bloom and red tide, using 10% less energy than the former system. Advanced technologies enable the optimum control value to be determined utilizing an original parallel genetic algorithm and sewage reaction model. Other management features include controlling air supply to the active sludge tank and active sludge density, which is required to maintain superior water quality while simultaneously satisfying the objective of saving energy.

Toxicity SOLUTIONS

(Reduce use of substances potentially harmful to the environment)

Utilizing Analysis and Product Development Technologies to Minimize Emission of Substances Potentially Harmful to the Environment

Negative Environmental Impact of LCD Manufacturing Process Reduced to 1/10 of Previous Level

The amount of special chemicals utilized to clean and remove the resist (photosensitive resin) from components in semiconductor and liquid-crystal display (LCD)

manufacturing processes has been markedly reduced. A new system that utilizes hydrolysis to remove resist, sprays a saturated high-density ozone gas to clean the substrate in the LCD manufacturing process. Substitution of the chemical solution has reduced negative environmental impact to less than 1/10 that of the previous method, and also resulted in lower processing cost (one-fifth) and a reduction in production line floor space as tasks following the cleaning process have been simplified.

High-density Ozone Resist Removal Equipment



Watching Over the Environment from Space—Midori II Environment Observation Satellite

As the main contractor, Mitsubishi Electric was responsible for developing and assembling the Midori II (ADEOS-II) environment observation satellite, launched December 14, 2002. Onboard the satellite are two main sensory systems, a high-performance microwave radiometer and a global imager. The radiometer is capable of highly precise measurement of various physical aspects regarding the earth's water supply, and collects data to help clarify water and energy circulation at the global level. The global imager conducts precise observation of many physical aspects regarding living organisms including global temperatures, snow and ice packs and clouds. This data is collected in order to understand changes in carbon circulation and climates at the global level. There are high expectations that the data collected from Midori II will enable humankind to better understand global environmental change such as global warming and ozone-layer depletion, and thus support the development of countermeasures.



Midori II Environment Observation Satellite (courtesy of NASDA)

Environmental Communications

Taking Various Opportunities to Explain Activities Towards Resolving Environmental Problems

The Mitsubishi Electric Group is committed to making environmental information available to the public. To this end, we believe it is important to apply various methods and grasp unique opportunities to promote the disclosure of product information.

During "Environment Month" (June) last fiscal year, we were busy preparing for the "Eco-Products 2002" exhibition. Other activities included posting environmental information on the Mitsubishi Electric corporate website, publishing environmental advertisements in newspapers and magazines, making news releases for new products, exhibiting products at community events, and finishing up production of the Environmental Sustainability Report. We place importance on interactive communications by responding to questions raised by stakeholders and offering public tours of facilities so that we can learn their feelings and better understand them.

We are increasing communications related to the environment.

The Environmental Sustainability Report explains the environmental activities of the Mitsubishi Electric Group, and is the core project of our environmental communications. Since its first publication in 1998, we have prepared two editions, one in Japanese and the other in English. Beginning with the report for fiscal 2002, we added a Chinese edition that is in the form of a summarized digest.

■ Environmental Sustainability Report, Fiscal 2002 Edition



From fiscal 2002, we began unifying the cover designs of corporate information publications such as the Corporate Profile and Annual Report.

● Environmental Report Briefing

Beginning in fiscal 2000, in parallel with the publishing of the Environmental Sustainability Report, a briefing has been held to announce it. In fiscal 2002, together with outlining the report, we introduced examples of our environmental technologies to members of the press and representatives from non-governmental organizations. We will reflect the views of those who have provided comments in future editions of the report as well as future environmental activities.

■ 2002 Environmental Sustainability Report Briefing



Our focus for Eco-Products 2002 was introduction of the Poki Poki Motor®.

The primary product exhibited to exemplify Mitsubishi Electric's environmentally conscious technologies at Eco-Products 2002 was the Poki Poki Motor®, which improves the Factor X eco-efficiency of products when integrated. It has a variety of applications including electric appliances and industrial machinery.

■ Mitsubishi Electric Booth at Eco-Products 2002



Information disclosure via virtual exhibitions on the corporate website is being promoted.

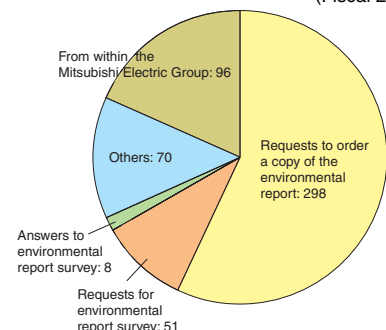
Only a limited amount of information can be supplied in a printed report such as the Environmental Sustainability Report. However, space on the corporate website is virtually unlimited, so detailed information regarding our environmental activities is provided there.

■ First Page on Website "Stance on Environmental Issues"



■ E-mail Inquiries—Total: 523

(Fiscal 2002)



Check out our environmental advertisements in newspapers and magazines.

● Factor X Introduced in Special Edition (Global Summit) of Forbes Magazine

A global summit was held in Johannesburg in August 2002. We introduced Factor X at the time and an advertisement was placed in Forbes Magazine in parallel with the timing of the summit.



■ Forbes Magazine

Education and Awareness

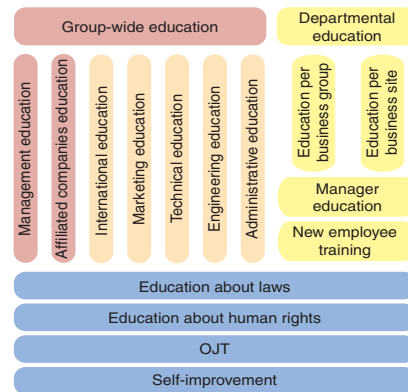
Enhancing Individual Environmental Awareness

If the employees of a company don't grow, the company doesn't grow. It is the belief of the Mitsubishi Electric Group that education and making the best of employees' talents are instrumental to corporate development. We now utilize a performance-based employment system where an employee's results and achievements are directly reflected in promotions and salary. Accordingly, we assume the responsibility of establishing employee education and fostering interest in developing one's own abilities as an individual goal.

Educating environmental consciousness is part of the overall program.

The Mitsubishi Electric Group provides a variety of systematic educational programs to nurture environmental awareness among employees. In addition to offering comprehensive education at training centers located throughout various regions, such as Kanto (Kamakura) and Kansai (Sanda, and Kobe), an e-learning program is now available and an environment that allows on-demand learning is planned. Education related to environmental issues is conducted as an integrated part of a group-wide educational system. Employees can study to obtain various licenses and certifications related to environmental management, including that of environmental auditor, at business groups/sites. Among the areas of study, "Design for the Environment" and "Creating Environment-related Businesses" are subjects we place special importance on.

Overall Educational System



DFE education is promoted through a technology seminar.

Two popular seminars held annually are the Design For Environment Technology Seminar and Practical LCA Evaluation Technologies Seminar, both of which focus on environmentally related leading-edge technologies and knowledge. Approximately 1,300 employees had taken these classes by the end of fiscal 2002. Improvements proposed as a result of taking the classes are fed back to the actual product design departments.

Product Disassembly Experience





Mutual enlightenment is actively promoted to create environment-related businesses.

A number of engineer's societies have been organized to provide individual specialists the opportunity to work on self-improvement by communicating personally with leading engineers in respective fields. In fiscal 2002, a new society, the "Maintenance and Environmental Technology Society," was formed with the aim of creating a new business model through discussions on common technical problems experienced regarding facilities, plants, products, system maintenance, maintenance and wastes.

Presentations on the latest technologies and market trends were also held. We invited speakers from outside of the company who were experts in their respective fields to share their knowledge and promoted mutual information exchanges and recycling plant tours to increase communications.

Engineers' Societies

Societies' Activities (Fiscal 2002)		Manufacturing Processes Society			
Presentations (85)	Announcements (56)	R&D and Systems	Design and Reliability	Manufacturing	Maintenance and Replacement
Research Seminars (70)	Engineers' Societies News (115)				
Visits to Other Companies (7)		<div style="text-align: center;">  <p>Membership in two societies is recommended</p>  </div>			
Information and Software	Communications				
Media	Electronic Devices				
Measurement Control	Electrical Devices and Energy				
Machinery					

Poki Poki Motor^{®2}—New Concept Using Round Coil Winding!

The power of an electric motor is determined by the density of the coil winding; therefore a high-density, tightly wound coil can result in a highly efficient motor. However, coil winding is performed inside the stator, which is equivalent to putting a schooner together inside a thin-necked glass bottle, so it was assumed that efficient winding is impossible. The reasoning of Mitsubishi Electric was however, "First wind it, then assemble it." The stator was opened, high-density coil wrapping performed, and the stator was again closed. This new technique has proven that Poki Poki motors simultaneously offer excellent efficiency and space savings. The technology has been incorporated into the Kirigamine series of air-conditioners, and calculations based on annual figures gives an electricity savings equivalent to the annual energy use of approximately 60,000 households.³



Photograph: Poki Poki Motor[®]

² Poki Poki Motor is a trademark of Mitsubishi Electric Corporation. Domestic patents: 60, registered 12. International patents: 12, registered 3.

³ Compared to the fiscal 1990 model MSZ-2800 standards of the Japan Refrigeration and Air-conditioning Association, the MSZ-WX28J has attained an electricity savings of 1,041kWh/yr/unit. The latest shipment figure is 200,000 units (July 3, 2003). General household consumption: Mitsubishi Electric calculation based on change in general electricity usage of one household (Tokyo Electric Power Company).

Work Environment Conditions –Health and Safety Measures

Comfortable Work Environment

The Mitsubishi Electric Group has placed the utmost effort into establishing a personnel system that, while providing just and quantifiable evaluations of personal achievements, also honors the individual lifestyle and motivation of each employee. With the same vigor, we are creating a corporate structure that not only fosters creativity in the workplace, but also actively supports the self-improvement ambitions of our employees.

“People grow through their work and a company grows through its people,” is the philosophy underlying human resource development within Mitsubishi Electric.

Mitsubishi Electric’s company policy “to contribute to a vital and affluent society through the improvement of technologies, services and creativity” is also reflected in its basic employee philosophy, “People grow through their work and a company grows through its people.”

With the creativity and independence of our employees in mind, we create a lively work environment and open-minded corporate atmosphere by fostering their motivation and responsibilities.

In 1986, the president of the company announced a policy related to human resource development, in which was contained the following three key elements: “To challenge one’s own abilities,” “To create more power through networking” and “To bring vitality to the company through managers educational activities.” Based on this thinking, various systems and environments have been introduced. Additionally, in terms of ability development and personnel system, a dual approach has been chosen based on the concept of “people = ability to execute tasks” and “work = task value,” thereby providing an equal evaluation base for each person’s performance and results. Moreover, at the management level, great importance is placed on the value of one’s role, which is again reflected in the personnel system.

In this way, we firmly believe that the growth of our company is closely related to the fair evaluation of our employees’ efforts and achievements as well as to a work environment that promotes creativity.

“Promoting the employment of women by providing an adequate work environment.”

In order to provide a work environment that allows female employees to actively realize their ambitions and abilities in their work as well as promote the strategic education of female executives, the “Positive Action Committee” has been established. This committee is now evaluating tangible measures related to this matter.

“Efforts to create a suitable work environment for the disabled.”

Mitsubishi Electric actively pursues the employment of handicapped employees, and since March 2003 has complied to the ratio required by the Equal Opportunity Law. By establishing a policy for “the improvement of working conditions for the disabled,” refitting toilets, building slopes for wheelchairs and introducing visual signals for hearing impaired employees, we are making every effort to create a suitable work environment for handicapped employees.

■ Wheelchair slope



As the most important resource of a company is the employee, the most important mission of management throughout the Mitsubishi Electric Group must be to ensure the safety and health of its employees. With the goal of making the transition from “zero accidents” to “zero danger,” we are further enhancing activities to ensure employee health and safety in a safe and secure work environment.

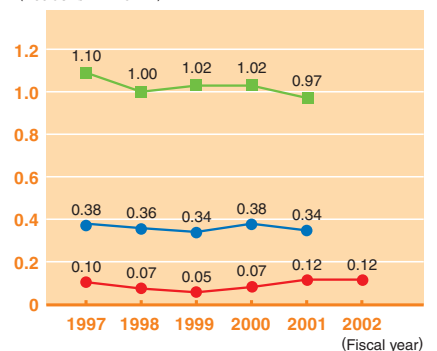
“Under the slogan “Health, Safety and Zero Danger,” a safe and secure work environment is our goal.”

Being responsible for the lives of its employees and their families, Mitsubishi Electric strives to provide a safe and secure work environment.

Accordingly, in the four areas of “Safety Management,” “Health Management,” “Construction Accidents” and “Commuter Accidents,” various activities to eliminate the origins of potential dangers are being undertaken.

■ Work Accident Frequency

(Accident/1 million hr)



● Mitsubishi Electric non-work related accident
■ Manufacturing industry
● Electrical and electronics products manufacturers

Social Philanthropy

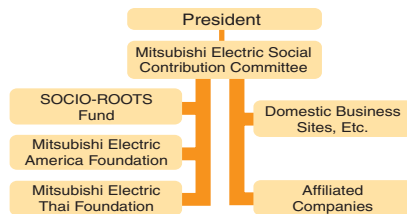
Working Together to Build Caring and Conscientious Communities

The Mitsubishi Electric Group conducts philanthropic activities with the aim of bringing a smile to the faces of everyone. Our activities are currently focused on five areas: social welfare, communities, global environmental preservation, promotion of science and technology, and supporting sports and cultural events.

System/Mechanism

A member of the board of directors chairs the Social Contribution Committee. This committee promotes the activities of the entire Mitsubishi Electric Group.

■ Promotion Organization



● Promoting Philanthropic Activities through Foundations Established in the United States and Thailand

Mitsubishi Electric America Foundation (MEAF) was established in Washington, D.C., USA, in 1991. The main activities of the foundation are supporting physically challenged young people in the US. In May 2000, Mitsubishi Electric was the first Japanese company ever to receive the esteemed Helen Keller Achievement Award. This commendation is presented to a person or company that contributes to improving the lives of people with impaired vision or to people with impaired vision who establish new lives for themselves in spite of their disability. Mitsubishi Electric Thai Foundation (METF) was also established in 1991, in Bangkok, Thailand. Its main activities are providing scholarships for college education and a lunch supply program for elementary schools.

Presentation of Helen Keller Achievement Award



● SOCIO-ROOTS Fund—Employee Donation Matched by Company

The SOCIO-ROOTS Fund was started in 1992. It is a matching gift program in which the company donates an amount equal to that donated by the employee, thus doubling the goodwill of the gift. Donations are made to social welfare facilities for physically challenged people that are operated by the national government, regional organizations, schools or NPOs as well as to groups that support related activities.

■ Mitsubishi Electric “SOCIO-ROOTS Fund” Symbol Mark



Social Welfare

We donated a school to the children of Polo Island in the Philippines.



Regional Communities

Personal computers and software were donated to a volunteer group that assists in brail translations.

Employees installed the systems and explained how to use them to the volunteer group.



Global Environmental Preservation

Employees participated in reforestation activities such as the planting and care of young trees on Mt. Fuji after a typhoon uprooted part of a forested area.



Promoting Science and Technology

We donated an information center to the Qinghai government in western China.



Supporting Sports and Cultures

Mitsubishi Electric Building Techno Service is the organizer for the World Physically Challenged Art Exhibition every year.

Demonstration by physically challenged artists





www.Global.MitsubishiElectric.com

For further information, please contact:
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