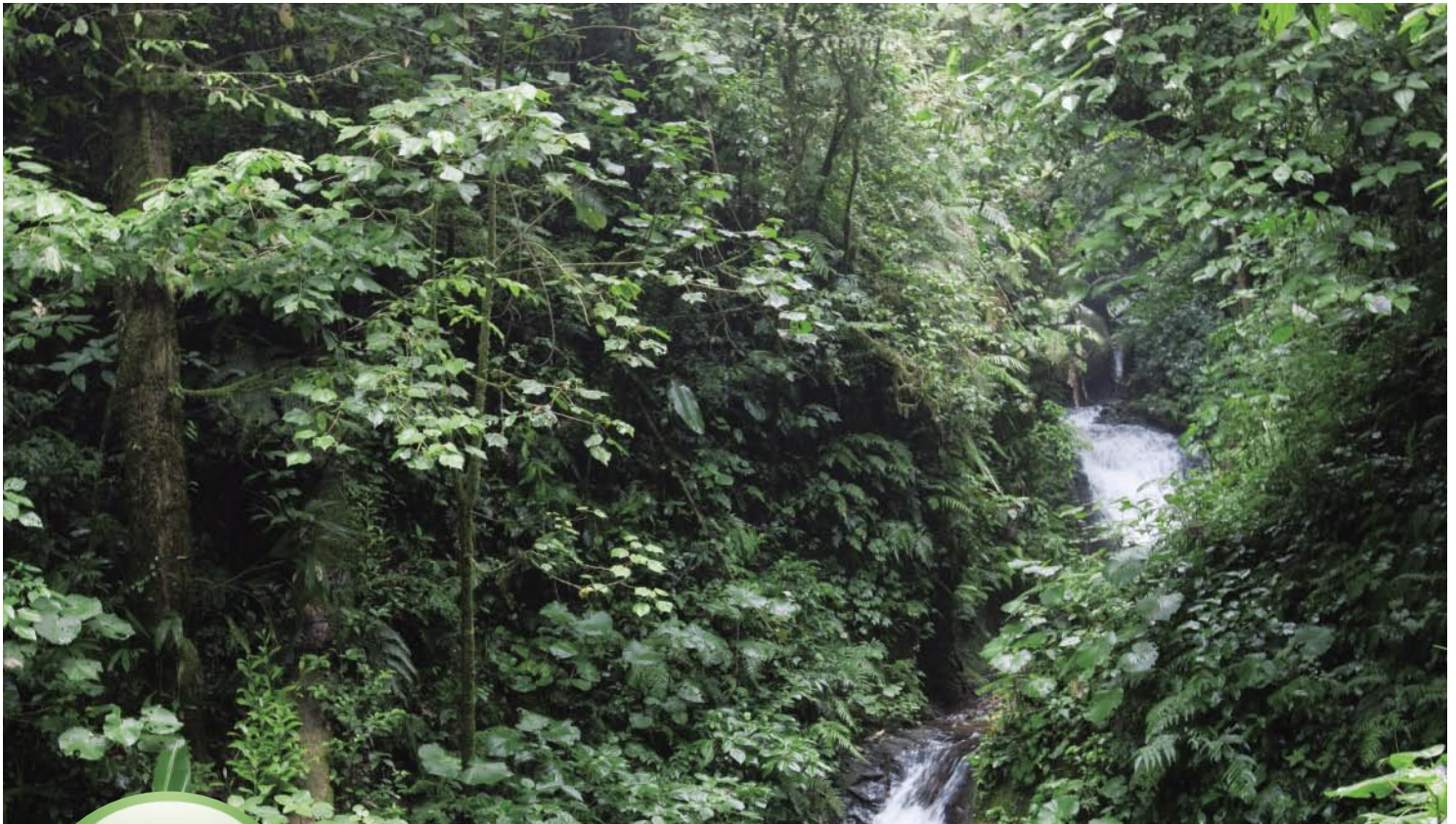


ECO

Mitsubishi Electric
Group Environmental
Sustainability Report
2010



for a greener tomorrow

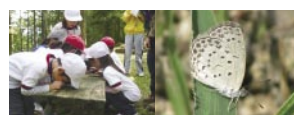
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The global environment is at the root of all We shall continue our single-minded efforts



Promoting Eco Changes as a Group Focused on the Future of the Global Environment

The conservation of the global environment will undoubtedly continue to be one of the most critical common issues facing the world. For precisely this reason, our corporate environmental activities must be down-to-earth, sustainable and visionary over the long haul. Mindful of these prerequisites, Mitsubishi Electric formulated its Environmental Vision 2021 to promote environmental management from a long-term perspective.

The creation of a low-carbon society is one pillar supporting this vision. We have established the concrete objective of reducing total CO₂ emissions from production 30% by 2021 (compared with fiscal 1991* levels). This is an ambitious target, but it is not merely an ideal; I am confident that it is achievable with a concerted groupwide effort. Mitsubishi Electric's 6th

Environmental Plan, the directive that is steering our endeavors from fiscal 2010 through fiscal 2012, promotes production line improvements and the introduction of high-efficiency equipment at all sites in Japan and overseas. Results for fiscal 2010 indicate early gains in pursuit of these goals.

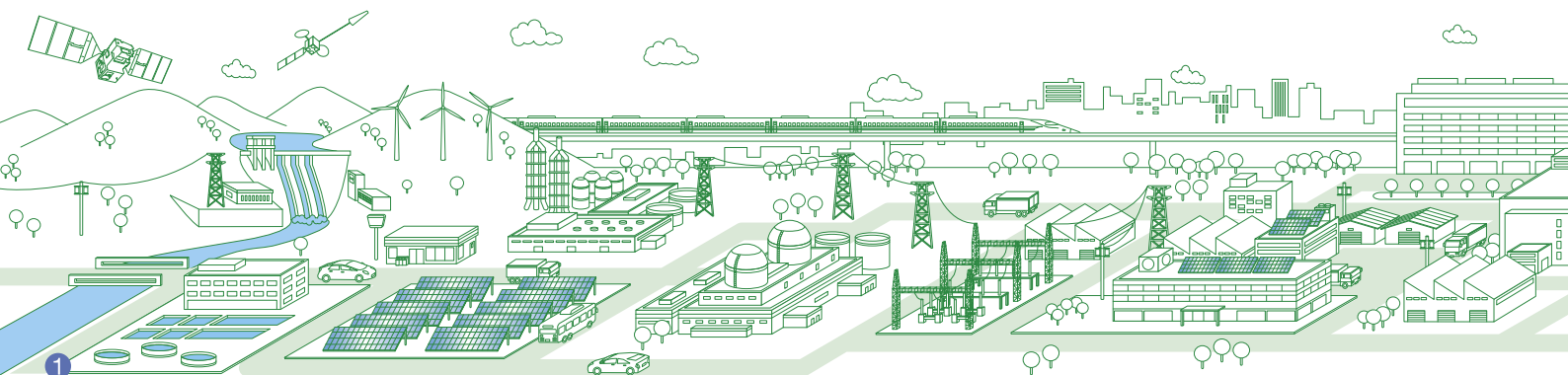
Creating a recycling-based society is another pillar of our environmental vision. One example is the closed-loop recycling and reuse of plastic from end-of-life products as materials for new products. We have established Japan's first technology for automatically separating three major types of plastic from mixed crushed plastic at high levels of purity. Large-scale, high-purity plastic recycling using this vanguard technology was employed at a new plant from fiscal 2011.

The environment also represents a foundation for further growth for the Mitsubishi Electric Group. We are incorporating environment- and energy-related businesses as a key element in the Company's future growth strategies by expanding sales of environmental products and services across a variety of fields.

Mitsubishi Electric's environmental statement, Eco Changes, which was announced in Japan last year, clarifies the Company's management stance on a variety of its environmental initiatives. "Change is progress" succinctly expresses my personal beliefs in this regard. "Eco Changes" represents two distinct aspects of our commitment: working together with our customers to change the global environment for the better; and, contributing to environmental conservation through our wide range of businesses.

Respecting Biodiversity in All Our Business Activities

Interest in biodiversity is on the rise, as evidenced by the 10th session of the Conference of the Parties (COP10), hosted in Nagoya in October 2010. However, conservation of ecosystems and biodiversity is far more than a passing topical theme; I believe it is the essence of solutions to global



our activity. to protect it for future generations.

environmental problems. Human activity in its various forms is possible precisely because we are blessed with the Earth's rich ecosystems. The global environment was formed over hundreds of millions of years. We must use every means at our disposal to stem the degradation of the Earth's bountiful but fragile ground.

As specific action guidelines to steer us in this accord, in May 2010 we formulated the Mitsubishi Electric Group Biodiversity Action Guidelines. In accordance with this proclamation, we are raising the awareness of each employee across all operational domains—from procurement, manufacturing, transportation and marketing, through recovery and recycling—regarding the relationship between their own business activities and ecosystems and biodiversity. In addition, we are committed to expanding such ongoing endeavors as the “Satoyama” Woodland Preservation Project and the Mitsubishi Electric Outdoor Classroom, which aid us in fostering environmental awareness.

Contributing to a Sustainable Society on a Global Level

Looking toward tomorrow, all regions and countries worldwide will have to aim for sustainable development, with consideration for global environmental conservation. To avoid the negative aspects of economic growth that Japan experienced in the past, the Mitsubishi Electric Group views doing its utmost to provide technologies, products and services that contribute to conservation of the environment worldwide as one of its primary obligations in the execution of its business. At the same time, we are aware of our responsibility to take extreme care that our resource procurement and production activities do not bring with them environmental destruction.

Currently, Mitsubishi Electric provides many products and services worldwide that contribute to global environmental conservation in a broad range of fields—from

in the home to outer space. However, the technological development this involves requires long years of cumulative effort. For example, Mitsubishi Electric's water treatment technologies utilizing ozone have been adopted in numerous countries around the world as purification technologies that feature excellent energy savings and cause no environmental pollution. When I joined the Company more than 30 years ago, I was involved in the development of these and related technologies. Thereafter, thanks to the efforts of many employees, this work bore fruit. Such examples enable me to appreciate the importance of continuous, cumulative effort. In this way, looking ahead, I would like to contribute to the realization of a sustainable society on a global level through continuous and unflagging effort.

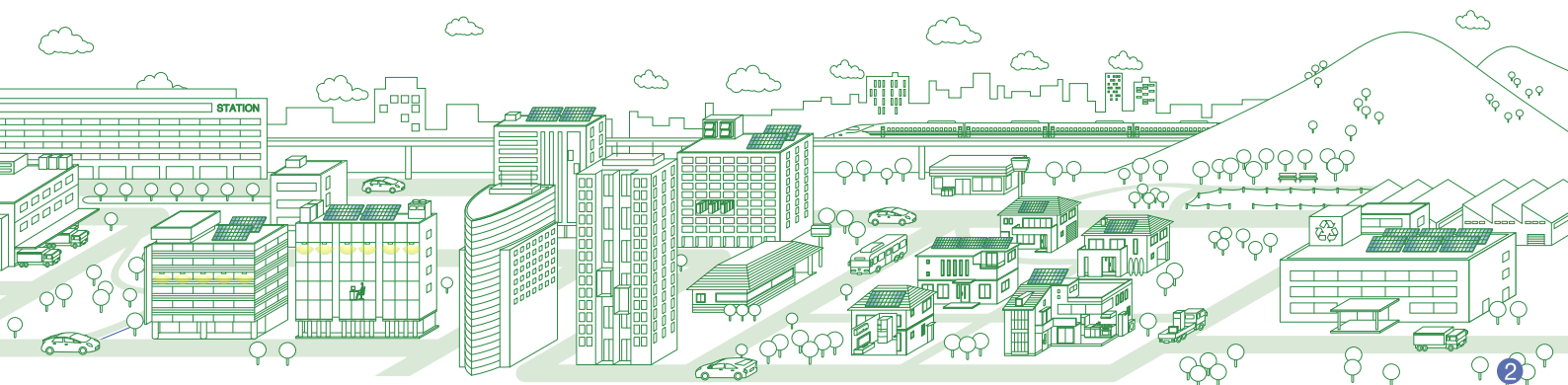
Continuing our Persistent Efforts with a Workforce United in Intent

Self-motivated, independent action by individuals taking responsibility upon themselves is indispensable if we are to continue the progress I have described into the future. Promotion of activities by top management can only provide momentum. Our ultimate objective is for all employees of the Mitsubishi Electric Group to share deep empathy for the natural environment and a proper awareness of biodiversity, and to advance step by step with a strong sense of their own role in helping protect the environment.

I am doing my utmost in my leadership role to build the company in this way. I hope to continue in these efforts to preserve our irreplaceable global environment through the concerted support of all employees.

*NOTE: Fiscal years used in this document refer to the fiscal period ending March 31 of the year shown.

K Yamanishi
Kenichiro Yamanishi
President & CEO



Energy Conservation Experts: Pointing Out Intelligent Ways to Save Energy

Production Line Improvements

To date, the Mitsubishi Electric Group has made efforts to realize energy conservation through such initiatives as the introduction of highly efficient equipment into our factories. In accordance with the 6th Environmental Plan (fiscal 2010-2012), we will now focus efforts on production line improvements from the perspective of energy conservation.

Traditionally, the objective of production line improvements conducted at each factory was to boost production efficiency. A primary example of such initiatives is just-in-time activities. At Mitsubishi Electric, these activities have indeed raised production efficiency and resulted in less wasted energy. However, when looking at such activities specifically from the perspective of energy conservation, many areas for improvement that previously went unnoticed can be found—which is why we have added an energy conservation perspective to our plans.

Searching Out Even the Smallest Energy Loss

At all our factories, workers are keen to make efficiency improvements. However, to put this desire into practice, it is the duty of management to cultivate that spirit of improvement even further, while providing the direction needed to turn it into energy-saving results. For this reason, in fiscal 2010 Mitsubishi Electric began carrying out inspections by energy conservation experts.

Energy conservation experts are employees who have been involved in energy conservation initiatives at factories across Japan, particularly those who possess considerable experience, have a track record of excellence in energy conservation activities and are highly skilled pioneers. These employees form a team of experts who visit domestic and overseas factories to conduct inspections and observe every detail of the production site. From infrastructure such as electrical equipment, boilers, air compressors and ductwork, to

On-site Energy Conservation Inspection: More than 100 Areas for Improvement at a Single Factory!

An inspection was conducted at Mitsubishi Electric's Air-Conditioning & Refrigeration Systems Works (Wakayama) in March 2010.



What is the management range of this pressure gauge? What is the basis for that pressure reading? Can it be lowered?



This is a great power supply method, and it has very little start-up power loss. We should definitely make it a standard.



There is heat loss coming from this open steam pipe. You should put a flange and thermal insulation cover over it.

Experts Discuss Ways to Conserve Energy

Looking Carefully at Current Processes



Teruyuki Shibata
Sanda Works

When searching for waste, I begin by looking at the energy required for production and the energy required to create the production environment, and then check to see if the energy being used is meeting those objectives.

Taking a careful look at things taken for granted at the production site will reveal all kinds of waste. This is the perspective I hope to impart through the inspection activities at each factory.

Suggesting Immediate Improvements



Kazumi Kobayashi
Fukuyama Works

Employees who work at the production site play a leading role in the promotion of energy conservation. This is why I always try to talk with as many on-site staff as possible when conducting inspections. Offering my suggestions and then asking their opinions gets them started asking questions, so we can have a constructive dialogue. By suggesting immediate improvements, I can convey my thoughts and ideas easily and directly.

the management of production equipment, experts make detailed observations of operations as well as people, checking for the smallest losses and inefficiencies.

The experts are able to discover the need for improvement in a wide range of areas. For example, a visit to the Shizuoka Works in January 2010 helped identify approximately 120 areas for improvement. In February, a visit to the Nagoya Works yielded approximately 70 areas for improvement, and in March, a visit to the Air-Conditioning & Refrigeration Systems Works uncovered some 170 areas for improvement.

Sharing an Energy Conservation Perspective

The more than 100 areas for improvement that were discovered not only have a direct effect on production line improvements, but also have an awareness-building effect.

The inspections help local staff to develop an energy

conservation perspective, and allow factory environmental managers to look at their workplace with the experts from a different point of view and discover new ways of thinking.

By inheriting the experience of experts at all its factories in Japan and overseas, the Mitsubishi Electric Group aims to instill a shared perspective in all its employees.



A venue is set up to share inspection results. At this meeting, employees gain the experts' perspectives to discover areas for improvement.



This steam heater is being used for heating, but it is inefficient due to significant steam loss. Since the temperature is low, you should be able to use a more efficient heat pump.

On the Energy Conservation Inspection

Although this factory has been engaged in thorough energy conservation initiatives for several years, we are very appreciative that the inspection identified 177 areas for improvement.

Attending the inspection visit provided many discoveries. The experts were very good at pointing out how insufficiently prepared we were to respond to fluctuations in production, and how uncoordinated our efforts really were.

This inspection was different from environmental audits in that it encouraged us by also indicating what we are doing right.



Tsunenori Mori
Deputy General Manager,
Air-Conditioning & Refrigeration
Systems Works

Ongoing Effort is the Key to Energy Conservation



Michitoshi Takagi
Power Distribution
Systems Center

When on-site activities first began, many ideas were suggested, and people gradually began believing that nothing further could be accomplished. I think energy conservation inspections are crucial to ongoing improvements. This is why I make the utmost effort to discover as many areas for improvement as I can at each factory I visit.

Inheriting the Knowledge of Energy Conservation

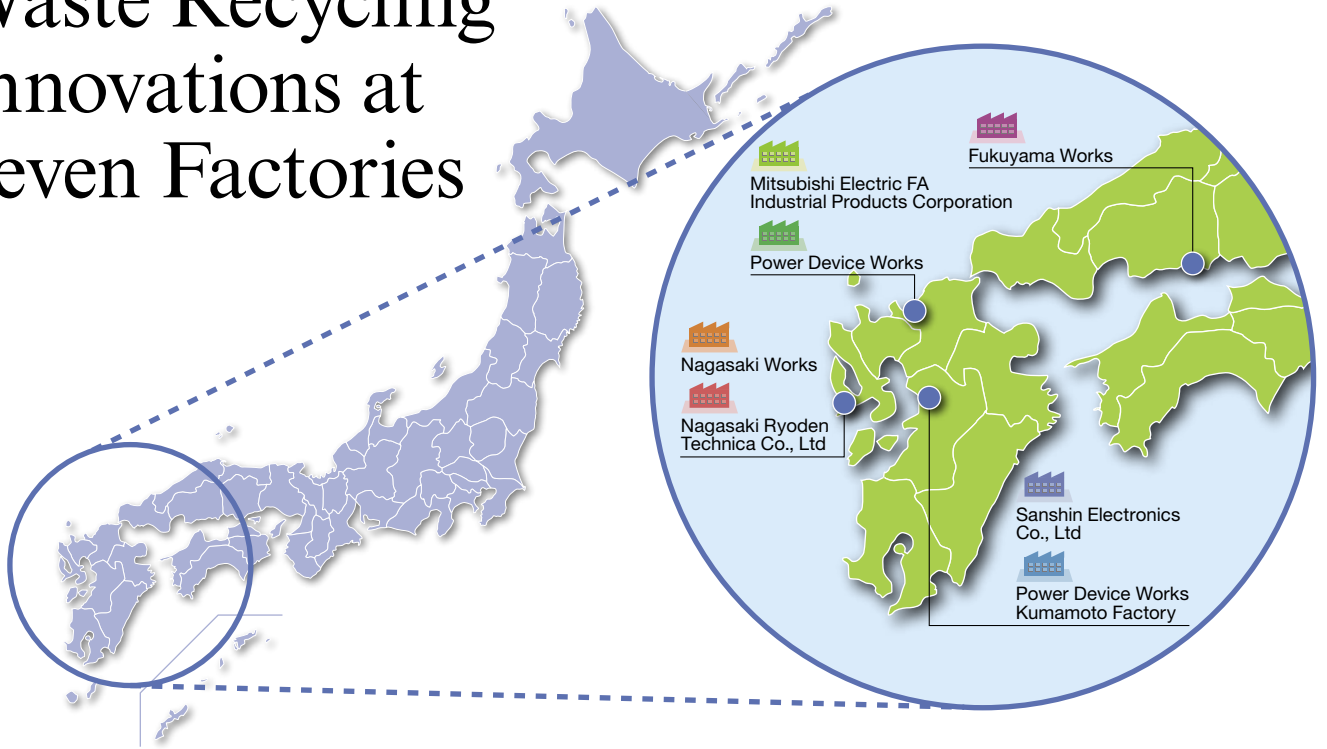


Shinichi Ichikawa
Nakatsugawa Works

My particular focus is the various components used in production equipment and the energy they consume. I check for waste by applying the experience I have cultivated in production equipment.

Being younger than the others, I benefit a lot from the knowledge of the veteran employees. I want to continue this process of inheriting knowledge and passing it on to the next generation.

Waste Recycling Innovations at Seven Factories



Mobilizing Managers from Seven Factories

The island of Kyushu, located in southern Japan, has an area of 13,761 square miles (35,640 km²) and is divided into seven different prefectures. Until recently, the seven Mitsubishi Electric factories, which are spread across a region including Hiroshima Prefecture and the entire Kyushu area, have promoted waste recycling initiatives individually. The processing of general industrial waste was carried out by each factory, usually without the involvement of factories outside the area. However, the major success of coordinated regional recycling activities in the Kansai area in 2007 led to the formation of a working group consisting of seven managers from four Mitsubishi Electric factories and three affiliated companies in November 2008. The Nagasaki Works, which is passionate about reducing waste, spearheaded the establishment of this working group.

Mutual Inspections Uncover Areas for Improvement at Each Factory

When the working group was created, the seven members began inspecting each of the seven factories, learning that “normal” practices at one site were not always viewed the same way at other sites. They ended up making several important discoveries.

One example was the discovery that the waste one factory paid to dispose of was viewed by another factory as a goldmine. By meticulously separating waste according to type and purity, some factories were able to convert as much as 40% of their waste into saleable materials.



Working Group Members (From left)
Yuki Ono, Nagasaki Works (Project Leader)
Mitsuhiro Yano, Power Device Works
Masafumi Mino, Sanshin Electronics

Hideto Yoshizumi, Power Device Works Kumamoto Factory
Takahiro Hamachi, Mitsubishi Electric FA Industrial Products
Tomoyasu Sato, Fukuyama Works
Hajime Murata, Nagasaki Ryoden Technica



Sharing Information to Raise Level of Environmental Conservation

In the past, factories selected waste disposal partners based on in-house knowledge, but now they understand differences in processing technology, processing expenses, the purchase price of saleable materials and storage facilities. Based on this knowledge, factories are now able to switch to processing methods with lower environmental impact and select excellent partners, leading to a higher level of environmental conservation activities.

In addition, in cases where multiple factories employ the same outsourced waste operators, the factories conduct inspections of these operators and their facilities on a rotating basis, sharing information about the inspections with other factories. This approach conserves energy and strengthens management.

Seven People Exchange Information on Waste Processors

- Company A has set up a compliance department, so from now on they should be even more legally observant.
- Did you know that Company B put in place an initiative to cut landfill waste to zero?
- Company C has expanded its facilities and has extra capacity, so they might be flexible on pricing.
- D waste disposal company respond quickly, and they're very reasonable.
- "Thanks for the tip! We'll give them a try!"



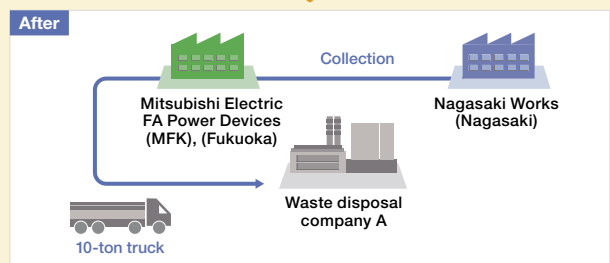
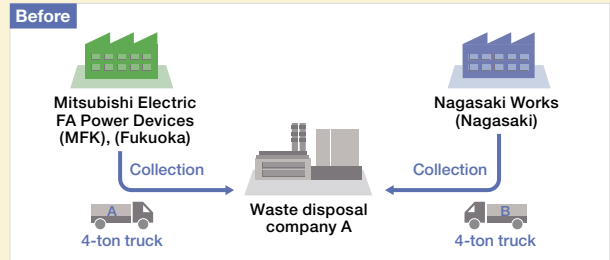
Streamlining and Developing the Waste Material Flow

Before this initiative, multiple factories contracted the same waste disposal operator individually to collect factory waste. Now, waste is collected from those factories using one large truck, thereby eliminating wasted energy and achieving 100% load efficiency. The efficient use of large trucks, which have a comparatively low degree of capacity utilization, also benefit the waste disposal operators, who can now use smaller trucks—which have a higher turnover rate—for other uses.

Furthermore, by abolishing weekly waste collection that took place regardless of the amount of accumulated waste, and establishing a system in which collection occurs only when a truckload of waste has accumulated at each factory, the number of required truck trips as well as CO₂ emissions have been reduced.

Please see the Environmental Topics section of our website at <http://Global.MitsubishiElectric.com/company/csr/ecotopics/kyushu/>

Case Study Improving Collection Efficiency by Using One Large Truck instead of Smaller Ones



Creating a Win-Win Relationship

All these achievements could not have been accomplished by the factories working on their own. Cooperation among factories and with waste disposal partners was indispensable to the program's success. Through the development of a meticulous methodology and cooperation that contributed to factories and waste disposal operators alike, these efforts resulted in the creation of a win-win relationship.

Although the working group is less than one year old, its members have already discovered that waste disposal can be interesting, and they are eager to achieve further success. In fiscal 2011, we plan on adding an affiliated company located in Kumamoto Prefecture to the Kyushu area working group. In coordination with activities in other areas, including those of the Kansai area, Mitsubishi Electric will continue to share information and find opportunities for collaboration, aiming to further enhance our level of activity.

Biodiversity Action Guidelines Formulated in Accordance with the Product Life Cycle

The Preservation of Biodiversity First Requires Understanding, then Action

As part of our efforts to help preserve the natural environment, Mitsubishi Electric has initiated numerous ongoing regional contribution activities. In 2003, we began our Fuji Sanroku forest cultivation activities. In 2006 we launched the Mitsubishi Electric Outdoor Classroom program to cultivate nature conservation leaders. And from 2007, we have been conducting “Satoyama” woodland preservation activities with local residents.

Environmental Vision 2021, formulated in October 2007, defines respecting biodiversity as one of Mitsubishi Electric’s basic policies. The policy stems from the strong desire to protect the natural environment and realize a sustainable society through cultivating environmental awareness among our employees.

As one activity designed to help increase awareness, we commissioned photographer Mitsuaki Iwago to photograph animals in their natural environment and write a column, which has been posted on our Japanese corporate website under the title *The Beauty of NATURE* since June 2008.

Ahead of the Convention on Biological Diversity (COP10) held in October 2010, we formulated the Mitsubishi Electric Group Biodiversity Action Guidelines in May 2010. In addition to helping foster the “emotional” aspects that form the basis for respecting biodiversity and cherishing living things, these guidelines also provide a “logical” foundation upon which to establish activities that help fulfill our corporate roles and responsibilities.

Our Biodiversity Action Guidelines have two main characteristics: (1) they include the pledge of every Mitsubishi Electric Group employee to understand the relationship between business activities and biodiversity; (2) they are structured according to each stage of the product lifecycle. We have also created a relational chart that makes these guidelines more visual.

In this way, we can understand how the products we make impact biodiversity, and use this knowledge as a guide in formulating the actions necessary to help preserve the environment and create a sustainable society.

Mitsubishi Electric Group Biodiversity Action Guidelines

Resources & Procurement

Recognizing that we utilize globally procured natural resources such as minerals, fuels, and plants, we shall aim to preserve biodiversity in Japan and around the world by carrying out green procurement activities.

Product Design

In designing our products and services, we shall promote the effective utilization of resources and the efficient use of energy, as well as aim to prevent the emission of substances that pose a risk to the environment.

Manufacturing & Transportation

When commencing or making changes to land use such as when constructing factories or warehouses, we will give due consideration to protecting the biodiversity of the land in question. And in manufacturing and transportation, we aim to minimize energy use, waste generation, and the emission of chemical substances.

Sales, Usage & Maintenance

In our sales activities, we will work to promote better understanding among our customers of the impact that product/service usage and maintenance can have on biodiversity.

Collection & Recycling

We will actively develop recycling technologies and apply them to collected end-of-life products.

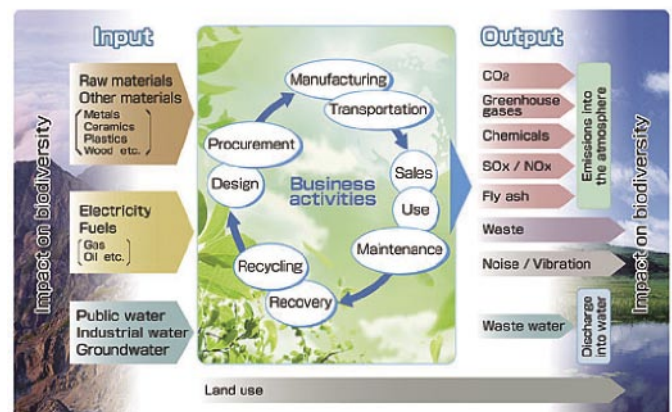
Understanding & Action

We will deepen our understanding of the importance of biodiversity and our relationship to it, and will actively and voluntarily take actions necessary to coexist in harmony with nature.

Cooperation

All companies in the Mitsubishi Electric Group, including overseas affiliates, will act as one, in cooperation with local communities, NGOs, and governments.

Relationship between Business Activities and Biodiversity





Ensuring Compliance in Procurement, and Conducting “Living Creature Studies” at Production Sites

The product lifecycle has many stages. However, as a manufacturer that purchases and procures the materials used to assemble and manufacture our products, the one stage at which it is difficult for us to directly control impact on biodiversity is the procurement stage.

To promote the global procurement of materials with minimal environmental impact, the Mitsubishi Electric Group has positioned green procurement as a priority to ensure the regulatory compliance of our suppliers. Since April 2006 Mitsubishi Electric has been creating partnerships based on the Green Accreditation System, which requires that suppliers carry out environmental management. In September 2009, we also added an appendix specifically related to protecting biodiversity to our Green Procurement Standards Guide.

In the meantime, focusing on production—a lifecycle stage that we can control directly—we have begun activities to help see the relationship between our factories and their surrounding environment. These activities are not only one of the simplest ways to understand the relationship between our business activities and biodiversity, but also the point at which the “emotional” and

“logical” aspects of respecting biodiversity converge.

Japan’s Chubu Area is a region of rich natural beauty, where nature preservation activities are popular. In August 2010, Mitsubishi Electric’s Chubu Branch Office along with three of our production sites in the area conducted “living creature studies” and aquatic nature observation around the factories, and put together field guides to the living creatures they found. The *Mitsubishi Electric Experience of Life* booklet has also been created based on the findings gained from these studies. The content of this booklet demonstrates the value of focusing on production.

The Mitsubishi Electric Group is developing additional activities designed to renew awareness regarding our relationship to surrounding ecosystems and the environment. These activities are scheduled for implementation in 2011 within each environmental management organization. We believe the initiative in the Chubu Area will serve as a model for future activities.

For the benefit of our employees and stakeholders, the booklet and related charts are available on our website in Japan.



Living creature study



Living creature relationships map

Themes of Field Guides to Living Creatures

Inazawa Works: Coexisting with life
Nakatsugawa Works: Feeling the abundance of life
Nagoya Works: History felt through life



The *Mitsubishi Electric Experience of Life* booklet is used by local citizens, visitors to the area, and a wide range of age groups.

Living creature studies were conducted with the cooperation of local experts and NPO members. The experiences and discoveries made by employees during these studies are organized into relational maps themed around regional natural features. Through these activities, we not only helped individual employees realize what they can do to help protect the environment, but we have also gained a more systematic and structured understanding.

Exchanging Ideas with Experts

In creating Mitsubishi Electric’s Biodiversity Action Guidelines and the Relationship between Business Activities and Biodiversity chart, we invited Dr. Ryo Kohsaka, Associate Professor at Nagoya City University, to exchange ideas regarding biodiversity. His feedback on our efforts is summarized as follows:

1. Activities are based first upon the emotional desire to cherish living things. The next step is action based on logic.
2. Using indices for management can be effective; however, focusing on the effect of manufacturing on the ecosystem is more important.
3. As a company that procures resources globally, a focus on procurement is vital; begin first by confirming legal compliance.
4. Collaborative relationships with regional communities are essential.

Based on this feedback, we created our guidelines and relational chart, which were announced on May 18, 2010.

For details, please see the Environmental Topics section on our website.



Dr. Ryo Kohsaka

Associate Professor, Nagoya City University
Executive Committee Advisor, The 10th
Conference of the Parties to the Convention
on Biological Diversity (COP10) Guest
Researcher, United Nations University
Institute of Advanced Studies

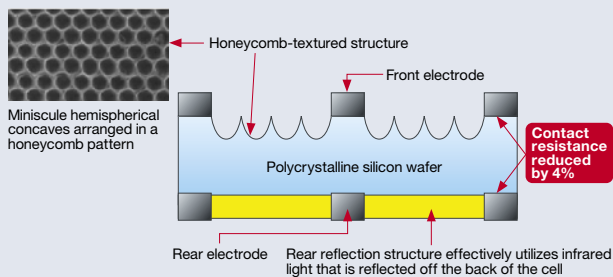
World's Highest Conversion Efficiency for the Third Year in a Row

For the third year in a row, Mitsubishi Electric's 15 cm x 15 cm, 200 μm thickness polycrystalline silicon photovoltaic (PV) cell achieved the world's highest¹ photoelectric conversion efficiency, this time reaching 19.3%². Our 15 cm x 15 cm, 100 μm ultra-thin polycrystalline silicon photovoltaic cell also attained the world's highest conversion efficiency of 18.1%².

In addition, our R&D efforts involving thin-film silicon photovoltaic cells have resulted in a conversion efficiency of 14.8%³, the industry's highest in this category.

- ¹ Mitsubishi Electric research as of February 16, 2010.
- ² Measurement provided by the Research Center for Photovoltaics, National Institute of Advanced Industrial Science and Technology.
- ³ Mitsubishi Electric measurement (5 mm x 5 mm-sized cell, initial efficiency rate)

Polycrystalline Silicon PV Cell and Ultra-thin Polycrystalline Silicon PV Cell with the World's Highest Photoelectric Conversion Efficiency

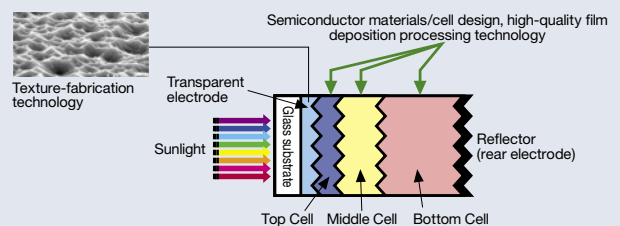


See the February 16, 2010 news release on our website for more details.

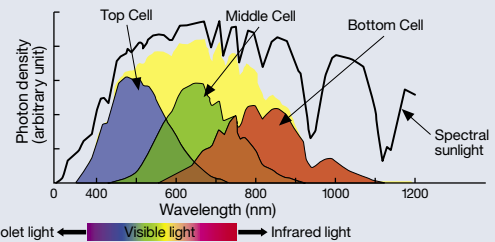
Also see our website:
[Guide to Environmental Technologies "Photovoltaic \(PV\) Systems"](#)

Thin-film Silicon PV Cell Achieves Industry-leading Photoelectric Conversion Efficiency

Thin-film silicon PV cells help conserve resources, as they require only 1% of the amount of silicon used in crystalline-type PV cells. Mitsubishi Electric has developed triple-junction structure PV cells, in which the top layer absorbs short wavelengths and the bottom layer absorbs long wavelengths, allowing the cell to absorb sunlight from visible to infrared light. We will continue to develop this technology for practical use.



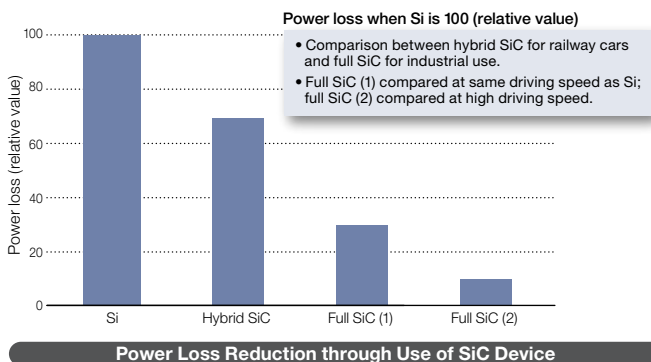
Cross-sectional View of Thin-film Silicon PV Cell



Progress Toward Application of Energy-efficient SiC Devices

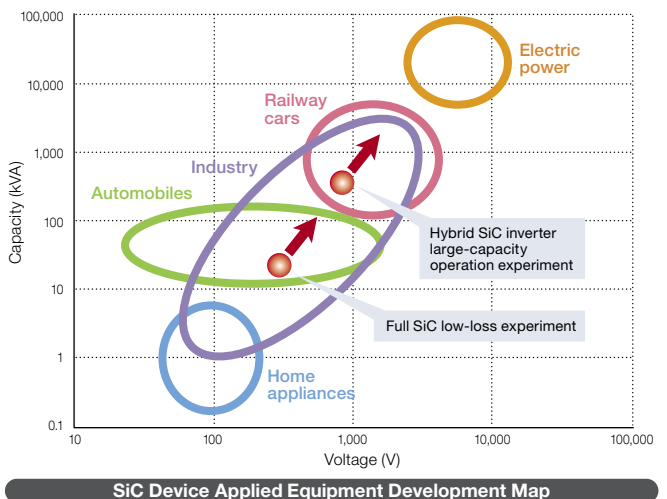
Mitsubishi Electric is targeting the early practical application of next-generation power devices using silicon carbide (SiC). In fiscal 2010, we achieved a 90% reduction in power loss compared to conventional silicon (Si) inverters by using a 20 kW-output full SiC inverter¹ prototype.

We also developed a hybrid power module consisting of SiC-SBD and Si-IGBT², and for the first time succeeded in driving a 300 kW railcar drive motor.



- ¹ **Full SiC inverter:** Inverter that is composed of SiC-MOSFET (Metal Oxide Semiconductor Field Effect Transistors) and SiC-SBD (Schottky barrier diodes)
- ² **Insulated Gate Bipolar Transistor:** A power device widely used for industrial inverters and motor control circuits

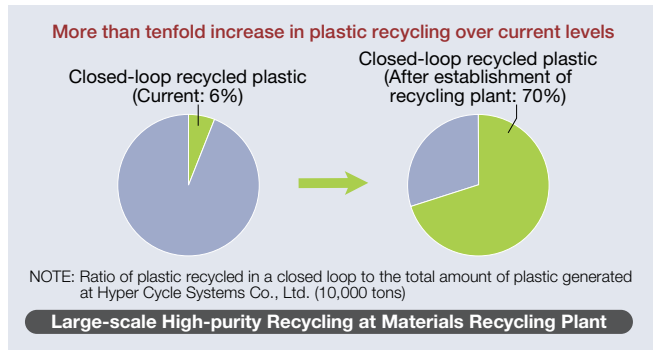
Also see our website:
[Guide to Environmental Technologies "SiC Power Devices"](#)



Operations Begin at Large-scale, High-purity Plastic Recycling Plant

Mitsubishi Electric's efforts in developing closed-loop recycling technology to recover plastic from used products and recycle it for use in new products has resulted in a technology that automatically separates the three main types of plastic¹ from mixed shredded plastic at more than 99% purity.

¹ The main types of plastic are polypropylene (PP), polystyrene (PS) and acrylonitrile-butadiene-styrene (ABS).



A plant employing this technology began operations in 2010. This large-scale, high-purity plastic recycling facility, the first of its kind in Japan, will recycle a maximum of approximately 6,400 tons of mixed plastic per year.

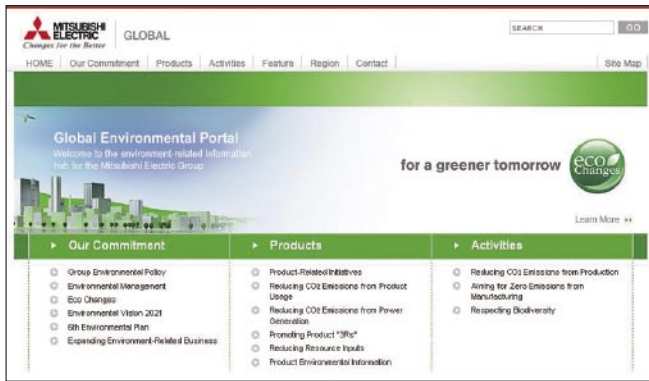


Green Cycle Systems Corporation

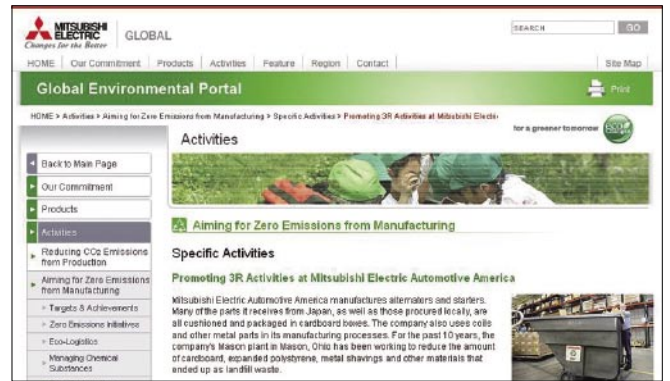
Global Environmental Portal Website Renewed

In March 2010, Mitsubishi Electric redesigned and renewed its information-rich English-language environmental portal website. The website helps improve the accessibility of environmental information that was formerly disseminated individually by overseas business units and bases of operation.

News and topics are added as they become available, making the Global Environmental Portal a valuable tool that contributes to the group-wide goal of expanding global environmental management.



Global Environmental Portal



www.MitsubishiElectric.com/eco/

Environment and Energy Conservation Private Forum Held in Shanghai, China

On August 26, 2009, we held the "Environment and Energy Conservation Private Forum¹" in Shanghai, leveraging our cumulative knowledge of energy conservation technologies. The forum featured keynote speeches and a panel discussion comprising representatives from the Chinese government and the head of Mitsubishi Electric's Corporate Environmental Sustainability Group. Another feature was an executive session focusing on five themes designed to facilitate technological exchange among all seven operating companies.



Panel discussion in Shanghai

¹ Sponsored by the *Daiichi Zaikai Nippo* and Tongji University. Co-sponsors Mitsubishi Electric Corporation and Mitsubishi Electric (China) Co., Ltd., were responsible for forum planning and management.

Period Covered: April 1, 2009 to March 31, 2010

Scope of Report: Mitsubishi Electric Group (Mitsubishi Electric Corporation and 163 affiliates in Japan and overseas)

* Up to fiscal 2009, the scope of our report was limited to those companies that had drawn up an environmental plan for governance from an environmental conservation perspective. But under the policy of expanding global environmental management, we have broadened the scope of report to cover Mitsubishi Electric, its consolidated subsidiaries, and its affiliated companies.

Material Balance

IN

Materials for Manufacturing			
	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Materials ¹	510,000 tons	90,000 tons	420,000 tons
Manufacturing			
Electricity	960 million kWh	320 million kWh	245 million kWh
Natural gas	20,700,000 m ³	2,850,000 m ³	8,510,000 m ³
LPG	1,903 tons	2,119 tons	1,373 tons
Oil (crude oil equivalent)	6,146 kl	2,763 kl	651 kl
Water	6,530,000 m ³	2,120,000 m ³	1,550,000 m ³
Public water	1,280,000 m ³	480,000 m ³	380,000 m ³
Industrial water	2,030,000 m ³	280,000 m ³	970,000 m ³
Groundwater	3,220,000 m ³	1,360,000 m ³	50,000 m ³
Others	0 m ³	0 m ³	190,000 m ³
Reuse of water	3,050,000 m ³	1,530,000 m ³	100,000 m ³
Controlled chemical substances (amounts handled)	5,012.7 tons	1,885.2 tons	4,172.7 tons
Ozone depleting substances (amounts handled)	0.3 tons	146.2 tons	1,438.7 tons
Greenhouse gases (amounts handled)	2,667.3 tons	92.1 tons	1,167.4 tons
Volatile organic compounds (amounts handled)	1,474.3 tons	950.0 tons	147.5 tons

¹ **Materials:** Sum of shipping weight of "Design for Environment" (DfE) products, plus amount of product packaging materials used, plus total amount of waste

Selling and Distribution ³			
	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Fuel for trucks (gasoline)	10,500 kl	1,200 kl	170 kl
Fuel for trucks (diesel)	25,000 kl	6,500 kl	24,500 kl
Fuel for rail (electricity)	1,900 MWh	400 MWh	0 MWh
Fuel for marine transport (bunker oil)	350 kl	20 kl	28,500 kl
Fuel for air transport (jet fuel)	450 kl	200 kl	14,500 kl

³ **Sales and logistics:** Includes 11 sales companies in Japan. Figures for overseas affiliated companies include transportation between countries.

Energy Consumption ⁵			
	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Electricity ⁵	7,530 million kWh	780 million kWh	9,880 million kWh

⁵ **Energy Consumption:** Amount related to "Design for Environment" (DfE) products

End-of-Life Products ⁷			
	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Air conditioners	12,038 tons		
Televisions	20,399 tons		
Refrigerators	19,922 tons		
Washing machines/ Clothes dryers	6,559 tons		
Personal computers	47 tons		

⁷ **End-of-Life Products:** Weight of products taken back and weight of recovered resources of four types of appliances subject to Japan's Home Appliance Recycling Law, plus personal computers

Factory

Logistics

Products (Customer)

Recycle

OUT

Emissions (From Manufacturing)			
	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Water	6,290,000 m ³	1,350,000 m ³	1,020,000 m ³
Controlled chemical substances	13.0 tons	1.8 tons	43.0 tons
BOD (biological oxygen demand)	89.9 tons	4.2 tons	17.5 tons
COD (chemical oxygen demand)	20.0 tons	3.6 tons	37.0 tons
Nitrogen	91.2 tons	11.8 tons	0.2 tons
Phosphorus	7.2 tons	0.1 tons	0.2 tons
Suspended solids	64.7 tons	2.1 tons	20.8 tons
n-hexane extracts (mineral)	2.3 tons	0.2 tons	0.9 tons
n-hexane extracts (active)	1.3 tons	0.0 tons	0.2 tons
Total emissions of zinc	0.2 tons	0.0 tons	0.0 tons
Carbon dioxide (CO ₂)	472,000 tons-CO ₂	166,000 tons-CO ₂	217,000 tons-CO ₂
Controlled chemical substances (excluding amounts contained in other waste)	644.9 tons	66.3 tons	92.8 tons
Ozone depleting substances	0.00 ODP t	0.00 ODP t	0.04 ODP t
Greenhouse gases	150,000 tons-CO ₂	57,000 tons-CO ₂	63,000 tons-CO ₂
Volatile organic compounds	498.4 tons	64.8 tons	14.2 tons
Sulfur oxide (SO _x)	1.3 tons	4.1 tons	4.4 tons
Nitrogen oxide (NO _x)	33.1 tons	11.3 tons	33.2 tons
Fly ash	1.1 tons	0.7 tons	11.2 tons
Amount of CFCs recovered	0.2 tons	77.6 tons	-
Waste			
Total waste emissions	74,980 tons	50,155 tons	46,317 tons
Amount recycled	63,116 tons	43,332 tons	35,812 tons
Waste treatment subcontracted out	18,982 tons	30,762 tons	7,575 tons
Final disposal	32 tons	107 tons	1,496 tons
In-house weight reduction	2,011 tons	0 tons	0 tons
Products ²			
Weight of all "DfE" sold	393,000 tons	34,000 tons	317,000 tons
Weight of packaging materials	41,000 tons	7,000 tons	53,000 tons

² **Products:** Weight related to products designed for the environment

Emissions ⁴			
	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Carbon dioxide (CO ₂)	92,000 tons-CO ₂	20,000 tons-CO ₂	177,000 tons-CO ₂

⁴ **Emissions:** Includes 11 sales companies in Japan. Figures for overseas affiliated companies include transportation between countries.

Emissions ⁵		
	Mitsubishi Electric	Affiliates (Japan)
Carbon dioxide (CO ₂)	3,178,000 tons-CO ₂	329,000 tons-CO ₂

⁶ **Emissions:** Amount related to "Design for Environment" (DfE) products

Resources Recovered ⁸	
	Mitsubishi Electric
Metals	27,645 tons
Glass	10,608 tons
CFCs	274 tons
Others	12,459 tons

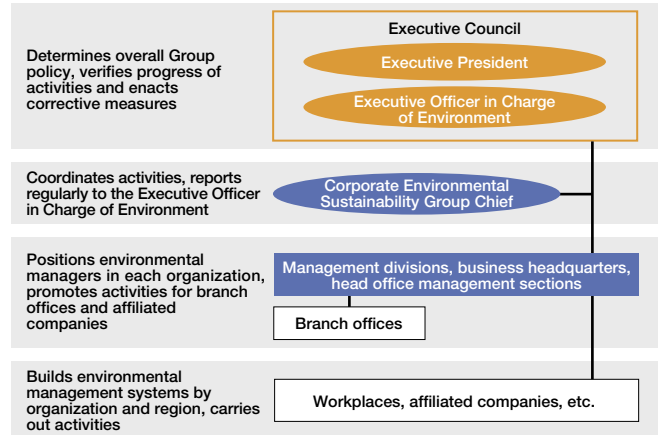
⁸ **Resources Recovered:** Weight of products taken back and weight of recovered resources of four types of appliances subject to Japan's Home Appliance Recycling Law, plus personal computers

Environmental Management

The Mitsubishi Electric Group aims to establish a uniformly high level of quality in environmental management across all organizations within the Group, and to continuously improve upon that level.

Environmental management and environmental governance are key links in the business management of the Mitsubishi Electric Group, and are applicable to the company, its consolidated subsidiaries, and its affiliated companies. All levels of the organization—from head office management divisions to management and business groups, workplaces, and affiliated companies—work within the scope of their responsibilities to ensure appropriate execution of environmental management within their downstream organizations. The environmental management promotion structure, as an integral part of the corporate body, accordingly includes all employees.

Environmental Management Promotion Structure



Reducing CO₂ from Production

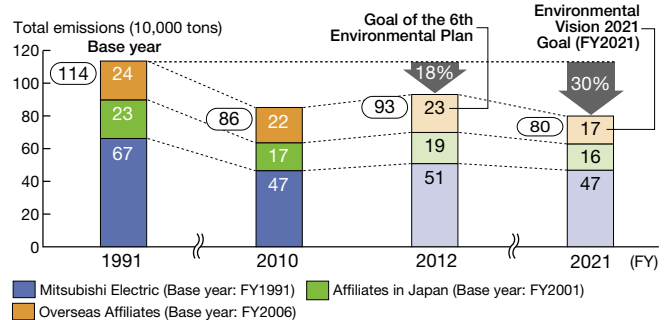
The Mitsubishi Electric Group's 6th Environmental Plan has established total CO₂ emissions targets for fiscal 2012 of 510,000 tons for Mitsubishi Electric Corporation, 190,000 tons for affiliates in Japan and 230,000 tons for overseas affiliates. These targets will be addressed through the promotion of two measures: revealing hidden energy wastage in the production process and addressing those areas through production line improvements; and by raising the efficiency and performance of air conditioning, lighting and other utility equipment.

Fiscal 2010 results are shown in the graph at right.

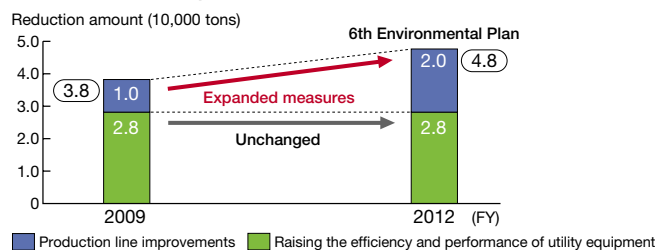
Our initiatives to date have already begun to yield steady progress toward the achievement of these goals, with CO₂ reductions of 19,000 tons by Mitsubishi Electric Corporation, 7,000 tons by affiliates in Japan and 8,000 tons by overseas affiliates, for a total of 34,000 tons of CO₂ reduced group-wide.

In fiscal 2011, we will aim to further reduce CO₂ by promoting the visualization of total energy usage at all headquarters and branch office sites.

Groupwide Plan to Reduce CO₂ from Production



Breakdown of CO₂ Reduction Plan through Expansion of Production Line Improvement Measures



Reducing CO₂ from Product Usage

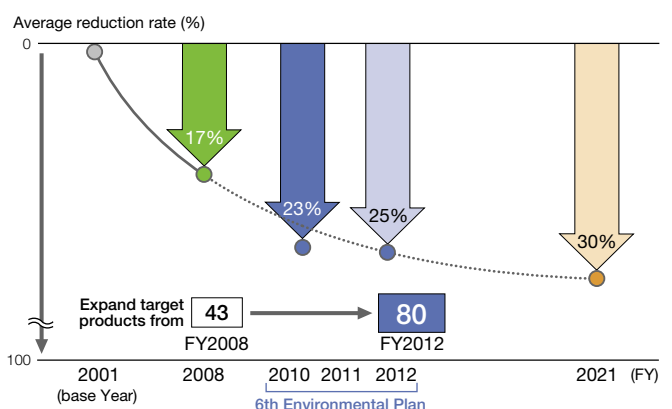
The Mitsubishi Electric Group promotes design for environment from the perspectives of the effective use of resources, the efficient use of energy and avoiding emissions of substances with potential environmental risk through the use of Life Cycle Assessment (LCA).

Because CO₂ emissions from product usage can total between 40 to 50 times more than the amount emitted during the production process (Mitsubishi Electric calculation), we must actively pursue greater reductions.

Under the 6th Environmental Plan, we have established the goal of improving the average CO₂ reduction rate in fiscal 2012 by 25% compared to fiscal 2001, and we are systematically proceeding with the selection of products that have the highest potential for CO₂ reduction.

The selection of target products expanded from 43 in fiscal 2009 to 70 in fiscal 2010, while our average CO₂ reduction rate in fiscal 2010 reached 23%.

Plans to Reduce CO₂ from Product Usage under Environmental Vision 2021



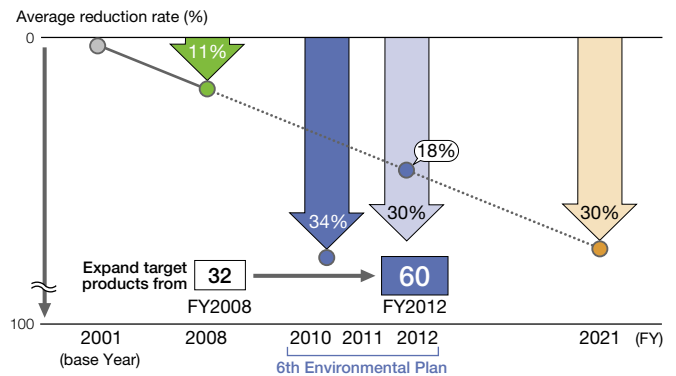
Reducing Resource Inputs and Recycling End-of-Life Products

Mitsubishi Electric is reducing resource inputs through the promotion of product recycling and through designing its products to be more compact and lightweight. We plan to increase the number of target products under this initiative to exceed 60 by fiscal 2012, and aim to improve our resource input reduction ratio by 30% compared to fiscal 2001 levels. Already at 51 products, we exceeded our fiscal 2010 target of 41 products, achieving an average 34% reduction ratio.

In fiscal 2010, we recycled 59,000 tons of four kinds of home appliances¹, achieving a recycling rate of 86%. Computers and monitors totaled 3,871 units or 79% of the total.

¹ Four kinds of home appliances: air conditioners, televisions, (CTR, LCD, and plasma models), refrigerator/freezers, and washing machines/clothes dryers

Reduction of Resource Inputs under Environmental Vision 2021

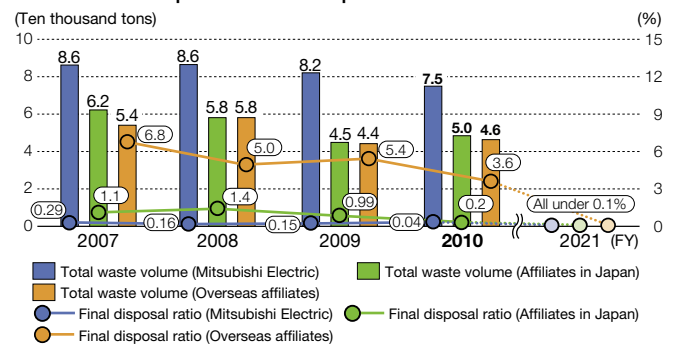


Zero Emissions

Under the 6th Environmental Plan, the Mitsubishi Electric Group established a final waste disposal ratio target of less than 0.1% for Mitsubishi Electric, less than 0.5% for affiliates in Japan, and less than 3.0% for overseas affiliates.

To this end, initiatives implemented according to waste generation and processing status at each production site resulted in significant achievements, including a final disposal ratio for fiscal 2010 of less than 0.1% at Mitsubishi Electric, as well as a final disposal ratio of 0.2% at affiliates in Japan. The final disposal ratio at overseas affiliates was 3.6%, representing a major step toward the achievement of these targets.

Total Waste Output and Final Disposal Ratio



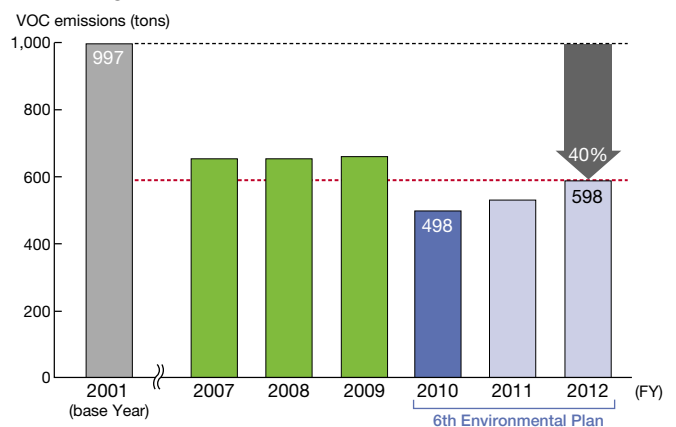
Managing Chemical Substances

In addition to the 462 substances designated under the revised PRTR law¹, Mitsubishi Electric and affiliates in Japan make use of a comprehensive Chemical Substance Management System that encompasses purchasing information about materials and components to voluntarily manage 2,097 substances, including refrigerant fluorocarbons used in air conditioners and refrigerators, VOCs (volatile organic compounds) as well as six RoHS substances. In fiscal 2010, Mitsubishi Electric used 5,013 tons of 115 different chemical substances; affiliates in Japan used 1,885 tons of 50 different chemical substances. VOC emissions totaled 498 tons.

We are engaged in initiatives to lower the volume of VOC emissions into the atmosphere to 40% of fiscal 2001 levels or less by fiscal 2012.

¹ PRTR: Pollutant Release and Transfer Register

Controlling VOC Emissions

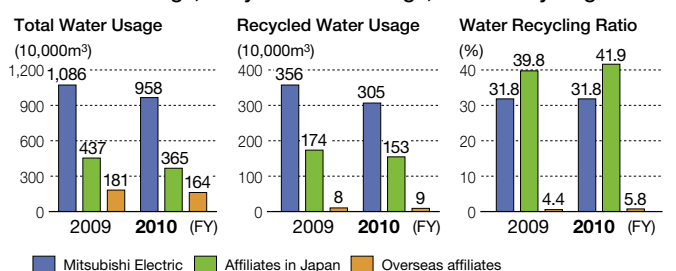


Effective Water Usage

The Mitsubishi Electric Group works toward the effective use of vital water resources, including tap water, industrial water, and groundwater, from the "3Rs" perspective. In fiscal 2010, Mitsubishi Electric reused less water than in the previous fiscal year as a result of the closing of a circuit board factory, but the amount reused by affiliates in Japan and overseas increased. Outside Japan, we made progress in recycling rainwater and improving the efficiency of water used on production lines.

¹ 3Rs: Reduce, Reuse, and Recycle

Total Water Usage, Recycled Water Usage, Water Recycling Ratio



Environmental Accounting

Period: April 1, 2009 – March 31, 2010
 Scope of Data Complementation: Mitsubishi Electric Group (Mitsubishi Electric Corporation and 163 affiliates in Japan and overseas)

□ Mitsubishi Electric Group □ Mitsubishi Electric (100 million yen)

Environmental Conservation Costs				Main Costs
Item	Capital Investment	Cost ¹	Year-on-Year Change	
Business area activities	38.9	101.6	(2.6)	Replacement and maintenance of ventilation and wastewater treatment facilities to meet regulatory requirements, etc.
	25.9	62.1	(2.3)	
Pollution prevention	3.4	31.2	(12.2)	
	1.1	18.5	(6.5)	
Global environmental conservation	33.5	36.0	3.6	
	23.3	24.6	2.3	
Resource recycling	2.0	34.4	6.0	Cost for processing industrial waste and recycling scraps, paper, cardboard, etc.
	1.5	19.0	1.9	
Green purchasing/procurement and product-related activities upstream and downstream from production	7.2	10.9	(2.4)	Examination of substances with environmental impact contained in products, and trial testing and evaluation of alternative materials, etc.
	2.7	8.0	(3.0)	
Management activities	0.2	32.2	(5.8)	Environmental education, EMS activities, environmental exhibition, greening of business sites, etc.
	0.0	23.5	(7.4)	
R&D activities for reducing environmental impact	3.2	61.9	10.6	Technological development to enhance photovoltaic cell efficiency, and development of high-efficiency power modules, energy-saving equipment/applications technology, and next-generation plastic recycling technology, etc.
	3.1	60.3	10.8	
Community activities	0.0	1.2	0.0	Onsite and offsite cleanup activities, management of greenery at factory sites, etc.
	0.0	1.0	0.0	
Environmental damage	0.3	3.1	(6.6)	Costs related to survey and cleaning of contaminated soil and underground water
	0.3	3.1	(6.6)	
Total	49.8	210.9	(6.8)	
	32.0	158.0	(8.5)	
Year-on-year change	2.9	(6.8)		
	2.8	(8.5)		

¹ Includes depreciation of capital investment over the past five years.

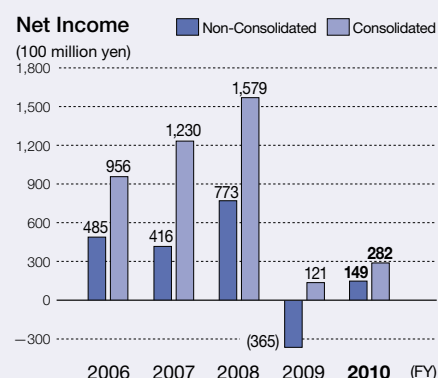
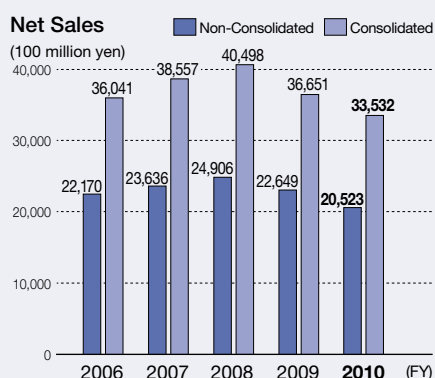
Environmental Conservation Benefits (Environmental Performance)				
Item	Unit	Fiscal 2009	Year-on-Year Change	Year-on-Year Per Net Sales
Total energy used	10,000 GJ	1,668	(232)	96%
		1,054	(87)	102%
Total water used	10,000 m ³	1,020	(146)	96%
		653	(77)	99%
Total greenhouse gas emissions	10,000 tons-CO ₂	112	(26)	89%
		62	(15)	89%
CO ₂ (Energy consumption)	10,000 tons-CO ₂	85	(10)	98%
		47	(4)	101%
HFC, PFC, SF ₆	10,000 tons-CO ₂	27	(17)	68%
		15	(10)	65%
Total releases and transfers of chemical substances into the atmosphere	tons	804	(133)	94%
		645	(57)	101%
Total wastewater discharged	10,000 m ³	857	(96)	98%
		629	(49)	102%
Total releases and transfers of chemical substances into the water and soil	tons	58	(17)	84%
		13	(0)	107%
Total waste discharged	tons	171,452	756	110%
		74,980	(6,821)	101%
Final disposal	tons	1,635	(1,305)	61%
		32	(89)	30%

Economic Benefits from Environmental Conservation Activities (Real Benefits)			
Item	Amount	Year-on-Year Change	Main Benefits
Earnings	24.3	(19.2)	Profit from the sale of saleable materials resulting from recycling of scrap metal, paper waste, etc.
	10.2	(14.2)	
Savings	74.5	34.5	Lower electricity costs due to introduction of high-efficiency equipment, reuse of waste materials, and productivity improvements; reduction in the use of wood packaging materials through use of returnable packaging materials.
	48.4	29.5	
Total	98.8	15.3	
	58.6	15.3	

Economic Benefits from Environmental Consideration in Products and Services		
Item	Amount	Main Products
Economic benefits to customers	2,555.7	Improvement in air conditioning equipment, total heat exchange ventilators (Lossnay), photovoltaic systems, thermoelectric generation stations, etc.
	2,542.5	
Environmental improvement effects	72.9	
	71.7	

Corporate Profile (As of March 31, 2010)

Company Name: Mitsubishi Electric Corporation
 Headquarters Location: Tokyo Building, 2-7-3, Marunouchi, Chiyoda-ku, Tokyo 100-8310, Japan
 Established: January 15, 1921
 Paid-in Capital: ¥175,800 million
 President: Kenichiro Yamanishi
 Number of Employees:
 Consolidated: 109,565
 Non-consolidated: 28,525
 Number of Affiliated Companies:
 Subsidiaries: 151 Affiliates: 42
 Business Segments:
 Energy and Electric Systems, Industrial Automation Systems, Information and Communication Systems, Electronic Devices, and Home Appliances



Mitsubishi Electric Group Environmental Information

Mitsubishi Electric's Global Website contains information about the Mitsubishi Electric Group's corporate social responsibility (CSR) activities. Within the "Corporate Social Responsibility" section, the "Environmental Report" outlines our environmental policies and vision, our environmental plans, and achievements in fiscal 2010 (year ended March 31, 2010), while the "Environmental Topics" section outlines activities designed to achieve the goals of Environmental Vision 2021.

Corporate Social Responsibility

<http://Global.MitsubishiElectric.com/company/csr/>

Environmental Report

<http://Global.MitsubishiElectric.com/company/csr/environment/>

In fiscal 2010 we launched the 6th Environmental Plan (fiscal 2010-2012). This section outlines initiatives and achievements in fiscal 2010, as well future plans.

Environmental Report Overview

- Policy, Vision & Plan
- Targets & Achievements of the 6th Environmental Plan
- Environmental Management
- Product-Related Initiatives
- Product Environmental Data
- Environmental Contribution in Business
- Production & Logistics-Related Initiatives
- Respecting Biodiversity
- Data & Charts

Environmental Topics

<http://Global.MitsubishiElectric.com/company/csr/ecotopics/>

This section introduces examples of prominent achievements from our various initiatives to realize the goals of Environmental Vision 2021.

Environmental Topics Overview

- From the President
- Guide to Environmental Technologies
- A New Dimension in Eco Air Conditioning
- Intelligent Ways to Save Energy and Reduce CO₂ from Production
- Coordinated Regional Waste Recycling (Kyushu Region)
- Recycling of Waste Plastics
- What We Can Do to Protect Biodiversity
- Archives

Other Mitsubishi Electric Group Environment-Related Websites

Eco Changes Website

<http://www.MitsubishiElectric.com/ecochanges/>

Provides information on initiatives related to Eco Changes.

Global Environmental Portal

<http://www.MitsubishiElectric.com/eco/>

A portal site that provides environmental information from our Group companies overseas.

 **MITSUBISHI ELECTRIC CORPORATION**
<http://Global.MitsubishiElectric.com>

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