

Accomplishments and Progress of Environmental Activities

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Prevention of Global Warming

The Maxell Group is promoting initiatives to conserve electricity, such as installing green curtains, upgrading air conditioners and lights, efficiently operating equipment by managing demand, and creating visualizations of power consumption patterns.

In fiscal year 2017, we reduced our annual power consumption 3,303 MWh thanks mainly to efforts to reduce power consumption through more efficient manufacturing and the introduction of LED lighting at respective works as well as upgrading to energy-saving equipment, such as switching from hydraulic to electric molding machines and controlling the number of compressors. In addition, the worksites in Ono, Fukuchiyama, and Kobuchizawa together produced 3,608 MWh of solar power for the year.

In fiscal year 2017, the Maxell Group reduced its CO₂ emissions in Japan a considerable 5.7% compared with the previous year. Overseas, it achieved a 1.1% reduction. Japan is targeting short-term greenhouse gas reductions of 3.8% by 2020 compared with fiscal year 2005 levels, and medium-term reductions of 26% by 2030 compared with fiscal year 2013 levels.

In fiscal year 2017, the entire Maxell Group achieved CO₂ emission reductions of 58.5% compared with fiscal year 2005 levels and 24.4% compared with fiscal year 2013 levels.

In fiscal year 2016, an evaluation system by business classification was added as part of the Energy Conservation Law. Maxell, Ltd. and Maxell Joei Tech Co., Ltd. received an S rank rating as exceptional business operators.

Waste Reduction and Recycling

The Maxell Group is taking thorough measures to sort waste, promote the recycling of waste through the sharing of information between worksites, and expand in-house intermediate waste treatment with the aim of achieving zero emissions.*

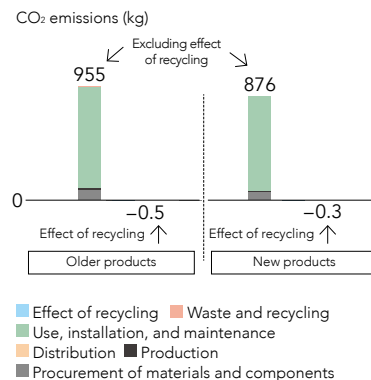
In fiscal year 2017, the amount of waste and recyclable materials the Group generated in Japan was essentially unchanged compared with that of the previous fiscal year. However, the Group's manufacturing bases in Japan achieved zero emissions for the 17th consecutive year thanks to stronger recycling efforts.

* Zero emissions criteria (evaluated by each worksite): final waste disposal amount of less than five tons per year and final disposal rate of less than 1% per year

Visualization of Environmental Performance through LCAs

Based on life cycle assessments (LCAs), we conducted a comparison of projectors and older products in terms of water use, waste, and CO₂ emissions and worked to visualize environmental performance. The results showed that newer products produced considerably less CO₂ emissions over their entire life cycle, from the manufacture of raw materials through distribution, use, and recycling. Similar evaluations of water use and waste showed similar results.

Comparison of New and Older Products' Generation of CO₂ Emissions



Determining Transportation Energy Consumption per Unit of Production

Because it handles a wide variety of products, the Maxell Group determines transportation energy consumption per unit based on the production volume of each production base. Due to increased transportation efficiency resulting from the integration of works in fiscal year 2017, the total for all bases decreased 12% from fiscal year 2016.

	Production (million yen)	Use (10,000 ton-kilometers)	Per Unit (ton-kilometers/million yen)
FY2016	56,216	1,147.4	204
FY2017	65,251	1,167.3	179

Chemical Substance Management

The Maxell Group processes waste by burning or removing it using absorbent materials to reduce the amount of volatile organic compounds (VOCs) released into the atmosphere. In fiscal year 2017, the Maxell Group's overseas works continued to achieve reductions, lowering VOC volume 33.3%. At domestic works, however, increased production of products that use significant amounts of VOCs led to a 16.4% year-on-year rise in VOC volume. As a result, the entire Maxell Group's atmospheric VOC emission volume increased 6.6% compared with the previous year. In addition, in response to the EU's REACH regulations and RoHS2 directive, we continued to enhance initiatives to assess the amount of added chemical substances in our products and manage the substances.

We manage the storage and processing status of equipment using PCBs. In fiscal year 2017, the Osaka and Kawasaki works completed processing of PCB waste, and the Kyoto Works processed large transducers.

Further, the Osaka Works completed the purification of contaminated groundwater, which had been a concern for many years.

Measures to Reduce Water Use

The Maxell Group strives to preserve water resources, including by reducing the amount of water used in manufacturing processes and recycling used water. Although water use at overseas worksites in fiscal year 2017 increased 2.4% compared with the previous year, Group worksites in Japan reduced their use 15.2%, resulting in a 9.7% year-on-year reduction for the Maxell Group as a whole.

Reduction of Environmental Burden through Environment-Friendly Products

Based on the criteria of our environmentally conscious design assessments, we quantitatively assess the environmental burden of products at each stage of their life cycle and register products that meet certain criteria as environment-friendly products. In fiscal year 2017, we registered 17 environment-friendly products, including a moisture retention support device, a high-power prismatic lithium ion rechargeable battery, a projector, headphones, a butyl adhesive tape, and a dicing tape.