Recycling Resources

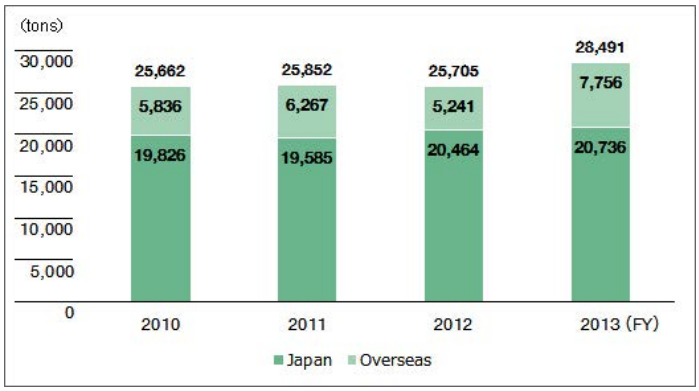
Fuji Electric is promoting the 3Rs (reduce, reuse, recycle) in its products. At the same time, we are contributing to the creation of a recycling-oriented society by striving for zero emissions at our operational sites.

↓Reducing Waste
↓Efficient Use of Water Resources

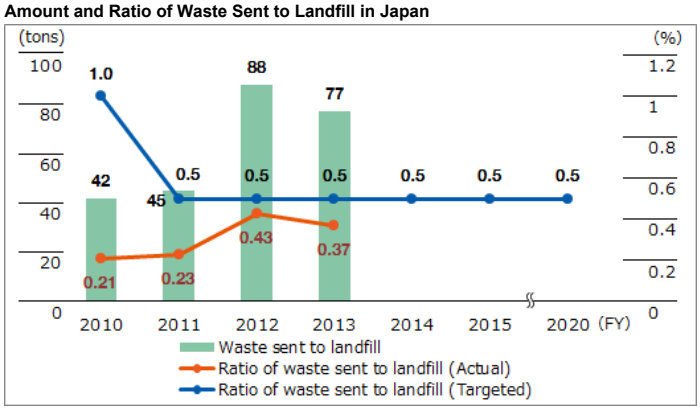
Reducing Waste

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 under 1%.
In Japan, our waste recycling activities 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. Further, in fiscal 2013 we revised this target to "less than 0.5%," and worked to strengthen our efforts in resource recycling. As a result, we achieved a ratio of waste sent to landfills of 0.37% in fiscal 2013.
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 landfills. 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.
Looking ahead, we will advance by confirming the status of recycling facilities and resource recycling methods during environmental patrols and lowering the ratio of waste sent to landfills.

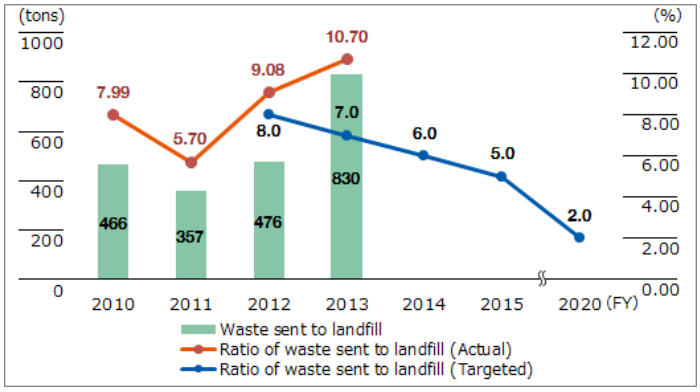
Amount of Industrial Waste



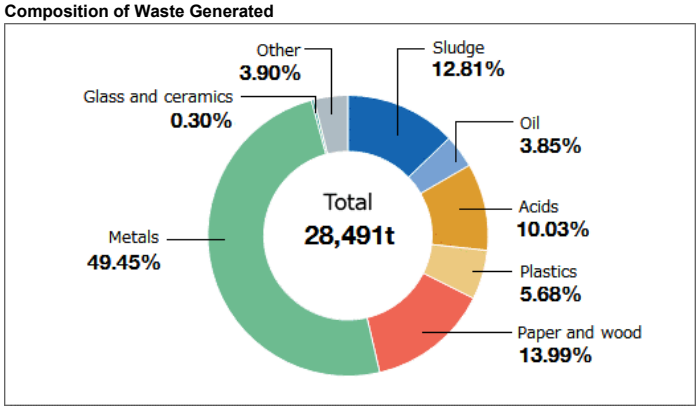
Amount and Ratio of Waste Sent to Landfill in Japan



Amount and Ratio of Waste Sent to Landfill Overseas



Composition of Waste Generated



Initiatives to Reduce Waste Emissions Related to Products

We promote the 3Rs (reduce, reuse, recycle) in our vending machine products in an effort to reduce waste emissions. Specifically, other efforts include reducing the size and weight of products to save resources, and printing warning labels directly on the inside of container lids to reduce materials used in labels.

Case Example of Initiatives to Reduce the Amount of Industrial Waste

TOPICS

■Fuji Electric Tsugaru Semiconductor Co., Ltd.

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.

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

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.

Efficient Use of Water Resources

In view of the problem of global water resource depletion, 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 production 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 new targets for overseas of a 25% reduction in water consumption per unit of production from fiscal 2011 levels by fiscal 2020. Moreover, as a result of water stress assessments* conducted at all production bases in Japan and overseas, we found that our Shenzhen Factory was the only one with a high water risk.

* A comprehensive judgment of a base's water stress based on three indices

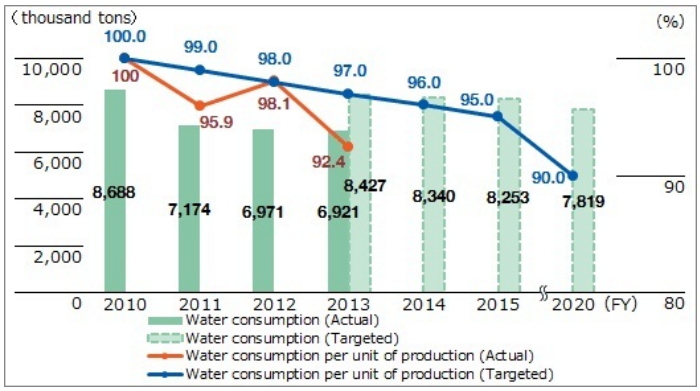
1. Results of global water stress assessments by region through the World Resources Institute Aqueduct Water Risk Atlas
2. Volume of water consumption
3. Water supply infrastructure

Example of an initiative for effective water use at a production base

China's Shenzhen Factory, which produces photoconductive drums, is in an area with high risk in a water stress assessment where supply restrictions are applied on the water indispensable for production in a dry season. Consequently, we have installed wastewater treatment and recycling facility in the Shenzhen Factory that enables it to control the volume of industrial-use water and wastewater. As a result, instead of the targeted 70% water recycling rate we agreed with the City of Shenzhen, we were able to raise that to an actual 80%, enabling a production framework with water stability.

In addition, our Malaysian production base uses significant volumes of water even though its water risk is not high. Consequently, we set a target of reducing its water consumption by 2020 to 70% of the 2011 level, kicking off initiatives such as improving the management standards of production equipment using water and installing pure water recycling devices.

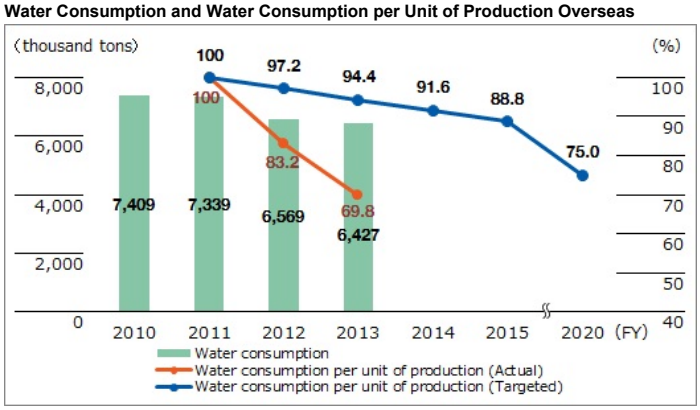
Water Consumption and Water Consumption per Unit of Production in Japan



* The amount of water consumed for the amount of production (Presenting FY2010 level as 100)

Note: Data has been restated retroactively for the semiconductor factory newly integrated in fiscal 2013

Water Consumption and Water Consumption per Unit of Production Overseas



* The amount of water consumed for the amount of production (Presenting FY2011 level as 100)

Note: Data has been restated retroactively for the addition of two new factories in fiscal 2013 (Fuji Electric France S.A. and Dalian Fuji Bingshan Vending Machine Co., Ltd.)