Efficient Use of Water Resources

Fuji Electric promotes the 3Rs (reduce, reuse, recycle) across the supply chain in accordance with its Basic Environmental Protection Policy and Environmental Vision 2050 in order to contribute to the realization of a recycling-oriented society. As part of these activities, we seek to make efficient use of water resources while complying with wastewater requirements.

Efficient Use of Water Resources

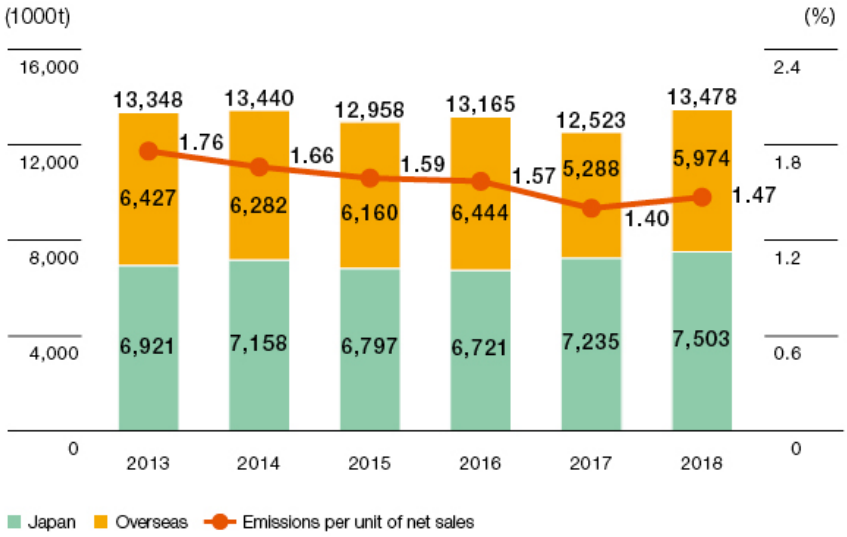
In light of the problem of global water resource depletion, Fuji Electric has been advancing measures to comply with wastewater requirements and reduce water usage amounts and is now working to achieve more effective use of water resources.

Targets have been set for water intake and for water intake per unit of net sales, and initiatives for accomplishing these targets were carried out in fiscal 2018.

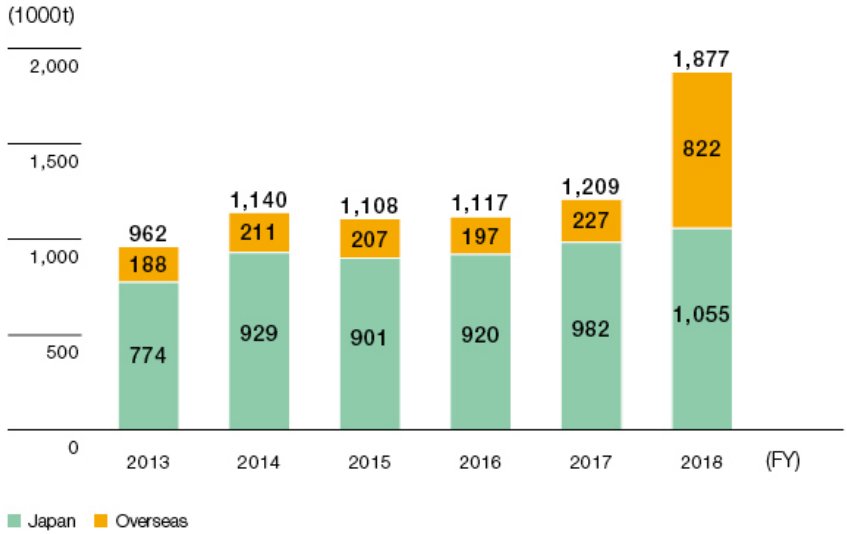
Water-related targets were not met in both Japan and overseas in fiscal 2018 as a result of higher production in the Electronic Devices segment, where production processes use large quantities of water. At the Malaysia Factory, a principal factory for the Electronic Devices segment, an additional 600,000 m3 of water was recycled, bringing the total amount of water recycled at all bases to 1,877,000 m3, a 55% increase year on year.

Going forward, we will continue to increase water recycling rates at semiconductor production bases in order to lower Companywide water intake levels.

Water Intake (Global)



Recycled water



Water Risk Assessments

Fuji Electric carries out assessments*1 to confirm whether there is any risk of water shortages at manufacturing sites in Japan or overseas. These assessments have indicated that the Shenzen Factory in China is the only site with a high risk of water shortage.

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

*1 Comprehensive judgment of a base's water stress based on three indices

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 [fiscal] 2020 to 70% of the [fiscal] 2011 level, and we are advancing systematic reduction activities for achieving this target. Specifically, we are improving the management standards of production equipment using water and installing pure water recycling devices.

<table>
<tr><th colspan="2">Initiatives at Matsumoto Factory</th></tr>
<tr><td colspan="2">The Matsumoto Factory uses large quantities of pure water during the process of manufacturing semiconductor wafers and also utilizes a significant amount of water for cooling production equipment. For this reason, effectively utilizing water resources and reducing overall usage volumes is an important theme for initiatives at this factory.</td></tr>
<tr><td>Pure water recycling initiatives:
We categorize wastewater from manufacturing processes, and water that is still of relatively high quality is recycled for use in creating pure water. Introduction of electric pure water manufacturing devices:
Introduction of electric pure water manufacturing devices:
Manufacturing pure water utilizing ion exchange resins requires that these resins be periodically regenerated, and water and chemicals must be used for this process. By introducing one electric pure water manufacturing device, the Matsumoto Factory is now able to continually create pure water without needing to use chemicals to regenerate ion exchange resins. Accordingly, the factory is no longer required to use regenerative chemicals to treat wastewater, an accomplishment that helped reduce usage volumes of electricity, water resources, and chemicals and lower the total costs of manufacturing pure water
Installation of wastewater recovery systems (Integrated Water Management):
Wastewater from factories is expelled into public sewer systems after undergoing final treatment. After installing wastewater recovery systems, the Matsumoto Factory has been conducting recycling processes (filtration via coagulation sedimentation) for wastewater to enable this water to be reused in factory cooling towers, toilets, and other facilities (approximately 1,000 tons reused each day).</td><td> 
IWM :
Integrated Water Management</td></tr>
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