

# Environmental Performance

In order to comply with environmental laws and regulations, Casio's main sites have acquired ISO14001 certification and operate an environmental management system. Under the environmental management system, Casio plans and executes environmental protection activities based on a range of environmental legislation and the Casio Group Environmental Action Plan as well as various voluntary action plans established by Keidanren and the industry association. Moreover, Casio applies and operates its own unique environmental management system to relatively small office sites, which takes into account the extent of their environmental impact.

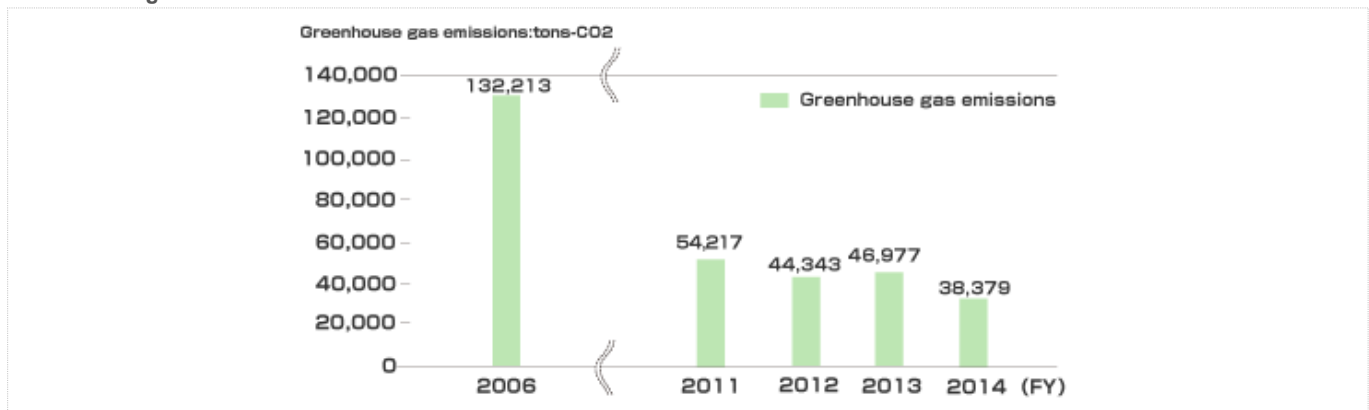
## ■ CO2

### Medium-and long-term greenhouse gas reductions

Casio has established medium-term (2020) and long-term (2050) objectives on reducing its total greenhouse gas emissions. Efforts are being made to reduce total greenhouse gas emissions from business activities by 30% by fiscal 2021 and 80% by fiscal 2051 (compared to fiscal 2006). Results for fiscal 2014 indicate that emissions were already about 71% lower than the base year, indicating that Casio has already met its medium-term goal and is even approaching its long-term goal of an 80% reduction.

On the other hand, since the transfer of its device business, which took place after the base year of fiscal 2006, had a large effect on reductions achieved so far, making it all the way to the long-term goal will still be a challenge. Casio is earnest in its commitment to reach the long-term in order to help build a low-carbon society, and the company is looking at ways to quickly adopt measures, such as the adoption of renewable energies, included in the fiscal 2015 environmental management policy.

### Greenhouse gas emissions

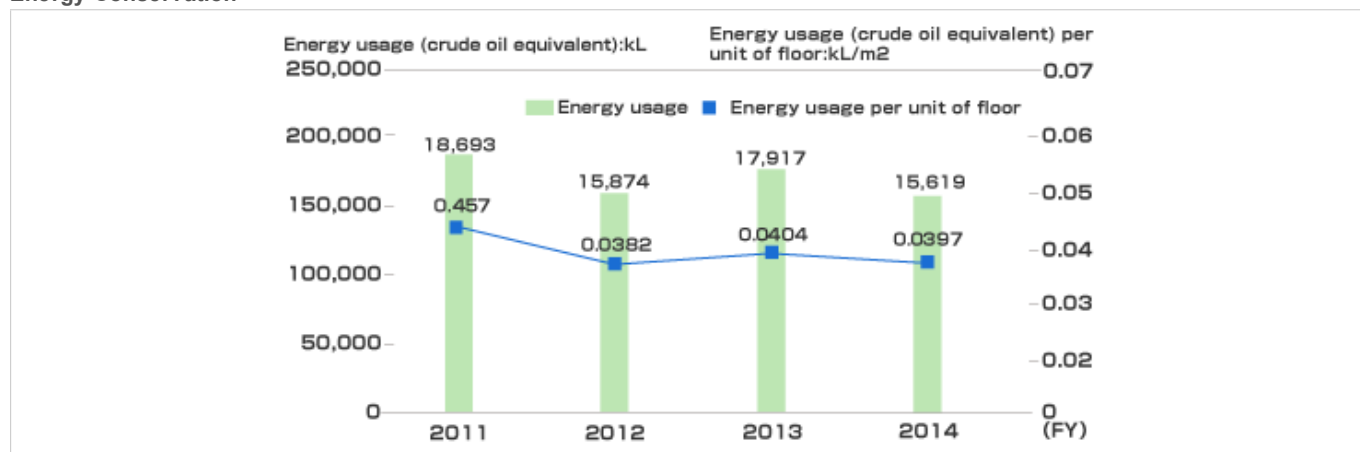


## Energy Conservation

Casio revised its Environmental Action Plan in fiscal 2014 and established an energy conservation goal that covers all of its sites. This goal is to reduce energy usage (crude oil equivalent kL) by 13 % per unit of total floor space compared to FY2011, by FY2016. This report is being issued in the first year of that period, but while energy use was 0.0457 kL/m<sup>2</sup> in the base year of fiscal 2011, it was 0.0397 kL/m<sup>2</sup> in fiscal 2014. This reflects a decrease of about 13%, thus revealing that the established goal has already been achieved. This is attributed to the closure of a production site outside Japan, the Panyu Factory of Casio Computer (Hong Kong). Casio is aware that it is already approaching the overall reduction goals that were just set last fiscal year, but it will continue to implement further reduction efforts.

Casio is continuing to strive to conserve energy at its production facilities and to improve production processes at all production sites in Japan and abroad. At offices in and outside Japan, Casio is promoting energy conservation efforts in its lighting, heating, and cooling equipment, and is striving to reduce CO<sub>2</sub> emissions.

### Energy Conservation



## Reducing CO2 Emissions in Logistics

### [Logistics in Japan]

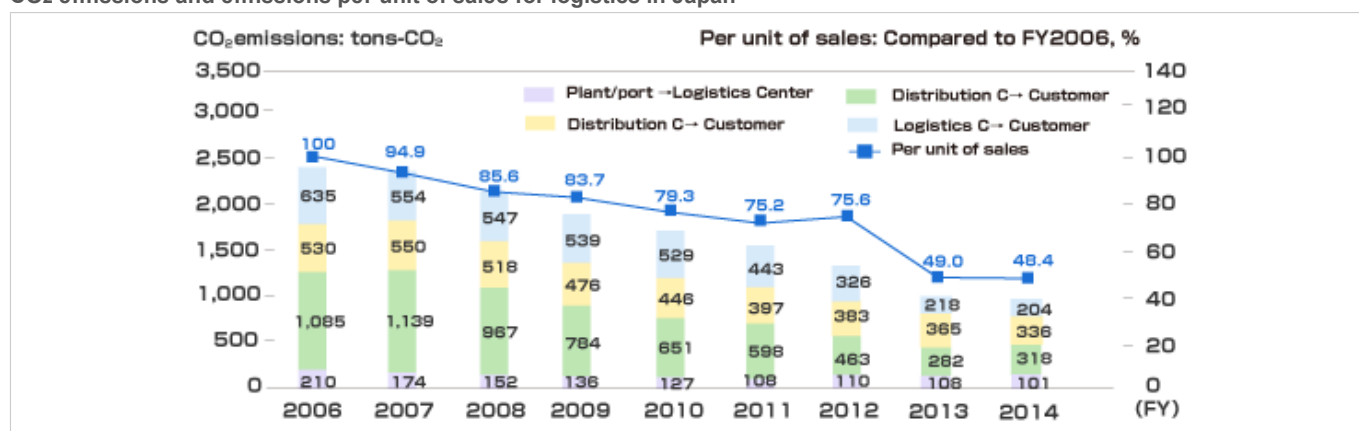
The target for CO2 emissions from logistics activities in Japan is a 20% reduction per unit of domestic sales in fiscal 2016 compared to fiscal 2011. In fiscal 2014, emissions were 35.6% lower than in fiscal 2011, already achieving the target. Nevertheless, Casio will keep working to further reduce CO2 emissions. 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 amalgamated 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 facilitated a modal shift from truck to rail, helping to further reduce CO2 emissions.

In fiscal 2013, Casio began an initiative to send products manufactured overseas directly to the Western Distribution Center in Osaka. This allows transport distances to be shortened significantly by cutting out transit through the Toda Logistics Center.

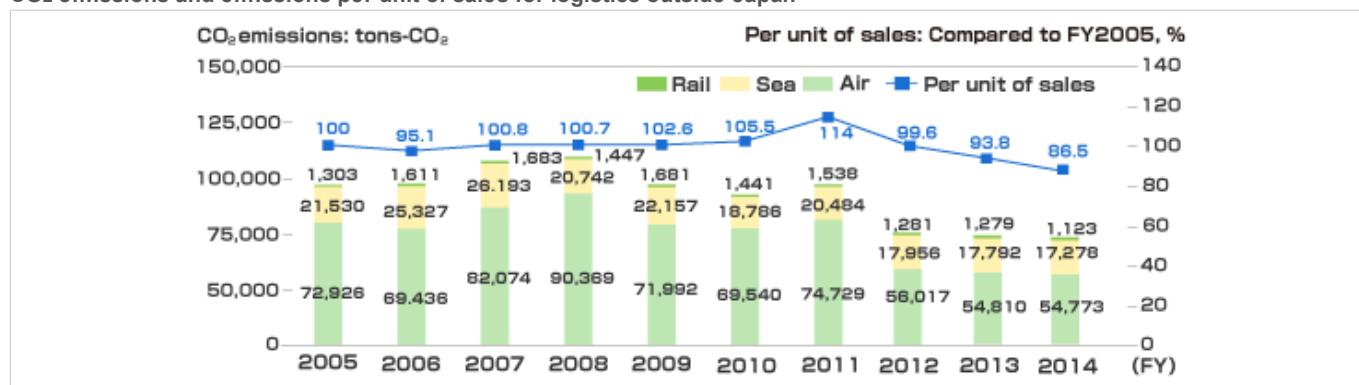
### [Logistics outside Japan]

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. Going forward, Casio will continue striving to improve energy efficiency and production processes at all of its production sites in and outside Japan. Moreover, Casio will promote energy efficiency, including for lighting and heating and cooling equipment, as it works to reduce the amount of CO2 emissions at its office sites in and outside Japan.

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



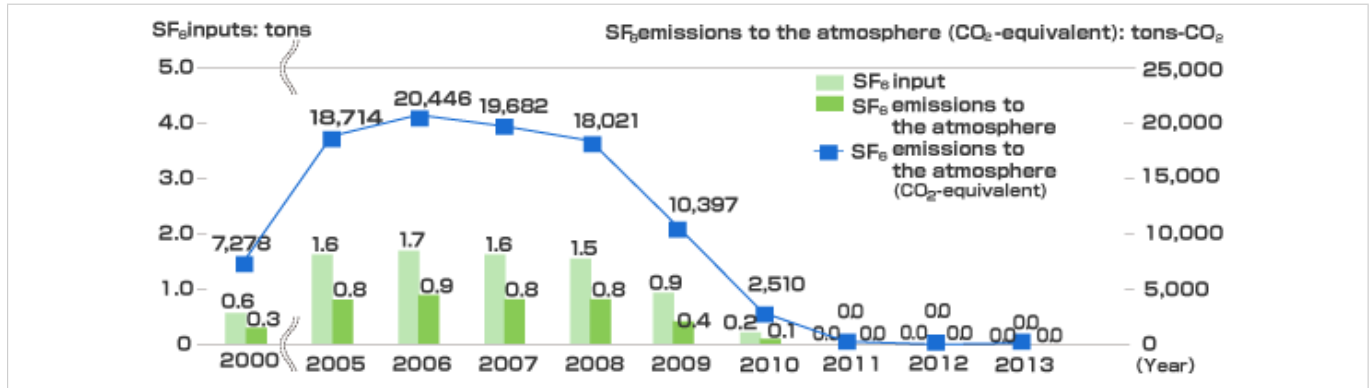
### CO2 emissions and emissions per unit of sales for logistics outside Japan



■ Greenhouse gases other than CO2

Because goals have already been met for greenhouse gases other than CO2 (SF6, HFCs) through the transfer of the device business (SF6) and ceasing to stock spray products that contain problematic components (HFCs), these gases have been left out of current targets. Periodic confirmation of these emissions will continue to be performed. Changes in SF6 emissions over time are shown in the graph below.

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.

■ Waste

**Reducing waste**

Casio revised its Environmental Action Plan in fiscal 2014, and transitioned to absolute volume goals that are not dependent on production volumes.

[All sites in Japan]

The target is to reduce waste from sites in Japan by 4% in fiscal 2016 compared to fiscal 2012.

In fiscal 2014, a reduction of about 7% had already been achieved versus fiscal 2012. By weight, this converts to a reduction of about 107 tons.

However, for fiscal 2014, Casio recorded a total increase in waste of about 194 tons. This was due to the addition of about 121 tons caused by changes in the waste calculation methods used at seven sales sites in Japan (a change was made in the coefficient used when converting from volume to weight, and all types of waste are now calculated using the larger conversion coefficient when specific types of waste cannot be confirmed. Another cause was the addition of about 73 tons of waste from fiscal 2014 from Yamagata Casio (the Yamanashi Office) which had not been added to the actual figures for the base year. Even after making these additions, the total volume of waste compared to the base year was still down by about 107 tons, revealing that Casio's various sites are making good progress. Casio will continue to work to reduce waste.

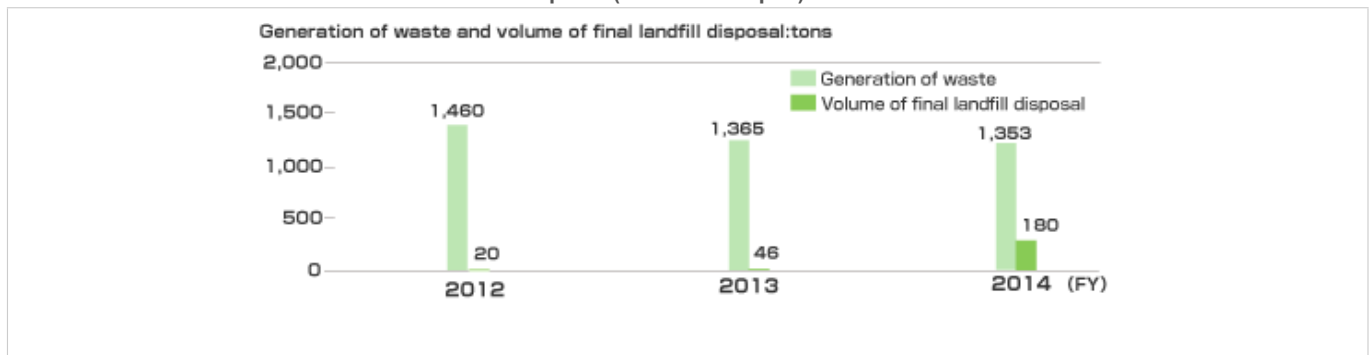
As a result of treating type-unknown waste as landfill, Casio's final landfill waste volume increased about 134 tons compared to fiscal 2013.

[Production sites outside Japan]

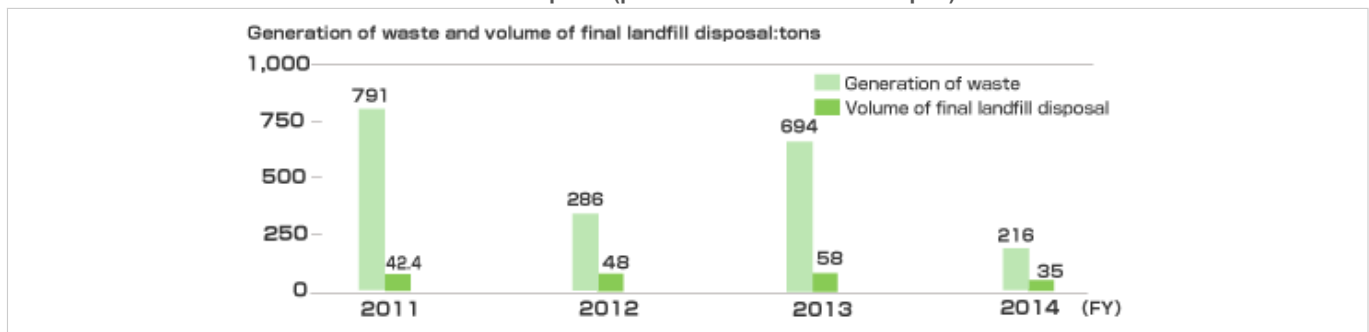
The target is to reduce waste at production sites outside Japan by 48% in fiscal 2016 compared to fiscal 2011.

In fiscal 2014, Casio achieved a reduction of about 73% compared to fiscal 2011, thereby hitting its target. This major decrease can be attributed to the closure of the Panyu Factory of Casio Computer (Hong Kong). Casio will continue to work to achieve further reductions.

**Generation of waste and volume of final landfill disposal (all sites in Japan)**



**Generation of waste and volume of final landfill disposal (production sites outside Japan)**



■ Water resources

**Reducing input of water resources**

Casio revised the parts of its Environmental Action Plan related to water resources in fiscal 2014, and transitioned to absolute volume goals that are not dependent on production volumes.

[Production sites in Japan]

Casio's goal is to reduce water usage at production sites in Japan by 5% in fiscal 2016 compared to fiscal 2011.

In fiscal 2014, Casio achieved a reduction of about 31% compared to fiscal 2011, thereby hitting its target. This significant decrease is attributed to personnel reductions at Yamagata Casio and the closure of the Murayama Factory. Casio will continue to pursue further reductions.

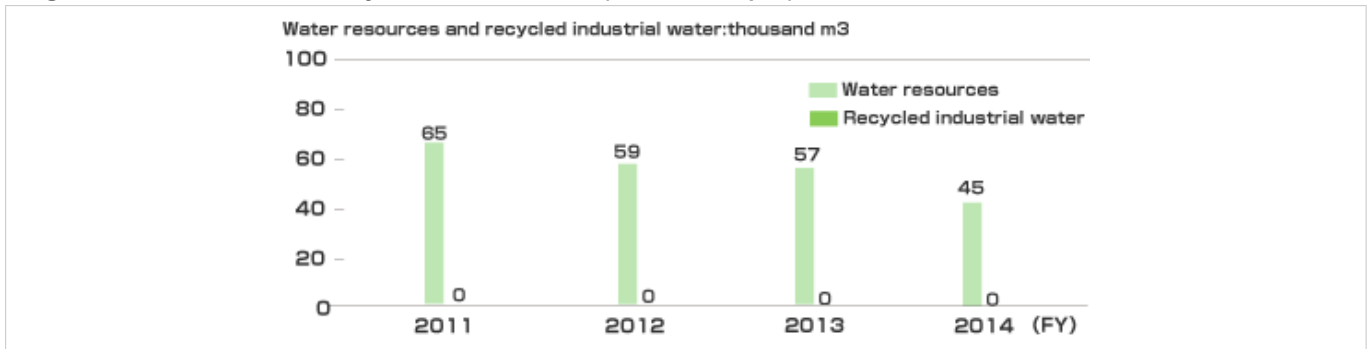
Figures were not calculated for Yamagata Casio (Yamanashi Office) in the base year, but results from this site are included in actual figures for fiscal 2014.

[Production sites outside Japan]

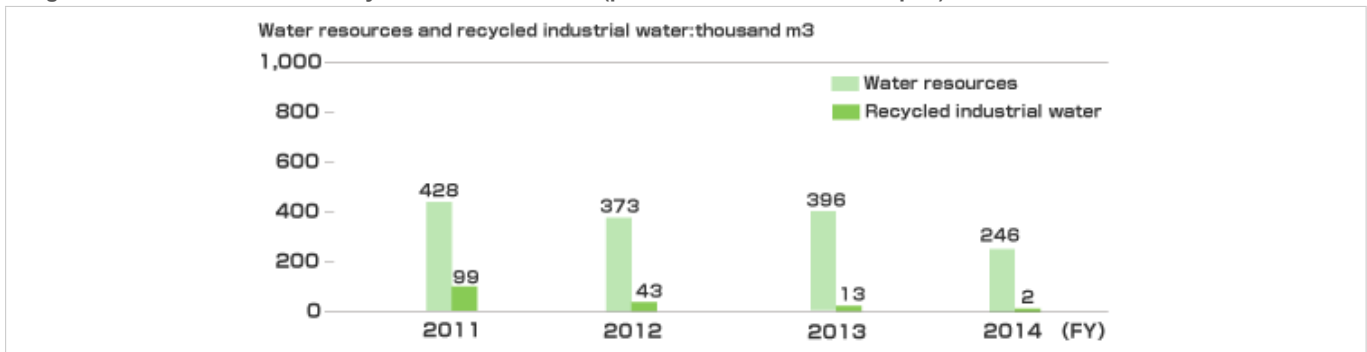
Casio's goal is to reduce water usage at production sites outside Japan by 5% in fiscal 2016 compared to fiscal 2011.

In fiscal 2014, Casio achieved a reduction of about 43% compared to fiscal 2011, thereby hitting its target. This is attributed to the closure of the Panyu Factory of Casio Computer (Hong Kong). Casio will continue to strive to achieve further reductions.

**Usage of water resources and recycled industrial water (all sites in Japan)**



**Usage of water resources and recycled industrial water (production sites outside Japan)**



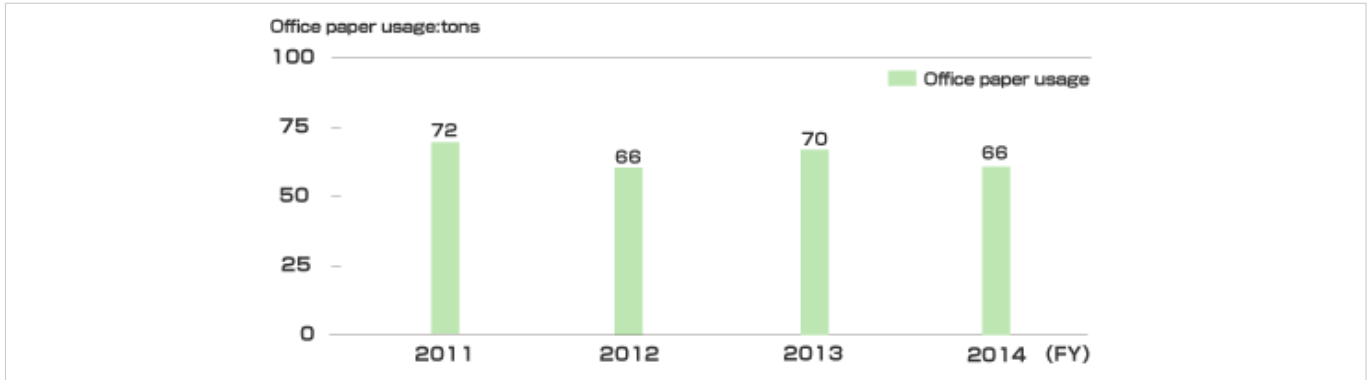
■ Paper resources

**Reducing usage of paper resources**

Casio revised the part of its Environmental Action Plan related to office paper at sites in Japan in fiscal 2014, and transitioned to absolute volume goals that are not dependent on production volumes. The goal is to reduce the volume of office paper used by 12% in fiscal 2016 compared to fiscal 2011. In fiscal 2014, Casio achieved a reduction of about 8% compared to fiscal 2011, showing that steady progress is being made toward the target. Casio will continue to work to reduce waste.

Figures were not calculated for Yamagata Casio (Yamanashi Office) in the base year, but results from this site are included in the actual figures for fiscal 2014.

**Office paper usage (all sites in Japan)**

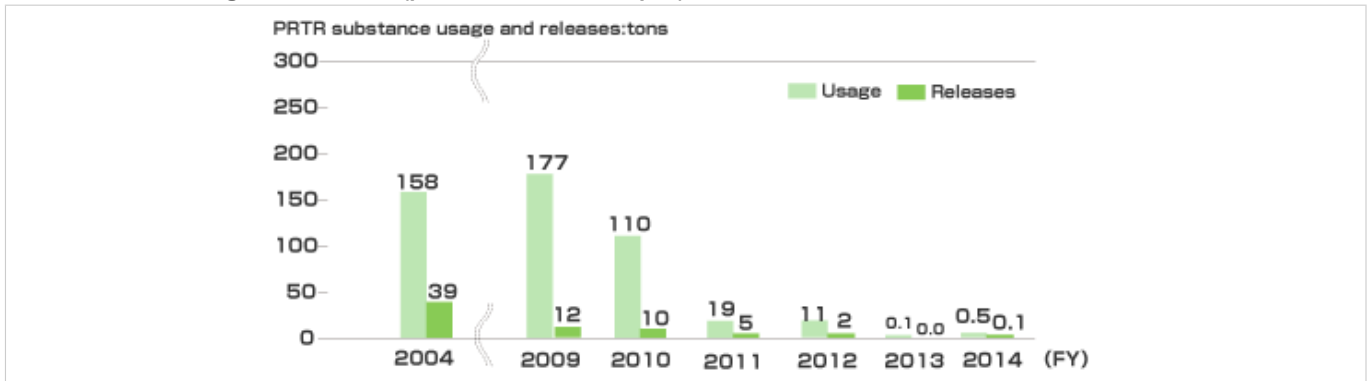


■ PRTR

**Reducing PRTR substances**

Since goals for reducing PRTR substances were met in fiscal 2013, these have been left out of current targets. Later changes over time are shown in the graph, but input amounts are less than one ton.

**PRTR substance usage and releases (production sites in Japan)**



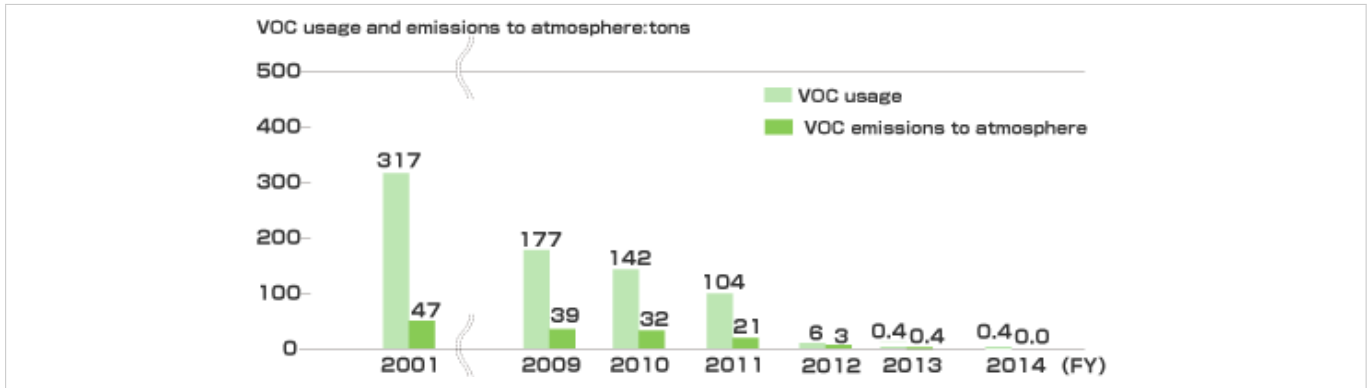
■ VOC, NOx, SOx, dust

**Reducing VOCs**

[Production sites in Japan]

Casio's goal is to reduce emissions of VOCs by 45% in fiscal 2016, compared to fiscal 2001, and it reached that goal fiscal 2013. Later changes over time are shown in the graph, but input amounts are less than one ton.

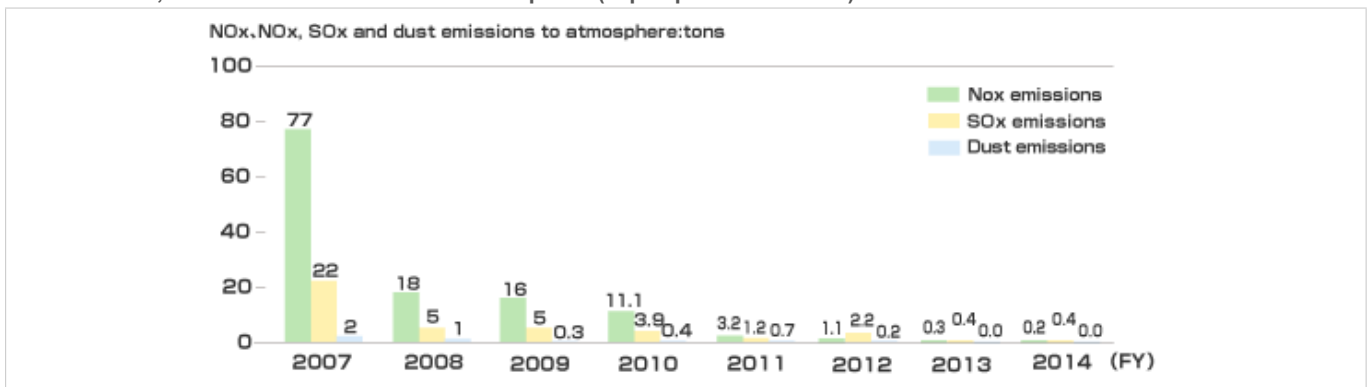
**VOC usage and emissions to atmosphere (production sites in Japan)**



**Reducing Nox, SOx, Dust**

Casio is taking measures to minimize NOx, SOx, and dust in a rational way by introducing and using appropriate equipment, and some changes have been achieved through changes in the way the equipment is operated. Changes over time are shown in the graph below.

**Trends in NOx, SOx and dust emissions to atmosphere (Japan production sites)**





## ■ Scope of Data

Environmental performance data was compiled using results from the following Casio sites for FY2014 (April 1, 2013 to March 31, 2014). For Casio Electronic Technology (Zhongshan), actual figures are for the period January 1, 2013 to December 31, 2013.

Production sites in Japan	Yamagata Casio Co., Ltd. Yamagata Casio Co., Ltd. (Yamanashi)	Casio Electronic Manufacturing Co., Ltd.
Office sites in Japan	Casio Computer Co., Ltd. (Headquarters) Casio Computer Co., Ltd. (Hachioji R&D Center) Casio Computer Co., Ltd. (Osaka sales office) Casio Computer Co., Ltd. (Saitama sales office) Casio Computer Co., Ltd. (Hiroshima sales office) Casio Techno Co., Ltd. (Headquarters) Casio Marketing Advance Co., Ltd. CXD Next Co., Ltd.	Casio Computer Co., Ltd. (Hamura R&D Center) Casio Computer Co., Ltd. (Kudan sales office) Casio Computer Co., Ltd. (Sendai sales office) Casio Computer Co., Ltd. (Nagoya sales office) Casio Computer Co., Ltd. (Fukuoka sales office) Casio Business Service Co., Ltd. (Headquarters and Kofu) Casio Information Service Co., Ltd.
Production sites outside Japan	Casio Electronic Technology (Zhongshan) Co., Ltd.	Casio (Thailand) Co., Ltd.
Office sites outside Japan	Casio Taiwan Co., Ltd. Casio (Guangzhou) Co., Ltd. Casio America, Inc. Casio Europe GmbH Casio France S.A. Casio Singapore Pte., Ltd. Casio (China) Co., Ltd. Guangzhou Casio Techno Co., Ltd. Casio Scandinavia AS Casio Italia S.r.l.	Casio (Hong Kong) Ltd.* Casio Electronics (Shenzhen) Co., Ltd. Casio Soft (Shanghai) Co., Ltd. Casio Canada Ltd. Casio Electronics Co., Ltd. Casio India Co., Pvt. Ltd. Casio Espana S.L. Casio Mexico Marketing, S. de R. L. de C.V. Casio Benelux B.V. Casio Brasil Comercio De Produtos Eletronicos Ltda.

\*Casio Computer (Hong Kong) Ltd. and the Panyu Factory were positioned as a "production site outside Japan" based on the calculations of output through fiscal 2013. However, in conjunction with the reconfiguration of Casio's Environmental Action Plan and the closure of the Panyu Factory, this facility has been repositioned as an "office outside Japan" starting this fiscal year, given that it now only consists of an office space.

## ■ Calculation Standards

---

### 1. • Inputs

#### 1. Energy input amount

- Combines the fossil fuel and electricity input into business activities at 40 sites in and outside Japan of Casio group companies.
- Includes fuel usage by company vehicles, but does not include energy used for contracted logistics services, commuting, and business trips.
- Crude oil equivalents are calculated based on Japan's Energy Conservation Act. Energy used at sites outside Japan is calculated on a crude oil equivalent by applying coefficients pursuant to Japan's Energy Conservation Act.

#### 2. Water resource input amount

- Usage amounts of tap water and industrial water are combined. Since figures for relatively small sales sites which are housed in rented buildings are difficult to ascertain, they are excluded.

#### 3. VOC input amount

- For substances subject to follow-up surveys related to VOC emission controls by the four main electrical and electronics industry associations, those whose annual usage at each site exceeds 50 kg are included in the tabulations.

#### 4. Paper usage amount

- Managed and tabulated based on the purchased amounts of paper used in printers, fax machines, and copy machines each year.
- The weight of one sheet is determined for each paper size, and weights are calculated based on the amounts purchased.

#### 5. PRTR substance input amount

- Calculated for chemical substances subject to Japan's PRTR Act whose annual amount handled per substance is 0.05 tons or more at each site.

### 2. • Outputs

#### 1. CO<sub>2</sub> emissions

- The CO<sub>2</sub> conversion factors for electricity used to calculate output amounts are as follows.

For emissions in Japan, Casio used the fiscal 2013 emission coefficient of 0.000487 (t-CO<sub>2</sub>/kWh), as announced by the Federation of Electric Power Companies in September 2013 to reflect an adjustment for depreciation credit.

For emissions in sites outside Japan, the "emissions factor adjusted for the CO<sub>2</sub> 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. Air pollutants

- Calculated at sites that have smoke generating facilities based on the concentration measurements and gas emissions at each facility.

#### 3. Wastewater

- Calculated from values at sites that measure wastewater amounts. Sites that do not measure wastewater amounts but can ascertain tap water use treat the amount of tap water used as their wastewater amount.

#### 4. PRTR

- Release and transfer quantities are calculated for each chemical substance subject to Japan's PRTR Act whose annual usage is 0.05 tons or more.

#### 5. Waste

- Waste is tabulated as the total amount of industrial waste generated when product is transferred from a Casio site to the processor, general waste derived from sites, and the quantity of valuables.
- Because sales sites are small in size and mixed waste is handled by a contractor, it is difficult to get accurate figures for recycling quantities and landfill waste quantities. Thus, all waste from these sites is conservatively treated as landfill waste for calculation purposes.

#### 6. Base year figures

- To evaluate medium- and long-term goals, Casio sets base year values by combining actual figures for all sites in existence in the established base year. Figures are not revised in conjunction with business transfer. For reference, the results obtained after adjusting base year figures in accordance with the GHG Protocol are shown in blue text in the Casio Environmental Action Plan Performance Report.