

Environmental Performance Review 2016



The Mitsubishi Electric Group is contributing to society through the simultaneous pursuit of a sustainable society and safe, secure, and comfortable lifestyles for all.

Simultaneously pursuing a sustainable society and safe, secure, and comfortable lifestyles

We have declared the following in our corporate mission: "The Mitsubishi Electric Group will continue to improve its technologies and services by applying creativity to all aspects of its business. By doing so, we enhance the quality of life in our society." Under this mission, we operate in a wide range of areas, from products for the home to equipment and systems for use in outer space.

Today, climate change is one of the major issues that must be addressed to realize a sustainable global environment. In the 2015 Paris Climate Conference (COP21), the Paris Agreement was adopted, listing climate change as a key issue to be addressed in the United Nation's Sustainable Development Goals (SDGs^{*1}). This demonstrates a strong need for a low-carbon society.

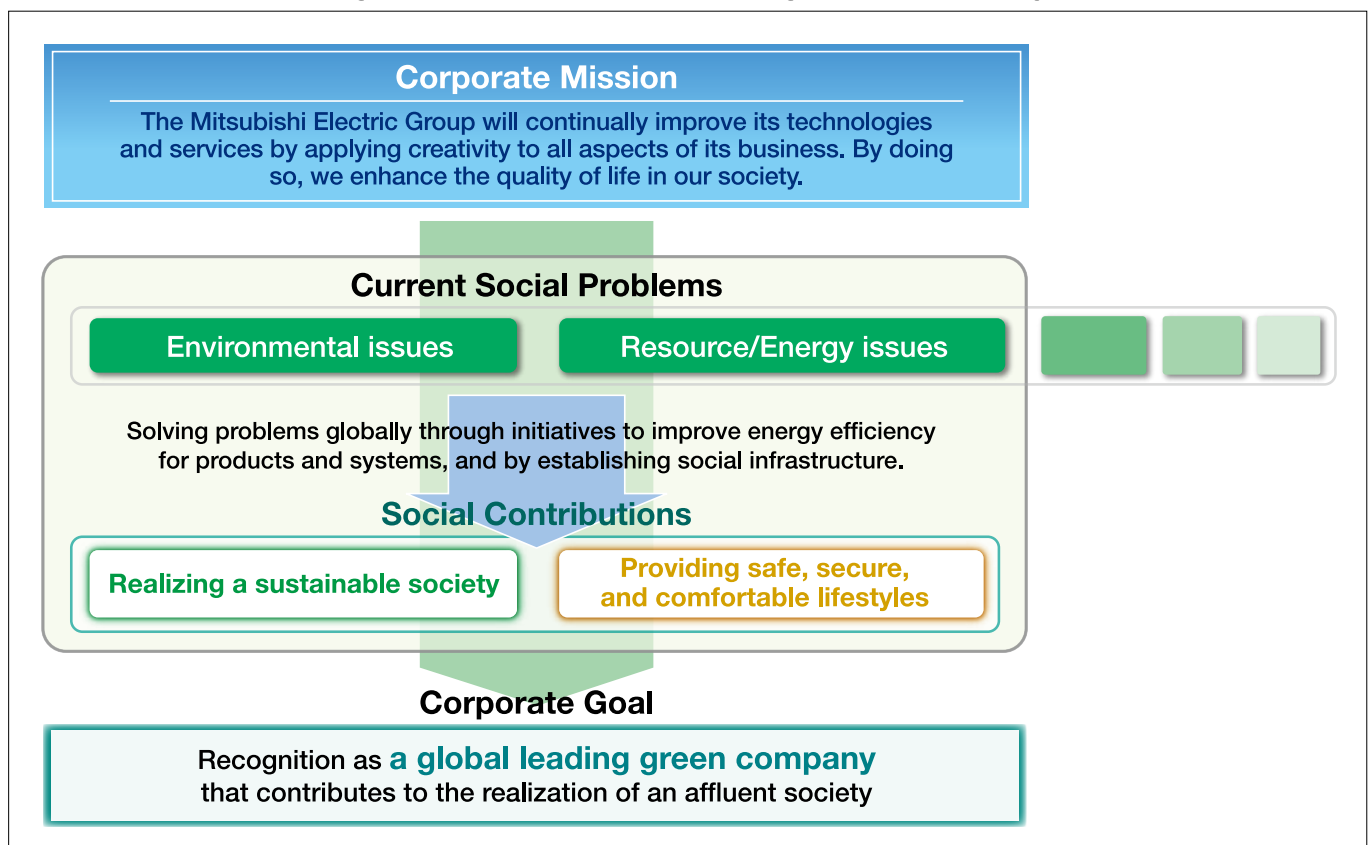
The Mitsubishi Electric Group defines a "global

leading green company" to be one that fully utilizes its advanced technologies in business activities around the world—including environmental issues—in order to contribute to creating an affluent society where both a "sustainable society" and "safe, secure, and comfortable lifestyles" are simultaneously achieved. Our aim is to be recognized as such a company. While making efforts to realize a low-carbon society through our products and services in the course of satisfying individual customers' needs, we will also try to reduce the environmental load at our business sites.

Contributing to the realization of a low-carbon society through energy-saving products and systems

The Mitsubishi Electric Group is carrying out initiatives to reduce the volume of CO₂ emitted during production activities at its business sites as well as suppress the volume that is generated during product and system use. This is being accomplished by making production

Corporate Goal – Aiming to Become a Global Leading Green Company





processes and product and systems performance more energy efficient. The volume of CO₂ emissions suppressed by improving product and system energy efficiency (i.e., contribution to reducing CO₂ emissions^{*2}) is tens of times that of the CO₂ emitted during activities at business sites. We therefore believe that our "energy-saving products and systems" will make a significant contribution to realizing a low-carbon society.

We have been pressing forward with energy savings through two effective ways: improving the energy efficiency of individual products and appropriately controlling systems that combine multiple products.

The Mitsubishi Electric Group has been contributing to energy savings by incorporating the use of power semiconductors, which is the key to achieving a higher level of energy-saving performance in individual products. We have developed power semiconductors that are produced using silicon carbide (SiC), which results in less

power loss compared to traditional semiconductors that use silicon, and we have been expanding the application of these advanced devices in recent years.

Additionally, leveraging our strengths in the development and manufacture of many products, such as in the area of social infrastructure, we are combining the use of our power devices for various applications. For example, we offer solutions for overall systems that deliver high energy-saving performance, such as net zero-energy buildings (ZEBs^{*3}) and net zero-energy houses (ZEHS^{*4}).

We will continue to simultaneously pursue the realization of a "sustainable society" and "safe, secure, and comfortable lifestyles," and prove ourselves worthy of stakeholders' trust by delivering safety, security, and comfort to customers while using less energy. We believe that this will lead to achieving our management targets of ¥5 trillion or more in consolidated sales and operating margins of 8% or more by FY2021.

Promoting resource savings and recycling, and reducing environmental load at business bases around the world

The Mitsubishi Electric Group has been working to reduce environmental load associated with its business activities at all business sites around the world. From the perspective of the entire value chain, as well as production and sales activities, we are carrying out initiatives that increase the effective use of resources while pressing forward with resource savings and recycling.

There are countries and regions in the world where environmental laws and regulations are still inadequate. Instead of using the absence of regulations as an excuse for the lack of environmental initiatives, we are working to reduce environmental load at all business sites, taking the circumstances of each country into consideration.

We will continue offering energy-saving products and systems, and reducing environmental load at business sites from the long-term perspective so that future generations will be able to inherit an abundant global environment.

June 30, 2016

M. Sakuyama

Masaki Sakuyama, President & CEO
Mitsubishi Electric Corporation

*1 SDGs: Sustainable Development Goals, as defined by the United Nations in September 2015.

*2 Contribution to reducing CO₂ emitted: Amount of CO₂ deemed to be reduced as a result of switching from older products (those equivalent to products sold in fiscal 2001) to new, more energy-efficient products. Estimated, using in-house calculation standards.

*3 ZEB (net Zero Energy Building): A building where the net consumption of fossil fuel energy is zero or roughly zero, offset by the use of renewable energy resources or other means.

*4 ZEH (net Zero Energy House): A house where the net consumption of fossil fuel energy is zero or roughly zero, offset by the use of renewable energy resources or other means.

Medium- and Long-term Perspectives of Environmental Management

Long-term Perspective

Contributing to Sustainable Development Goals

Today, climate change has become a major issue for sustaining the global environment. In September 2015, Sustainable Development Goals (SDGs), which include responding to climate change, were adopted. The Mitsubishi Electric Group is contributing to the realization of a low-carbon society by providing total energy-saving solutions that utilize the strengths offered by the diverse businesses and products of member companies.

*SDGs denote objectives declared in the action plan, "Transforming our World - The 2030 Agenda for Sustainable Development," which was adopted at the United Nation's Sustainable Development Summit in September 2015. There are 17 goals in three areas—economy, society, and environment—to be achieved by 2030.

Sustainable Development Goals (SDGs) Deeply Related to Mitsubishi Electric Group Environmental Activities



Securing Sustainable Energy and Expanding Its Use

We're developing technologies and systems that contribute to energy savings, power generation, and the realization of smart societies, while promoting the use of those technologies and products in society.



Climate Change and Mitigating Its Effects

We're gaining a full understanding of greenhouse gas emissions, including CO₂, throughout the entire value chain and setting targets to reduce them.



Securing a Sustainable Production and Consumption Format

In addition to reducing the volume of resources used in manufacturing, and collecting and recycling used products, we're reducing final waste disposal and promoting green procurement.



Protecting and Restoring Ecosystems, and Preventing the Loss of Biodiversity

We're developing and providing observation satellites that report the status of oceans and forests, and promoting coexistence with the surrounding environments at each business site.



Various examples can be seen on our website.

www.MitsubishiElectric.com/company/environment/report/issues/sdgs/

Mid-term Perspective

Aiming to Achieve Environmental Vision 2021

The environmental goals to be achieved by the Mitsubishi Electric Group before the end of fiscal 2021 are defined in Environmental Vision 2021. This policy is based on three pillars: "creating a low-carbon society," "creating a recycling-based society," and "respecting biodiversity and fostering environmental awareness." To effectively realize those goals, we prepare an environmental plan every three years and proactively implement it in order to achieve the vision.

For environmental management, each organization expanding globally has an environmental management system (EMS) that operates in unison with the entire Group.



Each business group's initiatives towards realizing a low-carbon society

The Mitsubishi Electric Group responds to each customer's needs utilizing the strengths of its various businesses while simultaneously aiming to ensure "safe, secure, and comfortable lifestyles for all" and a "sustainable global environment."

Public Utility Systems Group

Aiming to Construct Next-Generation Social Infrastructure Utilizing an Extensive Range of Technologies and Continuous R&D

Takahiro Kikuchi
Executive Officer
In Charge of Public Utility Systems



Products manufactured by the Mitsubishi Electric's Public Utility Systems Group play an important role in the long-term support of social infrastructure in areas such as water treatment, roads, and railways. Therefore, our goal in the design and manufacturing stages is to ensure high quality and superior performance. We also focus on simultaneously saving resources and electric power by reducing product size and improving performance and efficiency as a means of contributing to the creation of a low-carbon society.

In the railway sector of the Group's business, an inverter equipped with a large-capacity, full-SiC power module for rolling stock won the Ministry of Economy, Trade and Industry Minister's Award, the top prize of the Excellence in Energy Conservation Equipment Awards in fiscal 2016. We will continue to work to realize greater energy savings by expanding the application of full-SiC modules.

Profile

Mitsubishi Electric's Public Utility Systems Group provides water treatment plant systems, expressway information systems, railway information systems, and electronic products for rolling stock to clients responsible for the construction of social infrastructure, including the public sector and road/railway-related companies.



Inverter for rolling stock



Air-conditioning system for rolling stock

Main products and technologies

- Rolling stock total energy and environment solutions
- Air-conditioning systems for rolling stock ■ Automatic platform gates
- Ozone generators ■ Water treatment systems ■ Diamond Vision

Energy & Industrial Systems Group

Contributing to the Realization of a Sustainable Society through Development of High-Efficiency Equipment and by Strengthening Smart Grid-/Community-Related Business

Yasuyuki Ito
Executive Officer
In Charge of Energy & Industrial Systems



Mitsubishi Electric's Energy & Industrial Systems Group provides a wide range of systems and products that play a vital role in power generation, power conversion, power distribution, and power retailing. On the product side, this includes generators, switches, transformers, switchgear, and vacuum circuit breakers, while systems include plant monitoring, system stabilization, grid protection & control systems, and DC technologies. With the realization of a low-carbon society now an important theme globally, we are more committed than ever to making contributions to the realization of society where power companies and end users alike can live safely, securely, and comfortably, through the development of high-efficiency equipment and by stepping up our involvement in businesses related to smart grids and smart communities, as well as continuing our activities to reduce environmental burden.

Profile

Mitsubishi Electric's Energy & Industrial Systems Group provides comprehensive products and systems that support power systems from power generation to transformation, transmission, and distribution.



High-efficiency turbine generator



High-efficiency transformer

Main products and technologies

- Turbine generators ■ Switchgear ■ Transformers
- Power electronics systems for electric power ■ Smart meter systems
- Battery storage systems ■ Plant monitoring control systems

Building Systems Group

Proposing Building Solutions That Lead to Energy Savings and Reduce Environmental Impact

Nobuyuki Abe
Executive Officer
In Charge of Building Systems



Mitsubishi Electric's Building Systems Group is promoting business operations with priority given to users' safety and security throughout the products' lifecycle while working on environmental initiatives in the following areas: (1) developing products and technologies with excellent energy- and resources-saving performance, (2) manufacturing activities that give due consideration to reducing environmental impact, (3) renewing existing facilities to energy-saving models with the flexibility to use existing equipment, and (4) enhancing the building solutions (i.e., energy management in accordance with the status of building usage) offered. Our aim is to improve energy conservation, comfort, convenience, and efficiency for building owners and users alike. We are contributing to the realization of a society with more vitality and comfort.

Profile

The Mitsubishi Electric Building Systems Group provides not only elevators and escalators, but also building management systems such as access control, building management, and surveillance cameras, to public and private building owners in over 90 countries.



Standardized elevator for the Japanese market



Building management system

Main products and technologies

- Elevators ■ Escalators ■ Room access control systems
- Building management systems ■ Surveillance cameras

Electronic Products and Systems Group

Initiatives to develop products that solve global environmental problems and lead to next-generation energy development

Masamitsu Okamura
Executive Officer
In Charge of Electronic Products and Systems



The products of the Electronic Systems Group play an important role in solving global-scale environmental problems that are common to all human beings, and they lead to next-generation energy development. For example, the Advanced Land Observing Satellite-2 "DAICHI-2" (ALOS-2) and the Himawari-8 and Himawari-9 meteorological satellites, which we were responsible for manufacturing, lead to the improvement of observation capabilities—including ascertaining the status of disasters, monitoring the conditions of oceans and forests, and observing other weather phenomena—and thereby contribute to the safeguarding of people's lives and to the solution of global-scale environmental problems.

In addition, Doppler Lidar—which remotely measures the moving velocity of dust and micro-particles in the atmosphere—is a product expected to contribute to the improvement of generation efficiency and extend the service life of wind turbines in the wind power industry.

Profile

The Mitsubishi Electric's Electric Systems Group manufactures artificial satellites, ground control systems required for satellite operations, and large telescopes. In this way, we are safeguarding people's lives and contributing to space research and cutting-edge technologies.



Advanced Land Observing Satellite-2 "DAICHI-2" (ALOS-2)



Doppler Lidar for wind turbines

Main products and technologies

- Communications, broadcast, and observation satellites
- Satellite operation systems ■ Large telescopes ■ Doppler Lidars
- Contact image sensors ■ Millimeter-wave radar modules
- Mobile mapping systems

Communication Systems Group

Contributing to the Development of Communications and Network Camera Markets, and Reducing Environmental Impact through Value-Added Systems

Takashi Nishimura
Executive Officer
In Charge of Communication Systems



Telecommunication networks that incorporate ICT* and security systems that utilize video surveillance technologies are key elements of the social infrastructure that make progress in our daily lives and industry possible. As these devices become more functional and are used by more and more people, electricity consumption will also rapidly increase.

As a result, the Communication Systems Group is striving to develop globally expanding communications markets and a network camera market including security systems, as well as reduce environmental impact by focusing on three core themes: (1) energy-efficient products, (2) achieving energy savings in services provided using our products, and (3) environmental contributions during installation work. This should be achieved by further refining our optical and wireless information communication technologies and video surveillance technologies, while offering value-added systems. This will enable us to help develop communication and network camera markets around the world, including security systems, while mitigating environmental impact.

*ICT: Information and Communication Technology

Profile

Mitsubishi Electric's Communication Systems Group is making contributions to the advancement of today's information society through products and services supplied to communications carriers, financial services firms, retail companies, and governments—both in Japan and abroad—by providing products and services, including communications infrastructure equipment and network camera systems.



Customer network terminating unit



Gateway equipment

Main products and technologies

- Customer network terminating units for optical access systems
- Gateway equipment

Living Environment & Digital Media Equipment Group

Developing Eco-friendly Products and Reducing Our Own Environmental Impact

Takeshi Sugiyama
Senior Vice President
In Charge of Living Environment & Digital Media Equipment



Based on the concept of “Smart Quality,” the Living Environment & Digital Media Equipment Group is supplying a broad range of eco-friendly products and services for the home, office, and industry. These include energy-saving products that reduce CO₂ from usage as well as photovoltaic systems that generate renewable energy and do not produce CO₂ during power generation.

At our manufacturing bases, we are supplying energy-saving products and services that are advantageous to business and promoting activities to reduce CO₂ by introducing the Living Environment & Digital Media Equipment Group's products and improvements in productivity.

Profile

The Living Environment & Digital Media Equipment Group is globally expanding its businesses in seven major areas: air conditioning and ventilation, hot-water supply, photovoltaic power generation, lighting, cooking appliances, home appliances, and visual systems, providing products and services that contribute to the environment across a broad scope, including homes, offices, and factories.



LED lighting



Kirigamine ADVANCE FZ Series room air conditioner

Main products and technologies

- Room air conditioners ■ Retail store, office, and building air conditioners
- LED lighting ■ Photovoltaic systems ■ Heat-pump hot-water supply systems

Factory Automation Systems Group

Delivering Devices, Equipment, and Solutions that Help Reduce Energy Usage during Production to Customers around the World

Kei Uruma
Executive Officer
In Charge of Factory Automation Systems



Mitsubishi Electric's Factory Automation Systems Group proposes the "e-F@ctory" integrated FA solution. Various data collected in real time from a production site go through preliminary processing according to usage, and then data to be used onsite is fed back immediately to the production site, while the data required for higher levels of information utilization is supplied to IT systems. In this way, we provide an overall environment that is optimized to the fullest for Monozukuri (manufacturing). We are also contributing to energy savings, one of our goals, by continuing to promote improvements using such a manufacturing environment.

Profile

The Mitsubishi Electric Factory Automation Systems Group provides a diverse range of products and solutions in the field of industrial mechatronics, contributing to energy savings in production facilities, where the bulk of energy is consumed.



Programmable controllers



No-fuse switch for HVDC system

Main products and technologies

- Integrated FA solutions ■ Programmable controllers
- Fiber laser processing machines ■ Industrial robots ■ Energy-saving motors
- Energy measuring units ■ No-fuse switches for HVDC systems

Automotive Equipment Group

Contributing to the Realization of a Low-carbon Society through the Development of Low Fuel Consumption Technology for Vehicles

Isao Iguchi
Senior Vice President
In Charge of Automotive Equipment



Aiming to be an advanced global environmental entity, the Mitsubishi Electric Group is contributing to the realization of a sustainable global environment.

The Automotive Equipment Group is proactively developing business at the global level, engaging in initiatives to reduce CO₂ emissions by both installing its products in vehicles to realize better fuel efficiency and reducing energy consumption in manufacturing processes.

Profile

The Automotive Equipment Group provides powertrain products, body control products, and car multimedia devices globally. As a full-support supplier, we work together with our customers to develop cutting-edge technologies and endeavor to provide a wide range of services, from production, sales, and supply to spare parts and rebuilds.



GXi alternator



High-end audio and car navigation system

Main products and technologies

- Alternators ■ Starters ■ Electric power steering
- Engine control units ■ Car navigation systems

Semiconductor & Device Group

Contributing to the Realization of a Low-carbon Society by Providing Energy-efficient Products

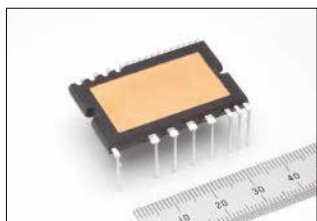
Toru Sanada
Executive Officer
In Charge of Semiconductor & Device



In order to achieve a sustainable global environment, it is imperative to minimize power loss when generating and using energy. Power modules are key devices playing a significant role in reducing power loss and are being incorporated into home electric appliances, rolling stock, and industrial equipment. Products offered by Mitsubishi Electric, the world's No.1 power module manufacturer, are being used all over the world and are contributing to a reduction in energy consumption globally. In addition, Mitsubishi Electric's Semiconductor & Device Group has developed state-of-the-art power modules using silicon carbide (SiC), which contributes to a sustainable reduction of the energy consumed when compared to conventional silicon (Si) products. By enhancing the lineup of these power modules and expanding the market for them and our related businesses, we are contributing to reducing carbon emissions further.

Profile

Mitsubishi Electric's Semiconductor & Device Group delivers key devices to a sustainable, low-carbon society, including power devices that help improve the efficiency of home electrical appliances and industrial equipment, high-frequency devices used in everything from mobile phones to satellite communications, optical devices supporting high-speed optical communications, and TFT LCD modules that improve information interfaces.



Ultra-compact full-SiC DIPIPM



High temperature operation optical transmission module

Main products and technologies

- Power devices ■ High-frequency devices
- Optical devices ■ TFT LCD modules

Information Systems & Network Service Group

Contributing to the Realization of a Low-Carbon Society through the Promotion of Various Green IT Services

Shinya Fushimi
Executive Officer
In Charge of Information Systems & Network Service



Under the creed "Diamond Solutions – Comfort, Peace of Mind, Development," the Information Systems & Network Service Group is committed to enhancing customer satisfaction and helping achieve a sustainable society through its solutions tailored to the management strategies and challenges of its customers, as well as solutions that resolve social issues.

Profile

We are a one-stop provider of optimal solutions and IT services for a broad range of areas including social, public, and corporate systems. We cover the entire lifecycle of information systems and network systems, from the planning and concept stage to operation and maintenance.



Data center

Main products and technologies

- Cloud services ■ Security solutions ■ ERP solutions
- Document management solutions ■ CTI

Expanding Resource Recycling Businesses by Strengthening Partnerships through Shared Case Examples and Technical Information

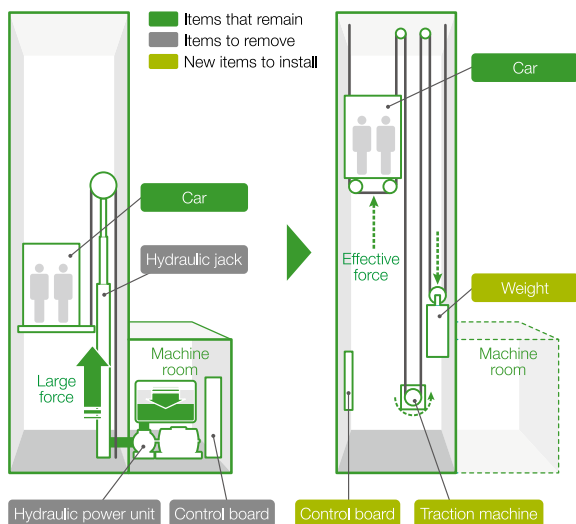
With the world population on the rise and the living standards of emerging nations improving, it is imperative to use resources more efficiently in order to achieve sustainable growth. This issue is one of the flagship initiatives of “EU 2020,” a long-term strategy announced by the European Commission in June 2010, and in the Leaders’ Declaration adopted at the G7 Summit in Elmau during June 2015. This highlights the fact that global efforts are required.

In order to reduce the input of new resources, the Mitsubishi Electric Group has commercialized “resource recycling

businesses” in which we recover resources from used Mitsubishi Electric products and recycle them, in addition to refurbishing existing products, salvaging components that are still usable and using them as they are. In the 8th Environmental Plan (fiscal 2016-2018), strengthening partnerships with resource recycling businesses is listed as one of our objectives, and we intend to internally share case examples and technical information that fall under multiple business categories, while conveying the information outside of the company as well.

“EleFine” Hydraulic Elevator Renewal

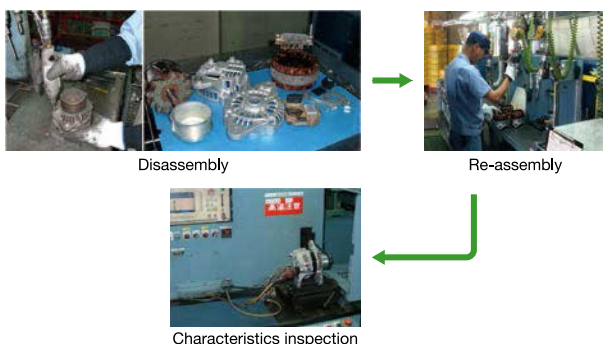
In 2011, we began an elevator renewal service that renovates old elevators into ones with rope-based systems by replacing the controls and drives of existing hydraulic elevators. This service realizes a reduction in resource input of approximately 66% compared to that of replacement with a brand-new rope-based elevator.*



*Comparison with Mitsubishi Electric’s machine-room-less elevator (AXIEZ) based on the following specifications: passenger capacity of 9 people, 2-panel center-opening doors, and 6-floor operating system.

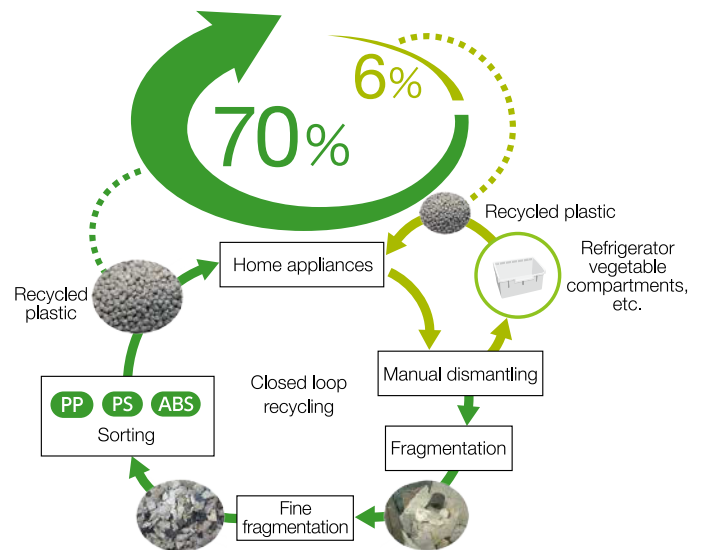
“Rebuild Business”

We have a “rebuild business” for alternators that supply electric power to vehicles and the starters used to start the engine. In this business, used alternators and starters are collected from automakers and rebuilt to be as good as new. By replacing only broken components and reconditioning them for reuse, this business is helping to save resources.



Home Appliances Recycling Business (Self-circulation Recycling of Plastics)

The Mitsubishi Electric Group is engaged in its own “self-circulation recycling” initiative, in which plastics are recovered from used home appliances and then reused in new home appliances. By establishing a technology to sort plastics by type, we have improved the recycling rate of plastics from a mere 6% to as much as 70%.



Other Businesses

In addition to these businesses, our recycling-oriented businesses include renewing electrical-discharge machines, which are often purchased used. We also offer coil rewinding services, which help to maintain power generator efficiency by preventing deterioration. While reducing resource input through product longevity, we are furthermore working to expand our resource recycling businesses, taking advantage of our ability to meet the demand for shorter delivery times and lower costs.

Performance Data

Period: April 1, 2015 - March 31, 2016

Scope of Data Compilation: Mitsubishi Electric Corporation, 112 affiliates in Japan, and 79 overseas affiliates (total of 192 companies)

* 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. However, under the policy of expanding global environmental management, we have broadened the scope of the report to cover Mitsubishi Electric, its consolidated subsidiaries, and its affiliated companies.

* Data posted to our website on June 30, 2016 was calculated based on aggregate estimates for the semiconductor business, which was affected by the Kumamoto earthquakes. Recalculation was carried out later on, and based on actual results, the data has been revised and is included in this report. The data on the website was updated on August 31, 2016.

Material Balance

IN

OUT



Factory

Materials for Manufacturing

	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Materials*1	1,130,000 tons	270,000 tons	1,150,000 tons

Manufacturing

Electricity	1,100 million kWh	310 million kWh	370 million kWh
Natural gas	25,170,000 m ³	2,330,000 m ³	11,000,000 m ³
LPG	1,125 tons	2,118 tons	672 tons
Oil (crude oil equivalent)	2,101 kl	2,604 kl	627 kl
Water	7,540,000 m ³	1,420,000 m ³	1,820,000 m ³
Public water	1,270,000 m ³	460,000 m ³	610,000 m ³
Industrial water	2,310,000 m ³	96,000 m ³	1,060,000 m ³
Groundwater	3,890,000 m ³	870,000 m ³	20,000 m ³
Others	0,0 m ³	0,0 m ³	4,000 m ³
Reuse of water	3,260,000 m ³	1,000,000 m ³	140,000 m ³
Controlled chemical substances (amounts handled)	4,962 tons	1,471 tons	5,142 tons
Ozone depleting substances (amounts handled)	1,4 tons	0.2 tons	802 tons
Greenhouse gases (amounts handled)	2,901 tons	44 tons	3,671 tons
Volatile organic compounds (amounts handled)	1,294 tons	1,288 tons	245 tons

*1 Materials: Total value for shipping weight of products, plus amount of product packaging materials used, plus total amount of waste.

Emissions (from Manufacturing)

	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Water	6,460,000 m ³	1,220,000 m ³	1,330,000 m ³
Controlled chemical substances	5.4 tons	0.0 tons	10 tons
BOD (biological oxygen demand)	46 tons	4.7 tons	14 tons
COD (chemical oxygen demand)	11 tons	4.5 tons	34 tons
Nitrogen	18 tons	15 tons	6.4 tons
Phosphorus	2.0 tons	0.2 tons	0.2 tons
Suspended solids	35 tons	7.0 tons	16 tons
n-hexane extracts (mineral)	0.7 tons	0.2 tons	6.5 tons
n-hexane extracts (active)	1.9 tons	0.2 tons	0.2 tons
Total emissions of zinc	0.1 tons	0.0 tons	0.1 tons
Carbon dioxide (CO ₂)	580,000 tons-CO ₂	170,000 tons-CO ₂	300,000 tons-CO ₂
Controlled chemical substances (excluding amounts contained in other waste)	329 tons	164 tons	282 tons
Ozone depleting substances	0.0 ODP tons	0.0 ODP tons	0.7 ODP tons
Greenhouse gases	62,000 tons-CO ₂	38,000 tons-CO ₂	140,000 tons-CO ₂
Volatile organic compounds	456 tons	257 tons	26 tons
Sulfur oxide (SO _x)	1.2 tons	0.5 tons	0.0 tons
Nitrogen oxide (NO _x)	15 tons	2.7 tons	4.4 tons
Fly ash	0.7 tons	0.1 tons	6.0 tons

Waste

Total waste emissions	84,606 tons	62,301 tons	65,174 tons
Amount recycled	82,592 tons	53,008 tons	63,691 tons
Waste treatment subcontracted out	20,243 tons	50,939 tons	64,129 tons
Final disposal	1.4 tons	30 tons	438 tons
In-house weight reduction	876 tons	0.0 tons	52 tons

Products

Weight of all products sold*2	1,000,000 tons	210,000 tons	950,000 tons
Weight of packaging materials	51,000 tons	6,000 tons	140,000 tons

*2 Products sold: Shipping weight of products.



Logistics

Sales and Logistics*3

	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Fuel for trucks (gasoline)	10,599 kl	1,680 kl	60 kl
Fuel for trucks (diesel)	27,155 kl	4,351 kl	111,227 kl
Fuel for rail (electricity)	1,593 MWh	434 MWh	0,0 MWh
Fuel for marine transport (bunker oil)	325 kl	0,0 kl	77,519 kl
Fuel for air transport (jet fuel)	717 kl	110 kl	33,845 kl

*3 Sales and logistics: Figures for overseas affiliated companies include transportation between countries.

Emissions*4

	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Carbon dioxide (CO ₂)	98,000 tons-CO ₂	16,000 tons-CO ₂	340,000 tons-CO ₂

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



Products (Customer)

Energy Consumption

	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Energy consumed during product use*5	39,800 million kWh	4,100 million kWh	24,300 million kWh

*5 Energy consumed during product use: Total energy consumed (estimated value) when using 89 finished products targeted for CO₂ reduction. The length of use (operating time) is set for each product according to statutory useful life, designed service life, statistical values, etc.

Emissions

	Mitsubishi Electric	Affiliates (Japan)	Affiliates (Overseas)
Amount of CO ₂ emitted during product use (converted value)*6	20,250,000 tons-CO ₂	2,090,000 tons-CO ₂	12,200,000 tons-CO ₂
Amount of SF ₆ emitted during product use (corresponding value)*7	100,000 tons-CO ₂	—	—

*6 Amount of CO₂ emitted during product use (converted value): Sum of CO₂ emitted when using 89 finished products targeted for CO₂ reduction.

The amount of CO₂ emitted is equal to the energy consumed multiplied by the CO₂ emissions coefficient, for which the value shown in CO₂ Emissions from Fuel Combustion Highlights (2013 Edition) is used.

*7 Amount of SF₆ emitted during product use (corresponding value): Sum of SF₆ gas naturally leaked during the operation of products (6) that use SF₆ gas for insulation.

Leakage rate used is the value from JEAC5001-2000. Global warming potential value used is from the 2nd Revised Guidelines of the IPCC.



Recycling

End-of-life Products*8

	Mitsubishi Electric
Air conditioners	13,082 tons
Televisions	3,779 tons
Refrigerators	20,150 tons
Washing machines / Clothes dryers	6,773 tons
Personal computers	55 tons

*8 End-of-Life Products: Weight of products recovered from four types of appliances subject to Japan's Home Appliance Recycling Law, plus personal computers.

Resources Recovered*9

	Mitsubishi Electric
Metals	25,761 tons
Glass	1,190 tons
CFCs	269 tons
Others	8,420 tons

*9 Resources recovered: Weight of resources recovered from four types of appliances subject to Japan's Home Appliance Recycling Law, plus personal computers.

Reducing Greenhouse Gas Emissions

The Mitsubishi Electric Group refers to regulations such as the Greenhouse Gas (GHG) Protocol—international standards relating to the calculation of greenhouse gas emissions—and the Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain, published by Japan's Ministry of the Environment, to determine how to assess and calculate emissions from business activities (Scope 1 and 2) and indirect emissions from outside the range of its business activities (Scope 3).

Owing to the fact that over 80% of CO₂ emissions in the value chain are associated with the use of sold products, the Mitsubishi Electric Group focuses on developing highly energy-efficient products that are linked to reducing CO₂ emissions during product usage. At the same time, we strive to continuously reduce CO₂ emissions from production, as well as the emission of other greenhouse gases with greater global warming potential than CO₂.

Fiscal 2016 Greenhouse Gas Emissions

Accounting (10,000 tons-CO₂) Total emission ratio

Scope	Category	Accounting	Accounting summary*1
Scope 1 All direct GHG emissions		37	
		0.9%	Direct emissions from using fuel and industrial processes at our company*2
Scope 2 Indirect GHG emissions from consumption of purchased electricity, heat, or steam		93	
		2.1%	Indirect emissions associated with using electricity and heat purchased by our company*3
Scope 3 All indirect emissions not covered in Scope	Scope 1 Purchased goods and services	534 12.5%	Emissions associated with activities until material, etc. is manufactured concerning raw ingredients, parts, purchased products, and sales*4
	Scope 2 Capital goods	61 1.4%	Emissions produced from constructing/manufacturing own capital goods
	Scope 3 Fuel- and energy-related activities	8 0.2%	Emissions associated with procurement of fuels from other parties and fuel necessary for generation of electricity, heat, etc.
	Scope 4 Upstream transportation and distribution	46 1.1%	Emissions associated with logistic processes for material, etc. to be delivered to our company concerning raw ingredients, parts, purchased products, and sales*5
	Scope 5 Waste generated in operations	0.07 0.0%	Emissions associated with transporting and processing waste produced by our company*6
	Scope 6 Business travel	4 0.1%	Emissions associated with employee business travel*7
	Scope 7 Employee commuting	3 0.1%	Emissions associated with employees commuting to and from their respective workplaces
	Scope 8 Upstream leased assets	- -	Emissions associated with operation of leased assets hired by our company (excluded if calculated in Scopes 1 and 2)
	Scope 9 Downstream transportation and distribution	0.7 0.0%	Emissions associated with the transportation, storage, cargo handling, and retail of products
	Scope 10 Processing of sold products	0.2 0.0%	Emissions associated with the processing of interim products by business operators
	Scope 11 Use of sold products	3,464 81.3%	Emissions associated with the use of products by users (consumers / business operators)
	Scope 12 End-of-life treatment of sold products	3 0.1%	Emissions associated with the transportation and processing of products for disposal by users (consumers / business operators)*4
	Scope 13 Downstream leased assets	0.013 0.0%	Emissions associated with operation of leased assets
	Scope 14 Franchises	(n/a)	Emissions at companies operating as franchises
	Scope 15 Investments	10 0.2%	Emissions related to investments
Total		4,264 100%	

*1 Excerpt from the fundamental guidelines published by the Ministry of Environment and Ministry of Economy, Trade and Industry *2 CO₂, SF₆, PFC, and HFC emissions from use of gas, heavy oil, etc., and product manufacturing *3 CO₂ emissions from use of electricity, etc. *4 Excludes some regions *5 CO₂ emissions from product distribution/circulation (sales distribution) Subject to accounting: 55 companies (production sites) *6 CO₂ emissions from transportation of waste (waste distribution) Subject to accounting: Mitsubishi Electric *7 Achievements in Japan

Reducing CO₂ from Product Usage

Targets of 8th Environmental Plan (FY2016–2018)

- Reducing CO₂ Emissions from Product Usage by Improving Product Performance: Average reduction rate in 107 product groups: 35% (compared to FY2001)
- Increasing Contribution to Reducing CO₂ Emissions from Product Usage: Contribute to reducing emissions by 92 million tons for than 127 product groups

Among approximately 260 Mitsubishi Electric Group products, we have designated applicable products according to the following criteria: (1) the product can be designed and developed under our initiatives, and (2) the product has been specified as having a major environmental influence because it generates CO₂ during use, based on the results of a product environmental aspect analysis we conduct. For these products, we are reducing CO₂ during use and expanding our contributions to reducing CO₂ from product usage.

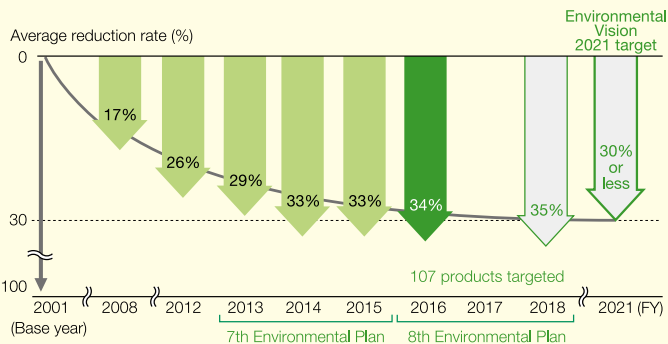
With regard to the reduction of CO₂ during use, we believe that reducing the power consumed by the customer when using a product will lead to the reduction of CO₂ emissions during the generation of electricity. Based on this aspect, we are striving to improve the energy efficiency of our products. The average reduction rate was 34% in fiscal 2016.

In order to expand our contribution to reducing CO₂ from product usage, we are visualizing the amount of CO₂ considered to have been reduced through the replacement of old products with new highly energy-efficient models using the following formula:

$$\text{Contribution to reducing CO}_2 = \text{Effect of reducing CO}_2 \text{ from product usage per unit} \times \text{Number of units sold during the fiscal year}$$

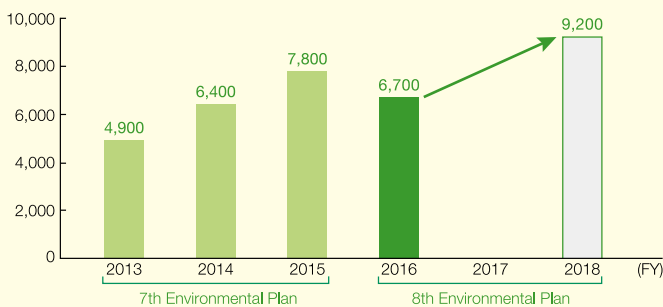
Contribution to reduction was 67 million tons for 124 products in fiscal 2016.

Plan for Reducing CO₂ from Product Usage through Improving Energy Efficiency



Contribution to reducing CO₂ from product usage

Contribution to reduction (10,000t-CO₂)



Reducing CO₂ from Production

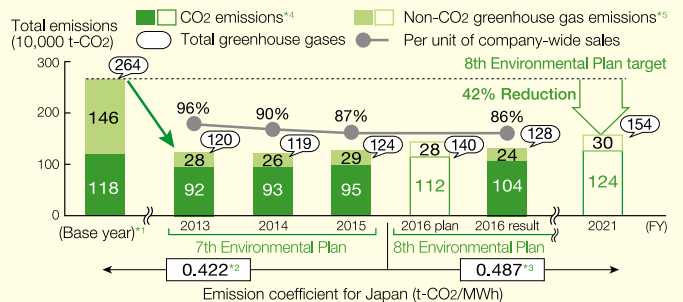
Targets of 8th Environmental Plan (FY2016–2018)

- Annual emission of greenhouse gases (CO₂ conversion): 1.37 million tons

Under the 8th Environmental Plan (fiscal 2016–2018), we are working to reduce emissions by combining CO₂ originating from energy and non-CO₂ greenhouse gases (SF₆, HFCs, and PFCs).

In fiscal 2016, CO₂ emissions (combined with CO₂ equivalents of SF₆, HFC, and PFC emissions) amounted to 1.28 million tons, which allowed us to reach our fiscal 2016 goal of 1.4 million tons or less. This was due mainly to (1) aging air conditioners and transformers being replaced with high-efficiency equipment in Japan, (2) progress in the shift to LED lighting in Japan, (3) energy savings thanks to the development of original production technologies overseas, and (4) improved recovery capacity for SF₆ gas overseas.

Plan for Reducing CO₂ from Production across the Mitsubishi Electric Group



*1 Base year (CO₂/non-CO₂ greenhouse gases): Mitsubishi Electric Corporation (fiscal 1991/2001), affiliates in Japan (fiscal 2001/2001), overseas affiliates (fiscal 2006/2006)
 *2 Figure published by the Japan Electrical Manufacturers' Association (JEMA) in 1997
 *3 Figure published by the Federation of Electric Power Companies of Japan at the time of drawing up the 8th Environmental Plan (in 2013, when two nuclear power stations were operational)
 *4 Figure published by JEMA in 2006 has been referred to for calculating the overseas emission coefficient.
 *5 Figure published in IPCC's Second Assessment Report was referred to for calculating the Global Warming Potential (GWP) for non-CO₂ greenhouse gases.

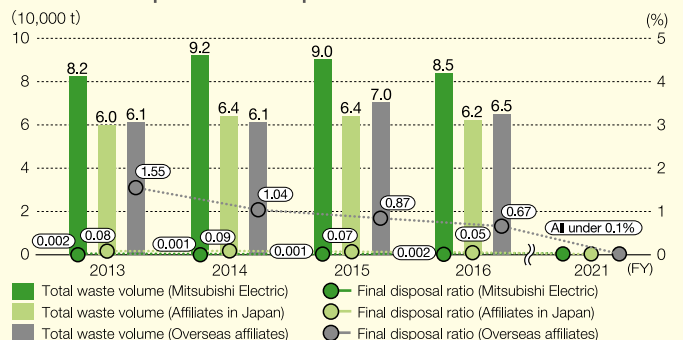
Effective Utilization of Resources

Targets of 8th Environmental Plan (FY2016–2018)

- Mitsubishi Electric: Final disposal rate of 0.1% or less
- Affiliates (Japan): Final disposal rate of 0.1% or less
- Affiliates (Overseas): Final disposal rate of 0.5% or less

We are striving to reduce final disposal rates via the following three measures: (1) turning waste into valuable resources through thorough waste analysis and separation, (2) a higher level of conversion to materials with commercial value through finding new waste disposal contractors and sharing information with them, and (3) more efficient waste (recycling) logistics. In fiscal 2016, the final disposal rates were 0.002% and 0.05% for Mitsubishi Electric and affiliates in Japan, respectively, with both achieving the targets of under 0.1% set in the 8th Environmental Plan. For overseas affiliates, the final disposal rate came to 0.67%, reaching the fiscal 2016 target of under 0.8%.

Total Waste Output and Final Disposal Ratio



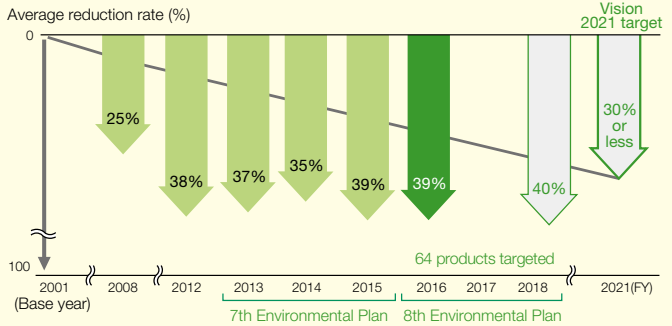
Reducing Resource Inputs

Targets of 8th Environmental Plan (FY2016–2018)

- Reducing Use of Resources: Average reduction rate in 64 product groups: 40% (compared to FY2001)

The Mitsubishi Electric Group is proceeding with reductions in resource input, by reducing the sizes and weights of the products set as targets. The average reduction rate was 39% in fiscal 2016, maintained at the fiscal 2015 level. This is due to growth in product sales, which resulted in further reductions in resource input, among the groups of heavy electric machinery systems, IT systems, and home electric appliances.

Plan for Reducing Use of Resources



Managing Chemical Substances

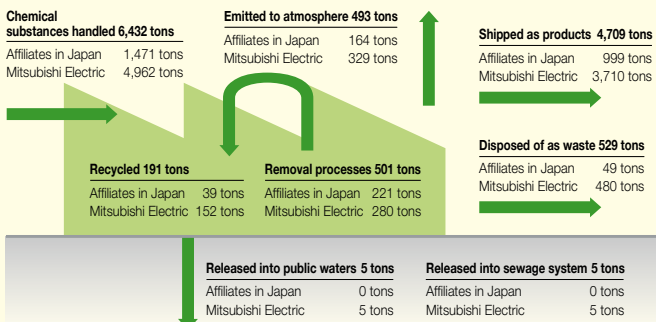
Mitsubishi Electric and affiliates in Japan utilize a Chemical Substance Management System that incorporates procurement data for materials and parts to comprehensively manage 3,163 substances. The list includes refrigerant fluorocarbons used in air conditioners and refrigerators, volatile organic compounds (VOCs), the ten RoHS substances, and the 462 substances designated under revisions to a chemical substances management law*1 (PRTR*2 law) in Japan.

In fiscal 2016, Mitsubishi Electric used 4,962 tons of 145 different chemical substances and affiliates in Japan used 1,471 tons of 41 different substances.

*1 Act on Confirmation, etc., of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof.

*2 PRTR: Pollutant Release and Transfer Register.

Material Balance of Chemical Substances Subject to Regulation



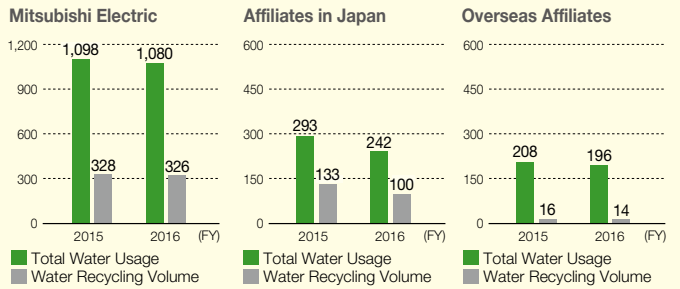
*Managed chemicals are not released into the soil or buried in landfills.

Effective Water Usage

The Mitsubishi Electric Group views public water, industrial water, groundwater, and other sources of water as a valuable resource. We work to assess our water usage at all sites and to conserve and make efficient use of this resource.

In fiscal 2016, water use was reduced at all Mitsubishi Electric locations, as well as affiliates in Japan and overseas, compared to the previous fiscal year. Meanwhile, recycled water use also decreased at all Mitsubishi Electric locations and affiliates in Japan and overseas, compared to the previous fiscal year.

Total Water Usage and Water Recycling Volume



Implementation of Mitsubishi Electric Outdoor Classrooms and Satoyama Woodland Preservation Project

Targets of 8th Environmental Plan (FY2016–2018)

- Total participants: 30,000 people

In our effort to foster employees' environmental awareness, we continue to hold sessions of "Mitsubishi Electric Outdoor Classrooms" and the "Satoyama Woodland Preservation Project." The Mitsubishi Electric Outdoor Classrooms are an initiative in which natural areas such as forests, riversides, parks, and coasts are regarded as "classrooms," and participants and employees who act as leaders work together to improve the natural environment. The Satoyama Woodland Preservation Project is a social contribution activity built on employees' spirit of volunteerism, aimed at protecting natural habitats— including parks, forests, and rivers surrounding our business sites. Our target is a total of 30,000 participants or more by the end of fiscal 2018 (10,000 people from fiscal 2016 to 2018). A total of 4,700 people took part in fiscal 2016.



Mitsubishi Electric Outdoor Classrooms



Satoyama Woodland Preservation Project

Environmental Accounting

Period: April 1, 2015 - March 31, 2016

Scope of Data Compilation: Mitsubishi Electric Corporation, 112 affiliates in Japan, and 79 overseas affiliates (total of 192 companies)

Environmental Conservation Costs

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

Item	Capital Investment	Costs	Year-on-Year Change	Main Costs
Business area activities	52.0	100.1	(7.8)	
	34.9	70.0	(0.0)	
Pollution prevention	5.3	13.8	(13.4)	Emission purification equipment overseas
	3.1	10.5	(8.2)	Facility management, wastewater treatment, pollution measurement, soil investigation/treatment
Global environmental conservation	45.7	57.3	9.8	Updating of utilities, such as air conditioners, lighting, and compressors to high-efficiency models, introduction of residual heat recovery systems, updating of production facilities
	31.4	42.3	9.1	
Resource recycling	1.0	28.9	(4.3)	Outsourcing of industrial waste disposal, waste management, PCB-related treatment
	0.3	17.2	(0.8)	
Upstream and downstream from production	0.0	2.4	(3.2)	Packaging improvement activities, contained material investigation/analysis
	0.0	2.2	(2.0)	
Management activities	0.1	15.1	(16.1)	Environment Bureau, beautification/afforestation, ISO assessment, education
	0.0	11.8	(12.8)	
R&D activities	1.5	47.9	11.3	Development of SiC devices, development of air-conditioning devices compliant with refrigerant regulations, development of energy-saving products, development of C-GIS for offshore wind power generation, development of high-productivity technologies
	1.4	47.2	11.7	
Community activities	0.0	0.3	(0.0)	Beautification/clean-up activities around business sites, Satoyama Woodland Preservation activities, regional volunteer activities
	0.0	0.2	(0.0)	
Environmental damage	0.0	2.0	0.2	Air pollution load tax
	0.0	2.0	0.2	
Consolidated total	53.7	170.5	(13.0)	
Non-consolidated total	36.3	135.5	(0.7)	

Environmental Conservation Benefits (Environmental Performance)

□ Mitsubishi Electric Group □ Mitsubishi Electric

Item	Unit	Fiscal 2016	Year-on-Year Change	Year-on-Year Per Net Sales
Total energy used	10,000 GJ	1,911	(8)	98%
		1,154	(3)	100%
Total water used	10,000 m ³	1,078	(44)	95%
		754	(16)	98%
Total greenhouse gas emissions	10,000 tons-CO ₂	128	4	102%
		64	6	110%
CO ₂ (energy consumption)	10,000 tons-CO ₂	104	9	108%
		58	7	113%
HFCs, PFCs, SFe	10,000 tons-CO ₂	24	(5)	81%
		6.2	(0.8)	89%
Total releases and transfers of chemical substances into the atmosphere	Tons	740	(137)	83%
		456	(60)	88%
Total wastewater discharged	10,000 m ³	901	(35)	95%
		646	(32)	95%
Total releases and transfers of chemical substances into the water and soil	Tons	15	(29)	34%
		5.4	(4.6)	54%
Total waste discharged	Tons	212,081	(11,787)	93%
		84,606	(5,437)	94%
Final disposal	Tons	470	(184)	71%
		1.4	0.4	140%

Economic Benefits from Environmental Conservation Activities (Actual Benefits)

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

Item	FY2016	Year-on-Year Change	Main Benefits
Earnings	31.8	(6.0)	Profits from sale of valuable resources (scrap metals, waste plastics, paper, cardboard, and wooden boards)
	20.4	1.4	
Savings	29.4	(1.0)	Savings in electricity bills through improving energy efficiency, reduction in package cushioning
	17.9	3.2	
Consolidated total	61.1	(7.0)	
Non-consolidated total	38.2	4.7	

Economic Benefits from Environmental Consideration in Products and Services (Estimated Benefits)

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

Item	Amount	Main Benefits
Consolidated total	34,420	Reduced electricity costs owing to lower energy consumption of 124 finished products that are targeted for reducing CO ₂ from product usage.*
Non-consolidated total	27,071	

*Base products for reducing energy consumption are those products sold in FY2001. The energy prices appearing in IEA Energy prices and taxes were referred to when calculating the amount of benefit.

Corporate Profile (as of March 31, 2016)

Company Name: Mitsubishi Electric Corporation

Head Office Location:

Tokyo Building, 2-7-3, Marunouchi, Chiyoda-ku,
Tokyo 100-8310, Japan

Established: January 15, 1921

Paid-in Capital: ¥175,800 million

President: Masaki Sakuyama

Number of Employees:

Consolidated 135,160

Non-consolidated 33,321

Number of Affiliated Companies:

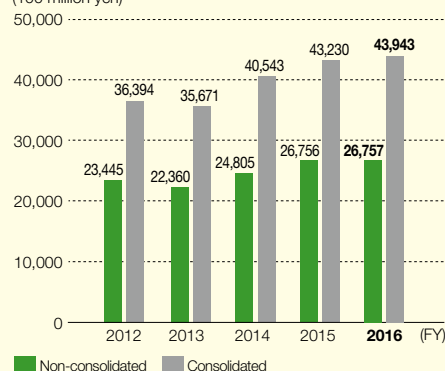
Subsidiaries 218 Affiliates 38

Business Segments:

Energy and Electric Systems, Industrial Automation Systems, Information and Communication Systems, Electronic Devices, Home Appliances, Others

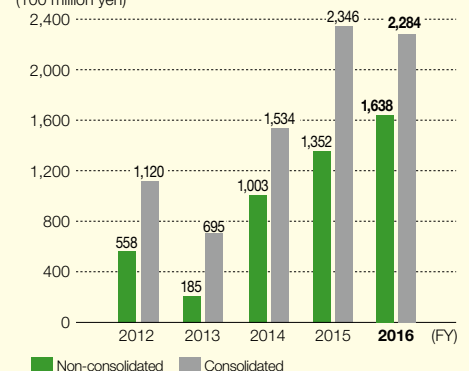
Net Sales

(100 million yen)



Net Income

(100 million yen)



Mitsubishi Electric Group Environmental Information

Mitsubishi Electric's global website contains information about the Mitsubishi Electric Group's activities related to corporate social responsibility (CSR).

<http://www.MitsubishiElectric.com/company/environment/>

From the President

A message from President & CEO Masaki Sakuyama about the Mitsubishi Electric Group's environmental initiatives.

<http://www.MitsubishiElectric.com/company/environment/message/>

Overview

A brief introduction to special characteristics of the Mitsubishi Electric Group that help us to create value in the environmental field.

www.MitsubishiElectric.com/company/environment/overview/

Basic Policy and Approach to Environmental Management

We present the entire picture of our environmental management, such as our policies and vision for becoming a global leading green company.

<http://www.MitsubishiElectric.com/company/environment/policy/>

Environmental Report 2016

A report on our environmental efforts and achievements in fiscal 2016, and an overview of the 8th Environmental Plan (fiscal 2016–2018).

<http://www.MitsubishiElectric.com/company/environment/report/>

The Environment and Business

Read about the activities and priority environmental issues of each business group, including key policies, initiatives, and the contributions that our long-term strategic products are making to the environment and society.

<http://www.MitsubishiElectric.com/company/environment/business/>

Environmental Statement: Eco Changes

Eco Changes is our environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses for homes, offices, factories, infrastructure, and even outer space, we are helping contribute to the realization of a sustainable society.

家庭から宇宙まで、エコチェンジ。



for a greener tomorrow



精于节能 尽心环保



MITSUBISHI ELECTRIC CORPORATION

<http://www.MitsubishiElectric.com>

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