Environmental Performance

In order to comply with environmental laws and regulations, Casio is carrying out frontline environmental protection activities based on the establishment of internal standards mainly for sites with ISO 14001 certification. With the aim of helping to realize a low-carbon society, the company is also complying with the voluntary action plan for reducing greenhouse gas emissions established by the industry association. Casio is pursuing environmental management in earnest by setting Casio Environmental Action Plan targets for the entire Casio Group.

CO2

Reducing CO_2 emissions

[Sites in Japan]

FY2012 marked the fourth year of the target period (five years from FY2009 to FY2013) for CO₂ emissions from sites in Japan. The performance figures using comparisons with the base year are average values for the initial year (FY2009) through the fourth year (FY2012).

Production sites in Japan

The target for production sites in Japan was a 35% reduction in CO₂ emissions per unit of actual production compared to FY1991. In FY2012, emissions were about 46.9% lower than in FY1991. This also represented a reduction of about 10.4% compared to the previous fiscal year. The reason for this significant reduction was the transfer of a company out of the Casio Group and its removal from the scope of computation, along with a decrease in production activities following a business closure.

Office sites in Japan

The target for office sites in Japan was a 9% reduction in the total amount of CO₂ emissions compared to FY1991. In FY2012, emissions were about 31.3% lower than in FY1991, resulting in target achievement for the second consecutive year. This was a reduction of about 7.4% compared to the previous fiscal year. The reason for the significant emissions decrease was the implementation of power-saving measures following the Great East Japan Earthquake.

[Sites outside Japan]

FY2013 is the target year for all sites outside Japan.

Production sites outside Japan

The target for production sites outside Japan was a 30% reduction in CO₂ emissions per unit of production compared to FY2005. In FY2012, emissions were about 9.5% lower than in FY2005, despite an increase of approximately 3.2% from the previous fiscal year. Due to the loss of records at Casio Thailand during the major flooding there, data from this company could not be included in this overall result.

Office sites outside Japan

The target for office sites outside Japan was a 3% reduction in the total amount of CO₂ emissions compared to FY2005. In FY2012, emissions were about 42.2% higher than in FY2005, but there was a reduction of about 3.3% from the previous fiscal year. Although emissions had increased each year from FY2005 to FY2011, the company finally achieved a year-on-year reduction in FY2012. The main drivers of the increased emissions over time were a major increase in floor space of Casio Europe offices in FY2010 and inclusion of a broader scope of data in the computation. Building on the turn-around in FY2012, Casio will aggressively pursue further energy-saving activities for lighting, heating and cooling.

[Logistics in Japan]

The target for CO₂ emissions from logistics activities in Japan was a 22% reduction per unit of domestic sales compared to FY2006, by FY2013. In FY2012, emissions were 24.4% lower than in FY2006. In August 2011, the logistics center was relocated from Suzuka City, Mie Prefecture, to Toda City, Saitama Prefecture. In January 2012, the Eastern Distribution Center in Koto-ku, Tokyo was consolidated with the logistics center. Through this staged effort, Casio reduced the number of consumer distribution centers in Japan from five to four. This transition not only shortened transportation distances, but also promoted a modal shift from truck to rail, helping to further reduce CO₂ emissions.

[Logistics outside Japan]

No specific CO₂ emissions reduction target has been set for logistics activities outside Japan. Cargo shipped from China to North America used to be sent to a sales company warehouse in Chicago, before being forwarded to client logistics centers. Since 2009 however, the cargo has been shipped from China direct to the various central logistics centers of clients, which is helping to reduce CO₂ emissions.

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CO2 emissions (production sites in Japan)



*Trends in CO2 emissions from energy sources (electrical power, fuel, etc.) used at production sites in Japan.

CO₂ emissions (office sites in Japan)



*Trends in CO2 emissions from energy sources (electrical power, fuel, etc.) used at office sites in Japan.



CO₂ emissions (production sites outside Japan)

*Trends in CO₂ emissions from energy sources (electrical power, fuel, etc.) used at production sites outside Japan.

CO₂ emissions (office sites outside Japan)



*Trends in CO2 emissions from energy sources (electrical power, fuel, etc.) used at office sites outside Japan.



CO2 emissions and emissions per unit of sales for logistics in Japan

CO2 emissions and emissions per unit of sales for logistics outside Japan



Greenhouse gases other than CO2

Reduction of greenhouse gases other than CO₂

The target for reduction of greenhouse gas emissions other than CO_2 is at least a 90% reduction compared to FY2001, by FY2013. (SF₆/HFCs)

Although the input and emissions of SF₆ were zero, certain spray cans used in production contain HFCs. These emissions were approximately 99.5% lower than in FY2001, and 98.9% down from the previous year. Due to the external transfer of the TFT-LCD business in FY2011, there was zero usage or emissions of SF₆ in FY2012. That leaves only emissions of HFCs contained in sprays used for in production. Casio will continue to reduce these emissions by switching to alternative HFC-free sprays in the future.

SF₆ gas usage and emissions to atmosphere (Japan production sites)



*Years shown in this graph are calendar years, to match industry action targets.

*The input and emissions of SF6 were zero in 2011.

HFC emissions



Waste

Reducing waste

Casio evaluates its waste reduction efforts (including waste and valuable reusable resources) against the target year of FY2013.

[Sites in Japan]

The target for reducing waste produced from sites in Japan was a 50% reduction in waste per unit of actual production compared to FY2001. In FY2012, waste was about 39.6% lower than in FY2001, but there was an increase of approximately 6.3% from the previous year. Although the total waste amount was down to 1,775 tons from 2,017 tons in FY2011, the figure per unit of sales worsened due to a drop in sales.

[Production sites in Japan]

The target for reducing waste from production sites outside Japan was a 30% reduction per unit of production compared to FY2005. In FY2012, emissions were about 73.9% lower than in FY2005, representing a decrease of about 62.2% from the previous fiscal year. Due to the loss of records at Casio Thailand during the major flooding there, data from this company could not be included. Production increases at other sites to compensate for the shutdowns at Casio Thailand also contributed to this overall result. Casio will continue to work to reduce waste by revising production processes.

Generation of waste, volume of landfill disposal, and waste per unit of actual production (all sites in Japan)



Generation of waste, volume of landfill disposal, and waste per unit of production (production sites outside Japan)



Water resources

Reducing input of water resources

[Production sites in Japan]

Water resource input is evaluated using FY2013 as the target year. The target for production sites in Japan was a 25% reduction in water resource input per unit of actual production compared to FY2001. In FY2012, water input per unit of actual production was about 61.2% lower than in FY2001, which also represented a reduction of about 33.7% from the previous fiscal year. The reason for this significant reduction was the transfer of a company out of the Casio Group, and its removal from the scope of computation, along with a decrease in production activities following a business closure.

[Production sites outside Japan]

The target for production sites outside Japan was a 15% reduction in water resource input per unit of production compared to FY2005. In FY2012, the figure was about 4.5% higher than in FY2005, but approximately 9.1% lower than the previous year. Due to the loss of records at Casio Thailand during the major flooding there, data from this company could not be included. Production increases at other sites to compensate for the shutdowns at Casio Thailand also contributed to this overall result. The company will work to reduce waste in the future by revising production processes.

Usage of water resources and recycled industrial water, and input per unit of actual production (Japan production sites)



Usage of water resources and recycled industrial water, and usage per unit of production (production sites outside Japan)



Paper resources

Reducing usage of paper resources

The reduction target for the usage of office paper at sites in Japan was a 10% reduction compared to FY2008 by FY2013, per unit of sales. The result for FY2012 was about 37.1% higher than in FY2008. This increase was due to a drop in sales, as the total volume of office paper used fell from 115 tons in FY2008 to 68.3 tons in FY2011. Along with the increased promotion of green IT, Casio will reinforce its efforts to reduce paper usage.

Office paper usage (all sites in Japan)



PRTR

Reducing PRTR substances

The target for reduction of usage and releases of substances specified by Japan's PRTR Act was a 40% reduction per unit of actual production compared to FY2004, by FY2013. In FY2012, the figure was approximately 88.8% lower than in FY2004, also down 61.4% from the previous year. The reason for this significant reduction was the transfer of a company out of the Casio Group, and its removal from the scope of computation, along with a decrease in production activities following a business closure. Casio will continue striving to reduce the use of these chemicals.

PRTR substance usage, releases, and releases per unit of actual production (Japan production sites)



VOC, NOx, SOx, dust

Reducing VOCs

The target for reducing atmospheric emissions of volatile organic compounds (VOCs) from production sites in Japan was a reduction of 45% compared to FY2001, by FY2016. In FY2012, Casio's emissions of VOCs were about 94.6% lower than in FY2001, which also represented a reduction of approximately 88.0% from the previous fiscal year. The reason for this significant reduction was the transfer of a company out of the Casio Group, and its removal from the scope of computation, along with a decrease in production activities following a business closure. By adjusting settings and practicing indoor temperature management, Casio also intends to further reduce emissions of atmospheric pollution generated by air conditioning equipment such as hot and chilled water generators.





Reducing Nox ,SOx, Dust

Casio's atmospheric emissions of nitrogen oxides (NOx), sulfur oxides (SOx) and dust in the peak year of FY2006 were 138 tons, 37 tons, and 2 tons, respectively. Emissions in FY2012 were dramatically lower, at 1.1 tons, 2.2 tons, and 0.2 tons, respectively. The reason for these significant reductions was the transfer of a company out of the Casio Group, and its removal from the scope of computation, along with a decrease in production activities following a business closure. By adjusting settings and practicing indoor temperature management, Casio also intends to continue reducing emissions of atmospheric pollution generated by air conditioning equipment such as hot and chilled water generators.





Scope of Data

Environmental performance data was compiled using results from the following Casio sites for FY2012 (April 1, 2011 to March 31, 2012).

Production sites in Japan	Yamagata Casio Co., Ltd.	Casio Electronic Manufacturing Co., Ltd.
	Kofu Casio Co., Ltd. (Headquarters)*1	Kofu Casio Co., Ltd. (Ichinomiya)*2
	Casio Micronics Co., Ltd. (Headquarters and Ome Factory No.1)*3	Casio Micronics Co., Ltd. (Ome Factory No. 2)*4
Office sites in Japan	Casio Computer Co., Ltd. (Headquarters)	Casio Computer Co., Ltd. (Hamura R&D Center)
	Casio Computer Co., Ltd. (Hachioji R&D Center)	Casio Computer Co., Ltd. (Kudan sales office)
	Casio Computer Co., Ltd. (Osaka sales office)	Casio Computer Co., Ltd. (Sendai sales office
	Casio Computer Co., Ltd. (Saitama sales office)	Casio Computer Co., Ltd. (Nagoya sales office)
	Casio Computer Co., Ltd. (Hiroshima sales office)	Casio Computer Co., Ltd. (Fukuoka sales office)
	Casio Business Service Co., Ltd. (Headquarters)	Casio Business Service Co., Ltd. (Fuji)
	Casio Business Service Co., Ltd. (Fujinomiya)	Casio Techno Co., Ltd. (Headquarters)
	Casio Information Systems Co., Ltd. (Headquarters)	Casio Human Systems Co., Ltd. (Headquarters)*5
	Casio Communication Brains, Inc.	Casio Marketing Advance Co., Ltd.
	CXD Next Co., Ltd.	Casio Information Service Co., Ltd.
Production sites outside Japan	Casio (Hong Kong) Ltd. (Panyu Factory)	Casio (Hong Kong) Ltd.
	Casio Electronic Technology (Zhongshan) Co., Ltd.	Casio (Thailand) Co., Ltd.*6
Office sites outside Japan	Casio Taiwan Co., Ltd.	Casio Electronics (Shenzhen) Co., Ltd.
	Casio (Guangzhou) Co., Ltd.	Casio Soft (Shanghai) Co., Ltd.
	Casio America, Inc.	Casio Canada Ltd.
	Casio Europe GmbH	Casio Electronics Co., Ltd.
	Casio France S.A.	Casio India Co., Pvt. Ltd.
	Casio Singapore Pte., Ltd.	Casio Espana S.L.
	Casio (Shanghai) Co., Ltd.	Casio Mexico Marketing, S. de R. L. de C.V.
	Guangzhou Casio Techno Co., Ltd.	Casio Benelux B.V.
	Casio Scandinavia AS	Casio Brasil Comercio De Produtos Eletronicos Ltda.
	Casio Italia S.r.I.	

*1 *2 The results for Kofu Casio's headquarters and Ichinomiya office were from the period of April 1, 2011 to October 31, 2011.

*3 *4The results for Casio Micronics' headquarters and Factory Nos. 1 and 2 were from the period of April 1, 2011 to September 30, 2011

*5 The results for Casio Human Systems' headquarters were from the period of April 1, 2011 to September 30, 2011.

*6 The relevant records at Casio Thailand were lost in flooding in July 2011. Since there is no data, and as operations were not restarted during FY2012, Casio Thailand was not included in data calculation for this fiscal year.

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Calculation Standards

- 1. Input
 - 1. Energy input amount
 - · Includes fuel (gasoline and diesel) for company vehicles
 - 2. Crude oil equivalent
 - · Calculated in accordance with the Law Concerning the Rational Use of Energy
 - 3. Input of greenhouse gases other than SF₆
 - Applicable gases are HFCs in sprays such as dust blowers and quenching agents, and the total spray quantities were used as the gas input amounts.
 - 4. VOC input amount
 - · Applicable VOCs are amounts from sites that use over 50 kg annually.
 - 5. Paper usage amount
 - Applies to paper used for page printers, fax machines, and copiers.
 - 6. Plastic material usage amount
 - · Applies to re-input of material on plastic molding lines at group companies.

2. Outputs

- 1. CO₂emissions
 - The CO2 conversion factors for electricity used to calculate output amounts are as follows.

For emissions in Japan, Casio used an emission coefficient of 0.00035 (t-CO₂/kwh), as announced by the Federation of Electric Power Companies to reflect an adjustment for depreciation credit. This coefficient was also adopted by the Japan Business Federation in its voluntary action plan.

For emissions outside Japan, the "emissions factor adjusted for the CO2 emissions from CHP (combined heat and power) generated electricity" was used. It is taken from the latest year value (2003 estimate) in the Japan Electrical Manufacturers' Association (JEMA) estimate survey (June 2006).

2. Other greenhouse gas emissions

These were calculated in accordance with Japan's Act on Promotion of Global Warming Countermeasures

3. Recycling amount

• This was calculated as the amount of material recycled by consignees for intermediate processing, plus the amount of thermal recycling.