CSR Activities

Environment

Efforts to protect the global environment are a key management issue for Fuji Electric, and with the establishment of our Basic Environmental Protection Policy, we continue to promote environmental management with the goal of contributing to global environmental protection through our business activities.

In fiscal 2012, we began the Smart Factory Initiative to optimize energy usage by coordinating electrical and thermal energy technologies with production planning. In fiscal 2013, we completed construction of systems at four model factories (Kawasaki, Tokyo, Yamanashi and Mie), verifying Smart Factory Initiative benefits and also deploying similar measures at other factories in Japan.

Solar power generation system introduced at a Smart Factory Initiative model factory (Mie Factory)

Basic Environmental Protection Policy

1. Offering products and technologies that contribute to global environmental protection
2. Reduction of environmental burden throughout product life cycles
3. Reduction of environmental burden in business activities
4. Compliance with laws, regulations, and standards
5. Establishment of environment management systems and continuous improvements of the systems
6. Improvement of employees' environmental awareness and social contribution
7. Promotion of communication

(Revised in 2003)

Environmental Vision 2020

Global warming, resource depletion, and other environmental issues are key challenges for the future of humanity.

To tackle these issues, Fuji Electric seeks to enable all employees to engage steadily in environmental efforts each day. To this end, we established Environmental Vision 2020 to guide our activities in keeping with the Basic Environmental Protection Policy.

This vision is centered around three themes of stopping global warming, creating a recycling-oriented society, and meeting our corporate social responsibilities. In addition to reducing the environmental load of our own production activities, we also seek to achieve a sustainable society by providing products and technologies that leverage our strengths in energy technologies.

Our main initiatives under the theme of stopping global warming are to reduce CO_2 emissions during production by 20% in fiscal 2020 compared with the fiscal 2006 level of 381,000 tons, while reducing society's CO_2 emissions by 17 million tons by expanding sales of energy-saving and energy-creating products.

Under the theme of creating a recycling-oriented society, our key measures with respect to production resources are to lower final disposal rates by reducing waste and recycling resources. For water resources, we are endeavoring to cut the use of water resource inputs per unit of production. We are particularly stepping up efforts to increase water reusage rates at production facilities that consume a lot of water and at overseas facilities where there are significant water supply risks. In this report, we present our main initiatives to stop global warming and to create a recycling-oriented society*.

* Unless otherwise specified, environmental activity targets and results in this report encompass domestic consolidated subsidiaries and overseas consolidated production subsidiaries.

1. Stop Global Warming

- Reduce CO_2 emissions during production by 20% [compared with fiscal 2006 levels]
- Raise the energy efficiency of products, reducing society's CO_2 emissions by 17 million tons through energy-conserving and energy-creating products.

2. Creating a Recycling-Oriented Society

- Increase our number of eco-products by promoting the 3Rs [reuse, reduce, recycle] in our products.
- Achieve zero emissions at operational sites by reducing waste and the use of energy and chemical substances.

Environmental Vision 2020

Fuji Electric will contribute to a sustainable society through energy-related businesses.

3. Meet Our Corporate Social Responsibilities

- Strive to enhance environmental awareness through environmental citizen movements, activities to protect the natural environment, and environmental education.

Fiscal 2013 Efforts to Stop Global Warming

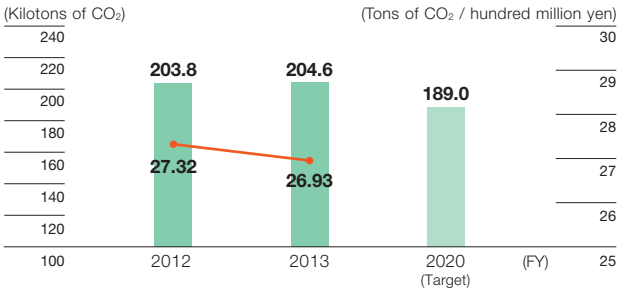
Reducing CO_2 during Production

In Japan, we started activities in fiscal 2012 to conserve energy and curb energy costs. In fiscal 2013, we achieved an effective reduction in energy expenses of 11% by saving energy in facilities and equipment operations, upgrading to higher-efficiency facilities, and installing solar power generation systems.

In fiscal 2013, CO_2 emissions from production were 204,600 tons, and we achieved our fiscal 2013 target of 212,000 tons. Emissions increased slightly from the previous year, owing to higher production volumes; however, the increase was offset by energy conservation efforts that enabled us to cut CO_2 emissions by around 7,500 tons.

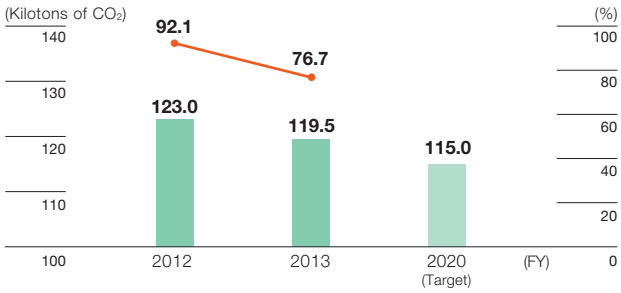
Overseas, we pushed ahead with such energy-saving activities as deploying solar power generation systems and advanced energy monitoring systems at our new factory in Thailand and other energy-saving activities at our factory in Shenzhen, China. As a result, our CO_2 emissions were 119,500 tons, far below the targeted 125,000 tons for fiscal 2013.

CO_2 Emissions and CO_2 Emissions per Unit of Sales in Japan



* Emissions per unit of sales is calculated by dividing the CO_2 emissions amount by consolidated net sales.

Overseas CO_2 Emissions and CO_2 Emissions per Unit of Production



* Emissions per Unit of Production is the amount of CO_2 emitted by production volume (presented taking the value for FY2006 to be 100).

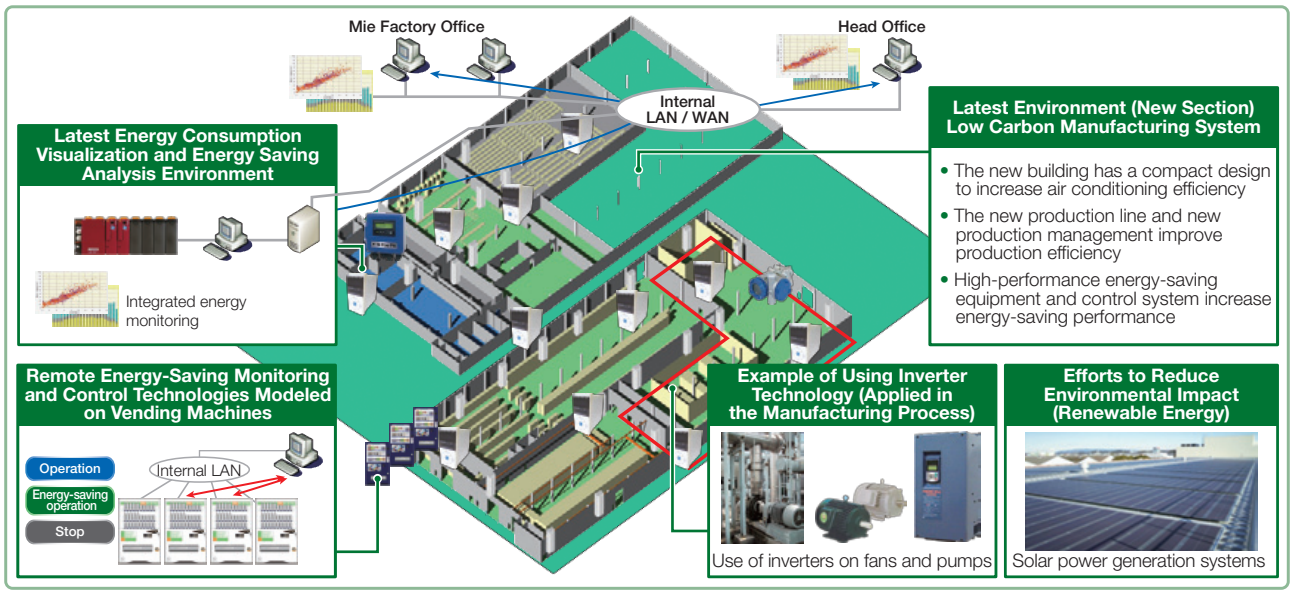
Case Example

Fuji Electric Mie Factory

Conserving Energy through the Smart Factory Initiative

We are undertaking a Smart Factory Initiative at the Mie Factory, which is our core production site for vending machines. As well as attaining high efficiency in our equipment through the application of inverters, in fiscal 2013, we established the foundations of a smart factory by installing solar power generation systems, fuel cells, and systems to monitor overall plant energy usage. The energy monitoring systems integrate production management systems with information and control the supply of energy to facilities according to changes in production conditions to minimize energy consumption.

We built a system to monitor the power consumption and operating statuses of around 30 vending machines within the plant and optimized energy-saving settings for the differing usage environments of each workplace as part of efforts to minimize electricity consumption.



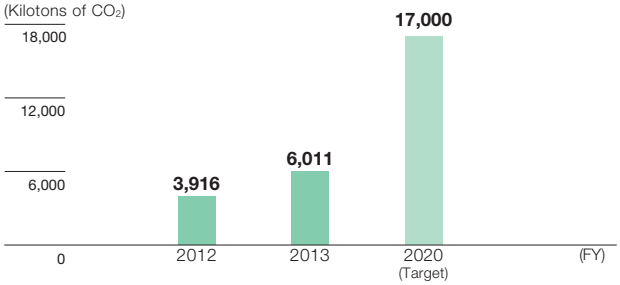
Main measures of the Smart Factory Initiative at the Mie Factory (Example of the new building)

Reducing Society's CO_2 Emissions through Products

Fuji Electric aims to help reduce society's CO_2 emissions by innovating electrical and thermal energy technologies.

In fiscal 2013, the contribution to CO_2 emission reductions from products was up 2,095,000 tons from fiscal 2012 to 6,011,000 tons. This reflected expanded sales of power conditioners and solar power generation systems.

Reduced CO_2 Emissions through Products



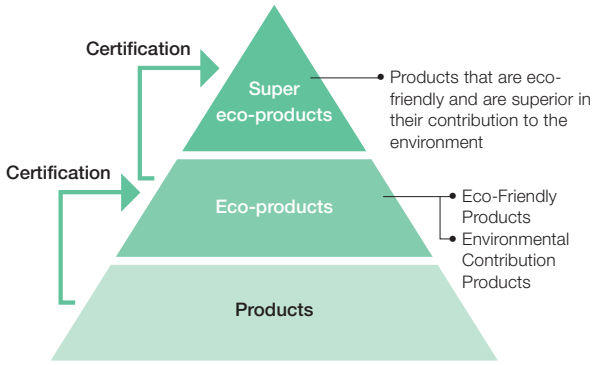
* Amount of CO_2 reduction based on one year of operation of products shipped for each fiscal year after fiscal 2009.
* Calculated making reference to the quantification method of GHG emission reductions stipulated in the Electrical and Electronics Industries' "Action Plan for Commitment to a Low-Carbon Society."

Eco-Product Certification System

Fuji Electric is developing eco-friendly products, which enhance energy efficiency and reduce the use of chemical substances, and environmental contribution products, which help reduce society's overall impact on the environment. We are continuing to promote the spread of these products.

In this initiative, Fuji Electric has established a common Fuji Electric Eco-Product Certification System. We evaluate the degree of product eco-friendliness on a Company-wide platform. Products meeting fixed criteria are certified as "eco-products," while those that are at the top of the industry for environmental benefit and contribution, and which are recognized outside the Company at the national level for environmental superiority are labeled "super eco-products."

In fiscal 2013, 30 offerings were certified as eco-products, while another 6 received certification as super eco-products. As a result, we now have 157 eco-products and 16 super eco-products.



Eco-Friendly Products: Products that have a reduced environmental impact over the entire product lifecycle. These products are superior to traditional products in at least four of six standard areas, including energy conservation, resource conservation, and recyclability.

Environmental Contribution Products: Products that contribute to environmental preservation during use. Products that contribute to the environment by utilizing natural energy or information and communication technology.

Super Eco-Products

Energy-Efficient Vending Machines Equipped with Hybrid Heat Pumps

Environmentally friendly vending machines are becoming increasingly mainstream. One type is heat pump vending machines that harness heat produced when cooling beverages to efficiently and simultaneously cool and heat.

Fuji Electric's hybrid heat pump system employs a innovative heat-exchange technology to utilize even the heat in the outside air for heating. The system efficiently switches with optimal timing between using the heat generated within the vending machine from cooling beverages and using the heat from the outside air.

Our hybrid heat pump vending machines consume 49% less electricity annually than conventional models made in 2006.

Fiscal 2013 Initiatives to Create a Recycling-Oriented Society

Waste Reduction

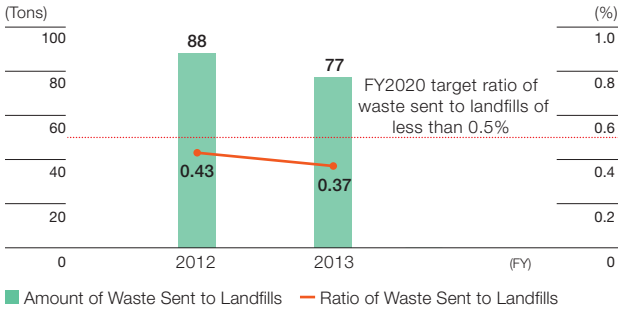
In addition to reducing waste, Fuji Electric works to promote resource recycling, with a focus on attaining the goal of zero waste emissions — a ratio of waste sent to landfills to total waste of no more than 1%.

In Japan, waste recycling enabled Fuji Electric to achieve its goal of zero waste in fiscal 2004, and we have continued to meet our targets in the years since.

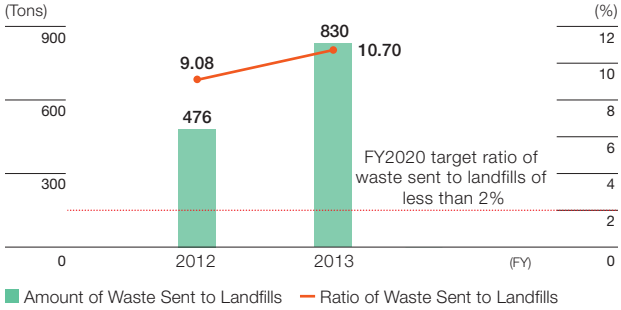
Furthermore, in fiscal 2013, we revised this target to "under 0.5%" and worked to strengthen our efforts in resource recycling. We achieved this target with a ratio of waste sent to landfills of 0.37%.

In addition, we have begun promoting zero emission activities at our overseas factories. In fiscal 2013, we added two overseas factories to the scope for these activities (Fuji Electric France S.A.S. and Dalian Fuji Bingshan Vending Machine Co., Ltd.), which increased both the amount and ratio of waste sent to landfill. Worldwide, waste treatment and disposal and resource recycling treatment infrastructure is far less advanced than in Japan, particularly in emerging countries. At its overseas operations, Fuji Electric is working to bring the ratio of waste sent to landfills down to 6% or less in fiscal 2014.

Amount and Ratio of Waste Sent to Landfills in Japan



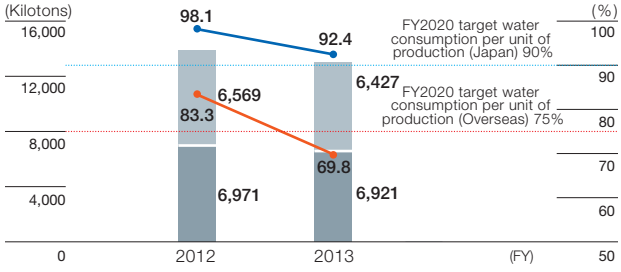
Amount and Ratio of Waste Sent to Landfills Overseas



Efficient Use of Water Resources

In view of the problem of global water resource depletion and in addition to its efforts to comply with wastewater quality requirements and reduce wastewater, Fuji Electric launched an initiative aimed at more efficient use of water resources. Using fiscal 2010 levels as a standard, this initiative aims to reduce both total water intake and base units of consumption at our domestic manufacturing sites by 1% each, with the goal of reducing those levels by 10% in fiscal 2020. In fiscal 2013, we set an overseas target of 25% reduction in water consumption per unit of production from fiscal 2011 levels by fiscal 2020.

Water Consumption and Water Consumption per Unit of Production



* Water consumption per unit of production (For Japan, presenting FY2010 level as 100; for overseas, presenting FY2011 level as 100).

Case Example

Fuji Electric Tsugaru Semiconductor Co., Ltd.

Initiatives to Reduce the Amount of Industrial Waste

Wastewater from semiconductor production is treated by using a wastewater treatment system to coagulate and detoxify sediments before discharging the water into a river. We dehydrate wastewater sludge from the coagulation-sedimentation process to recycle it into cement materials.

Fuji Electric Tsugaru Semiconductor Co., Ltd., which handles front-end processes for semiconductor products, has maintained zero emissions since fiscal 2000 by recycling wastes. The company has been reducing the actual volume of waste generated after noting that wastewater sludge accounted for 79% of generated waste.

The company reviewed its treatment methods in fiscal 2004 as part of its wastewater sludge reduction initiatives. It started to improve its treatment processes in fiscal 2011 and cut sludge by 59% in fiscal 2013 compared to fiscal 2010 levels. These wastewater sludge reduction efforts have also enabled the company to decrease usage of chemicals needed in coagulation-sedimentation processes.

Kazuaki Kimura, General Affairs Department (Environmental Activities Secretariat) (right)
Masato Honda, Facilities Department (left)

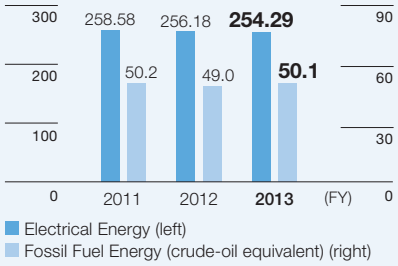
Mapping the Interplay between Business Activities and Environmental Impact

Fuji Electric is constantly working toward more efficient use of resources and energy and the reduction of waste throughout all of its business activities. We are also proactive in our efforts to be more environmentally conscious across the entire product and service lifecycle.

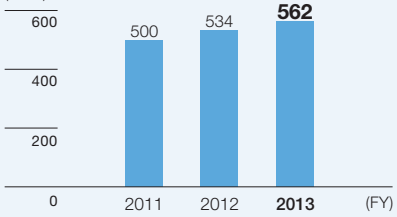
Scope: Production Bases in Japan

INPUT

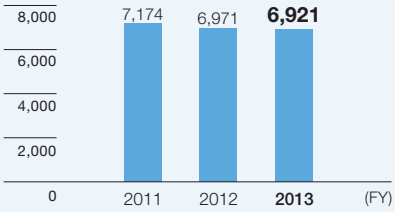
Energy Consumption



PRTR*1-Designated Substances Handled



Water Consumption



Main Materials

(Tons)

Ferrous	50,100
Non-ferrous	8,700
Plastic	3,300
Rubber, other	800

Fuji Electric

Operational sites

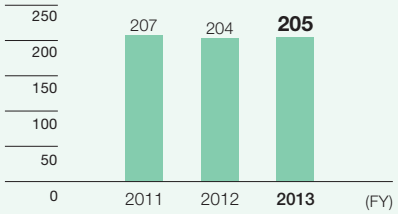
Research and Development	Procurement	Manufacture and Assembly	Products
Eco-friendly products Research and Development	Green procurement	Energy-saving, chemical substance management, waste reduction	Eco-products

Logistics Sales Services → **Customers**

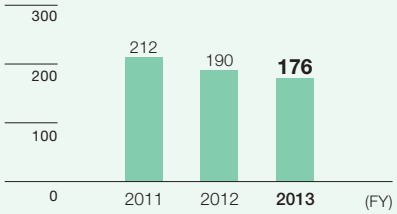
Recycling

OUTPUT

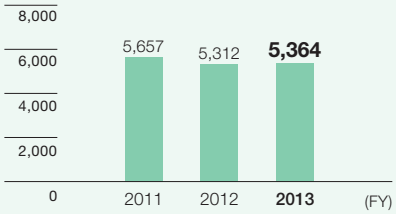
CO_2 Emissions



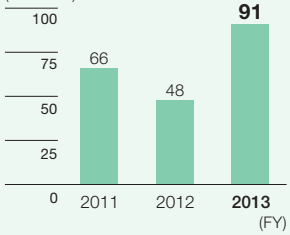
Emissions of PRTR-Designated Substances



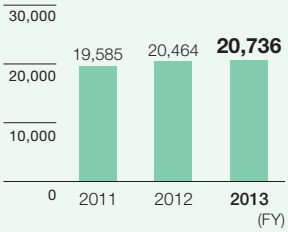
Wastewater Emissions



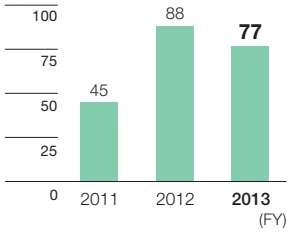
Greenhouse Gas Emissions Other than CO_2



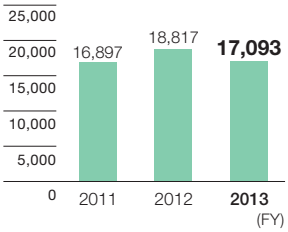
Amount of Industrial Waste



Industrial Waste Sent to Landfills*3



Waste Recycled*3



Emissions of Other Substances with Environmental Impact

(Tons)

NOx	4.2	COD*4	3.1
SOx	0.4	Nitrogen	2.4
BOD*4	2.0	Phosphorus	0.2

*1 Pollutant Release and Transfer Register Law
*2 GWP: Global Warming Potential. A measure of the relative greenhouse effect caused by a gas, compared with the effect of CO_2, which is assigned a GWP value of 1.
*3 The amount of waste sent to landfills and the amount of waste recycled are internal figures from the amount of waste generated.
*4 An index indicating the degree of water pollution
BOD: Biological Oxygen Demand
COD: Chemical Oxygen Demand