

# Environmental Performance

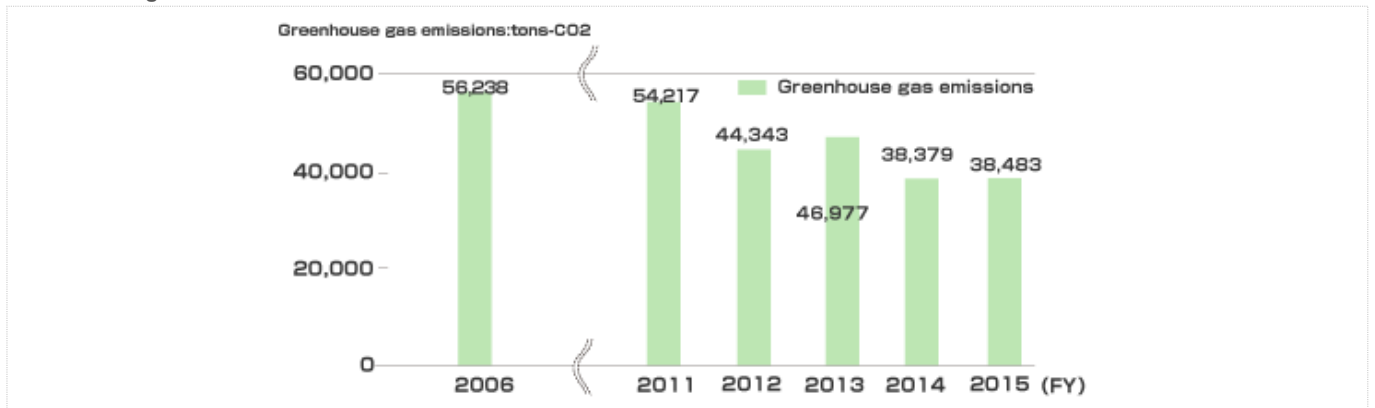
In order to comply with environmental laws and regulations, Casio's main sites have acquired ISO14001 certification and operate an environmental management system. Under the environmental management system, Casio plans and executes environmental protection activities based on a range of environmental 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). In the fiscal 2015 results, emissions were reduced by about 32% compared to the base year, and the medium-term plan has already been achieved. However, activities will be carried out for emissions reduction to achieve long-term targets. Furthermore, total CO2 emissions for the entire group in fiscal 2015 increased by 0.3% compared to fiscal 2014. However, this was due to an approximately 17% deterioration in the CO2 emission coefficient for electricity in Japan, which is used to calculate the amount of CO2 emissions generated per unit of electricity consumed.

### Greenhouse gas emissions



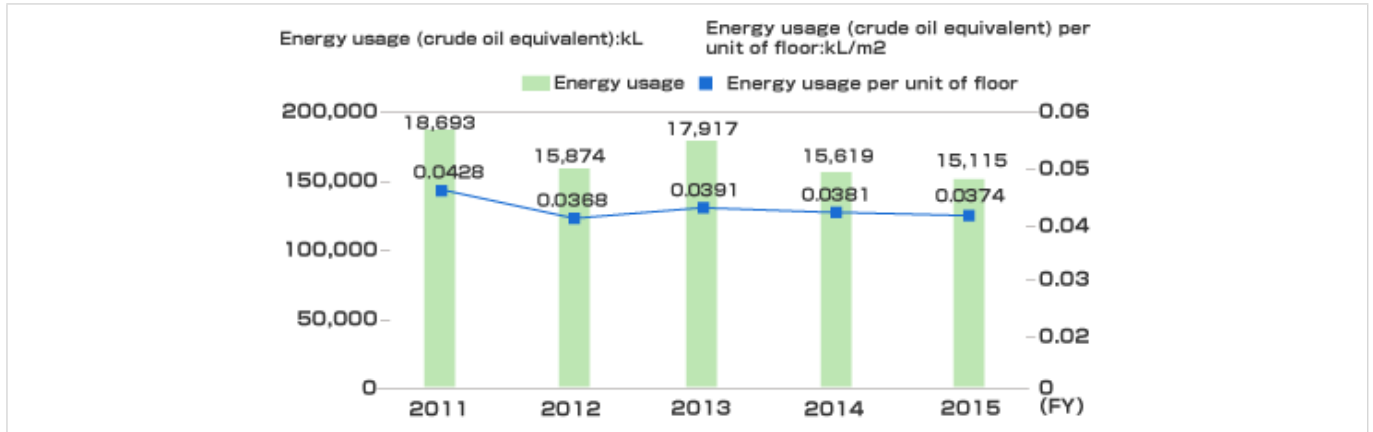
Starting in fiscal 2015, the base year (fiscal 2006) will be adjusted to a level that conforms to the GHG Gas Protocol.

## 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. Since fiscal 2015 was an interim year, and since there was an approximately 12.7% reduction for the fiscal 2015 result of 0.0374 kL/m<sup>2</sup> compared to the fiscal 2011 base year level of 0.0428 kL/m<sup>2</sup>, the target is now in sight. With an awareness that this target is close to the total reduction amount, further efforts will be made in the future.

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



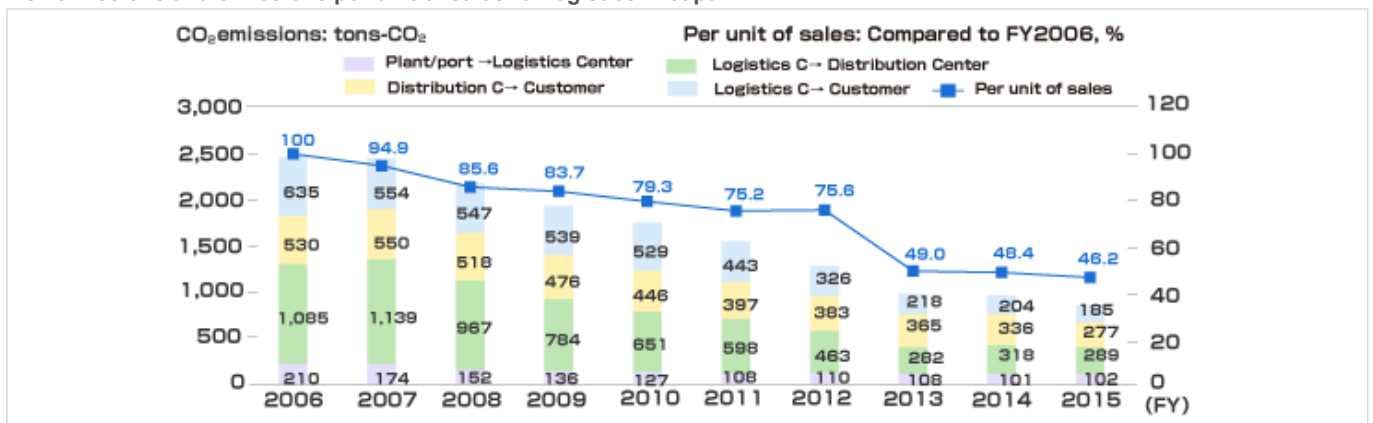
Since there was a change in total floor space at some sites, the energy consumption per unit of floor space figures have been revised going back to the previous year.

## Reducing CO<sub>2</sub> Emissions in Logistics

The target for CO<sub>2</sub> emissions from logistics activities in Japan is a 20% reduction per unit of domestic sales in fiscal 2016 compared to fiscal 2011. In fiscal 2015, emissions were 38.5% lower than in fiscal 2011, already achieving the target. Nevertheless, Casio will keep working to further reduce CO<sub>2</sub> 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 CO<sub>2</sub> 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.

## CO<sub>2</sub> emissions and emissions per unit of sales for logistics in Japan



■ 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 2015, waste was reduced by about 122 tons, a decrease of approximately 8% compared to fiscal 2012.

Although the target has been achieved, further efforts will be made in the future.

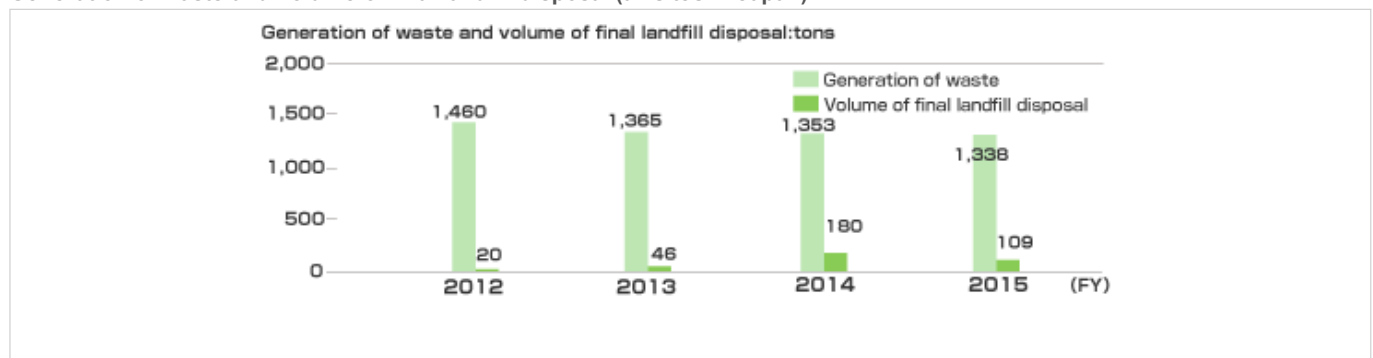
Moreover, landfill disposal volume was reduced by approximately 71 tons compared to fiscal 2014.

[Production sites outside Japan]

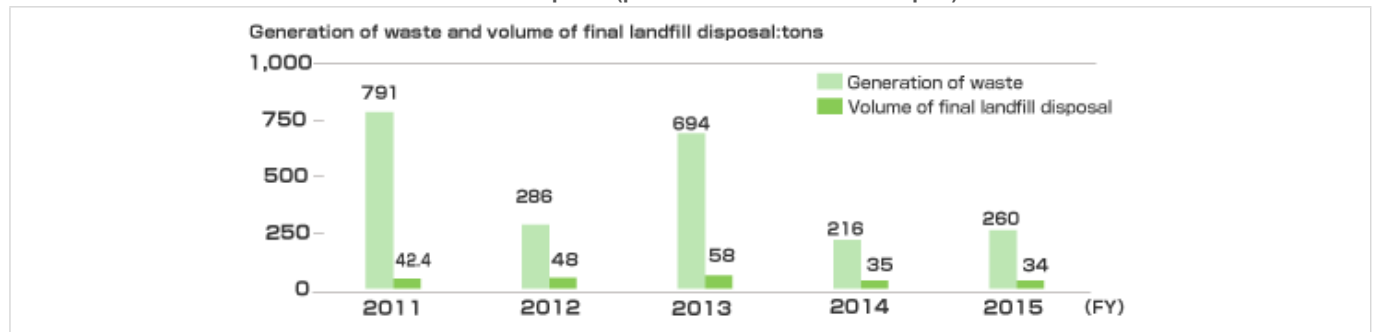
The target is to reduce waste at production sites outside Japan by 48% in fiscal 2016 compared to fiscal 2011.

In fiscal 2015, the waste reduction was about 67% compared to fiscal 2011, and the target was achieved. One reason for the substantial reduction was the closure of the Panyu Factory of Casio Computer (Hong Kong) in fiscal 2014. 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 2015, the reduction was about 18% compared to fiscal 2011, and the target was achieved. Along with increased production at Yamagata Casio, water usage has risen since fiscal 2014. Casio will continue to pursue further reductions.

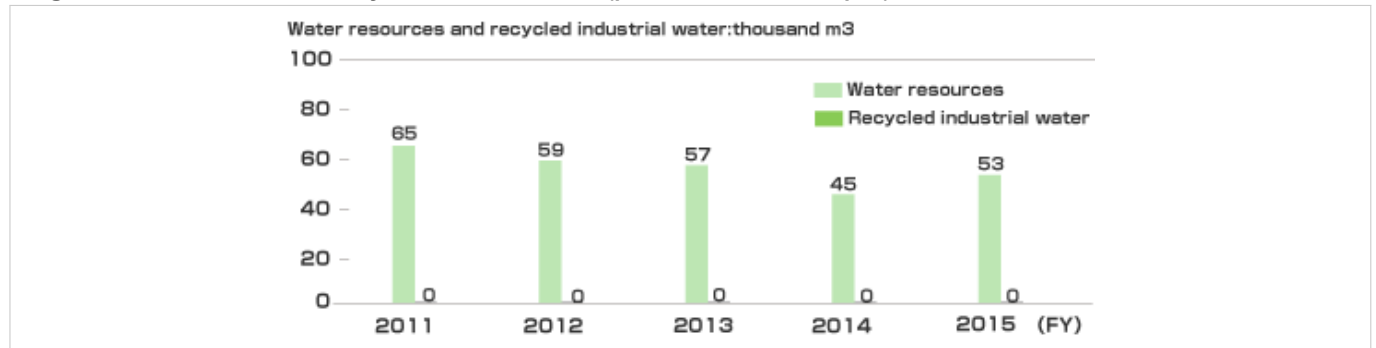
Although data from Yamanashi Plant of Yamagata Casio was not included in the base year level, it has been incorporated into the actual figures starting in fiscal 2014.

[Production sites outside Japan]

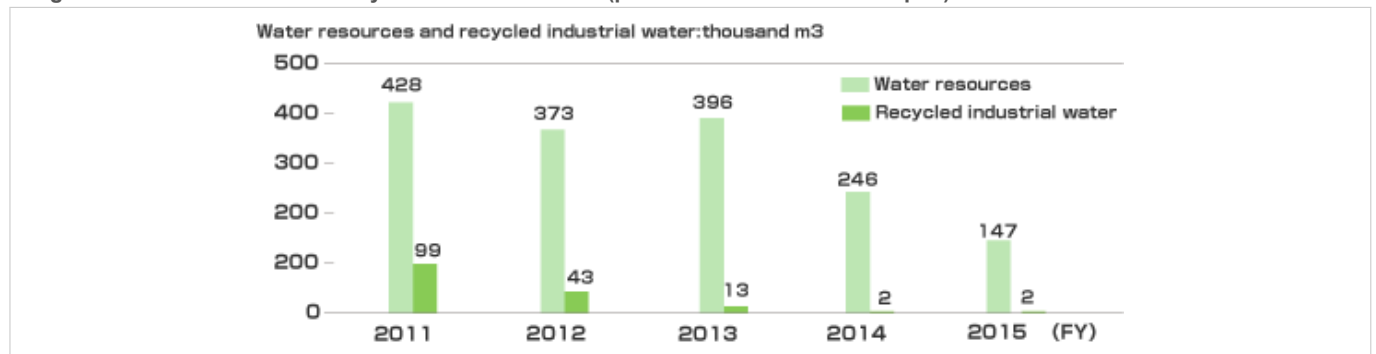
Casio's goal is to reduce water usage at production sites outside Japan by 5% in fiscal 2016 compared to fiscal 2011.

In fiscal 2015, the reduction was about 66% compared to fiscal 2011, and the target was achieved. The reasons for this were the closure of the Panyu Factory of Casio Computer (Hong Kong) in fiscal 2014 and lower production at some sites in fiscal 2015. Casio will continue to strive to achieve further reductions.

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



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



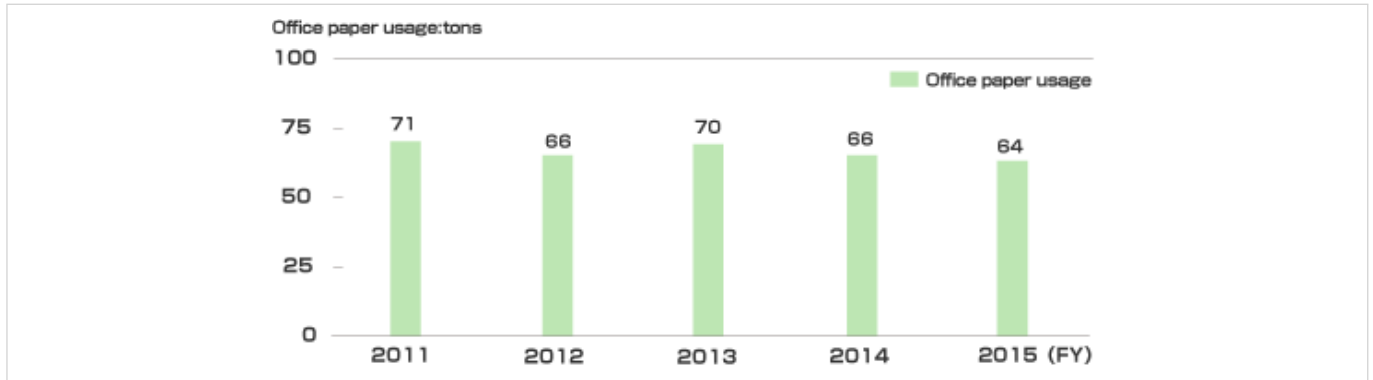
■ Paper resources

**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 2015, the reduction was about 10% compared to fiscal 2011, and steady progress was made. Efforts will continue to be made.

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)**

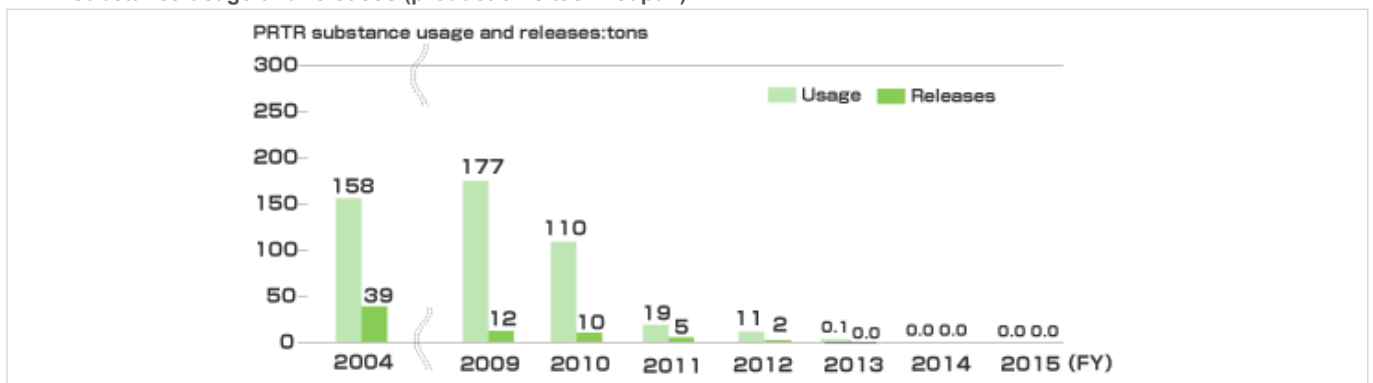


■ PRTR

**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)**



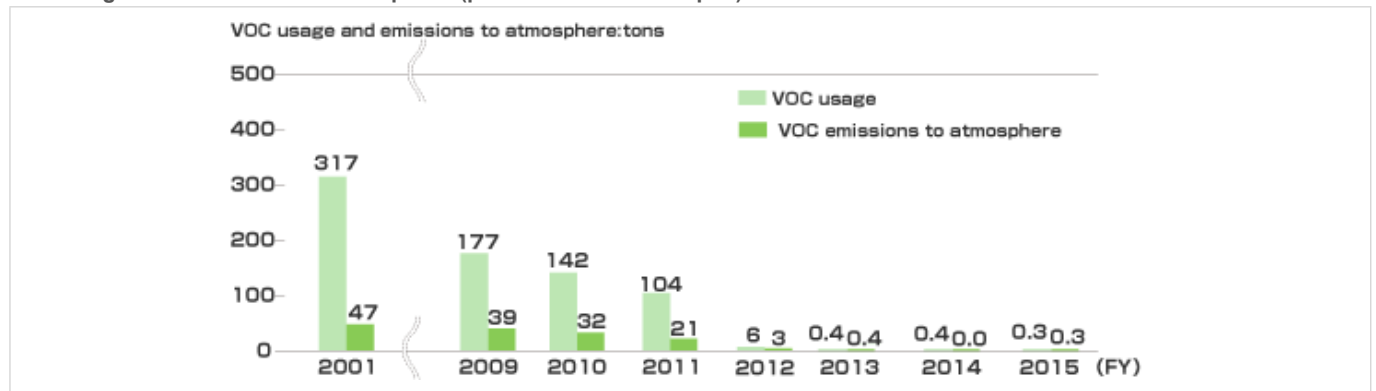
■ VOC, NOx, SOx, dust

**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.

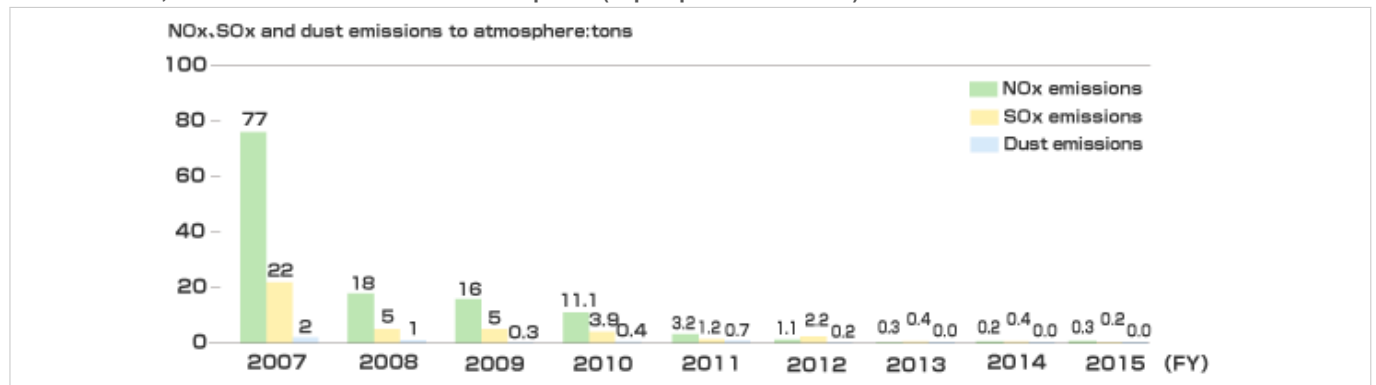
**VOC usage and emissions to atmosphere (production sites in Japan)**



**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

For the calculation of environmental performance figures including material balances, data was gathered from the following 42 sites for the period of April 1 2014 to March 31, 2015 (fiscal 2015).

Sites marked with a dot “●” include all production sites and main offices for environmental performance. Data for these sites is also listed separately.

Production sites in Japan (3 sites)	<ul style="list-style-type: none"> <li>●Yamagata Casio Co., Ltd.</li> <li>●Yamagata Casio Co., Ltd. (Yamanashi)</li> </ul>	<ul style="list-style-type: none"> <li>●Casio Electronic Manufacturing Co., Ltd.</li> </ul>
Office sites in Japan (15 sites)	<ul style="list-style-type: none"> <li>●Casio Computer Co., Ltd. (Headquarters)</li> <li>●Casio Computer Co., Ltd. (Hamura R&amp;D Center)</li> <li>●Casio Computer Co., Ltd. (Hachioji R&amp;D Center)</li> <li>•Casio Computer Co., Ltd. (7 sales sites)</li> </ul> <p>(Kudan, Osaka, Sendai, Saitama, Nagoya, Hiroshima, Fukuoka)</p> <ul style="list-style-type: none"> <li>•Casio Techno Co., Ltd. (Headquarters)</li> <li>•Casio Marketing Advance Co., Ltd.</li> </ul> <p>* Data for Casio Human Systems Co., Ltd., Casio Communication Brains Inc., and Casio Information Service Co., Ltd. have been included in the data for the sites where they are located.</p>	<ul style="list-style-type: none"> <li>●Casio Business Service Co., Ltd. (Headquarters and Kofu)</li> <li>•Casio Information Service Co., Ltd</li> <li>•CXD Next Co., Ltd.</li> </ul>
Production sites outside Japan (2 sites)	<p>Asia (2 sites)</p> <ul style="list-style-type: none"> <li>●Casio (Thailand) Co., Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>●Casio Electronic Technology (Zhongshan) Co., Ltd.</li> </ul>
Office sites outside Japan (22sites)	<p>Asia (9 sites)</p> <ul style="list-style-type: none"> <li>●Casio Electronics (Shenzhen) Co., Ltd.</li> <li>•Casio Computer (Hong Kong) Ltd.</li> <li>•Casio (Guangzhou) Co., Ltd.</li> <li>•Casio India Co., Pvt. Ltd.</li> <li>•Casio (China) Co., Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>•Casio Taiwan Co., Ltd.</li> <li>•Casio Soft (Shanghai) Co., Ltd.</li> <li>•Casio Singapore Pte., Ltd.</li> <li>•Guangzhou Casio Techno Co., Ltd.</li> </ul>
	<p>Europe (8 sites)</p> <ul style="list-style-type: none"> <li>●Casio Europe GmbH</li> <li>●Casio Electronics Co., Ltd.</li> <li>●Casio France S.A.</li> <li>•Casio Espana S.L.</li> </ul>	<ul style="list-style-type: none"> <li>•Casio Scandinavia AS</li> <li>•Casio Benelux B.V.</li> <li>•Casio Italia S.r.l.</li> <li>•Limited Liability Company Casio</li> </ul>
	<p>Middle East (1 site)</p> <ul style="list-style-type: none"> <li>•Casio Middle East FZE</li> </ul>	
	<p>Americas (4 sites)</p> <ul style="list-style-type: none"> <li>●Casio America, Inc.</li> <li>•Casio Canada Ltd.</li> </ul>	<ul style="list-style-type: none"> <li>•Casio Brasil Comercio De Produtos Eletronicos Ltda.</li> <li>•Casio Mexico Marketing, S. de R. L. de C.V.</li> </ul>

## ■ Calculation Standards

### 1. Overall

1. Items with no input, usage, handling or discharge performance have been left blank.
2. Figures are rounded off to the second decimal point, in the specified units (figures shown as “0.0” are less than “0.05”).
3. When total Casio Group values for VOC inputs/emissions and PRTR are 1 ton or more, data is shown separately for the individual site.

### 2. Inputs

#### 1. Energy input amount

- All fossil fuels and power used in business activities are totaled for sites indicated in the Scope of Data.
- 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.
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.

### 3. 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 2014 emission coefficient of 0.00057 (t-CO<sub>2</sub>/kWh), as announced by the Federation of Electric Power Companies in September 2014 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).
  - Regarding CO<sub>2</sub> equivalent for fuel, CO<sub>2</sub> conversion coefficients were calculated using the emission coefficients and unit calorific values by fuel type based on Japan's Global Warming Act, and then applied to different fuel types and totaled.
2. Air pollutants
  - Calculated at sites that have smoke generating facilities based on the concentration measurements and gas emissions at each facility.
  - Concentrations of dust emissions, NO<sub>x</sub>, and SO<sub>x</sub>, which must be managed by law, are measured at target sites, to confirm that they are below regulation levels.
  - The following substances are not used at any Casio site: dichloromethane, trichlorethylene, tetrachlorethylene, chloroform, vinyl chloride monomer, 1,3-butadiene, benzene, acrylonitrile, 1,2-dichloroethane, formaldehyde, trinickel disulfide, nickel nitrate, and acetaldehyde.
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.
  - At sites with special facilities that fall under the Water Pollution Prevention Act and/or the Sewer Act, water quality surveys are conducted based on applicable laws, and confirmation is made that emissions are below regulatory limits. Since fiscal 2014, the applicable facilities have not been operating.
  - In the case of discharge into public sewer systems, BOD is left blank, but figures are shown if voluntary measurements are taken.
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
  - For evaluation of medium and long-term targets, starting in fiscal 2015, base year (fiscal 2006) figures are adjusted according to the GHG Protocol.