



# The Environment

## Basic Policy

We consider the impact that our business activities have on the environment and strive continuously to reduce that impact at every stage from the development of products and services to procurement, production, transportation, sales, and after-use disposal, recycling, etc.

### Long-Term Goals

- Reduce total CO<sub>2</sub> emissions for domestic business by 6.5% or more relative to FY2013 levels by 2027
- Switch all palm oil used in our raw materials to certified palm oil by 2027
- Use certified paper for all paper containers and packaging by 2027
- Continuously achieve zero emissions

### Priority Initiatives

- Continuously improve the eco-friendliness of products by building a management system for evaluating environmentally friendly processes and their results in products and services
- Promoting measures to create a carbon-free society based on the Paris Agreement, and efforts to reduce greenhouse gas emissions at all sites
- Grasp the impact on biodiversity of each product throughout its life cycle and carry out measures to protect biodiversity
- Achieve and maintain zero emissions by fully recycling industrial waste

## Environmental Philosophy and Promotion System

It is our sincere hope to instill OYAKUDACHI, a contribution towards a comfortable life, for our consumers, our community, and the preservation of the global environment, through the actions of our business. We have always been environmentally conscious in daily operations at Mandom, and it came into fruition in August 1999, in the form of the establishment of the Mandom Environmental Philosophy and Fundamental Environmental Policy. Also, our Fukusaki Factory set its "Environmental Policy" as shown below in October 1999, which was revised on May 1, 2006. It was certified to ISO 14001 in November 2000.

In May 2016, we revised our Environmental Philosophy to strengthen efforts with respect to environmental protection throughout the value chain, corporate response to social demands, and systematic performance improvements. We also set environmental policies and are carrying out environmental activities for three priority areas—products, biodiversity conservation, and the Fukusaki Factory.

### Environmental Philosophy

We seek to accurately grasp the effects on the environment in our value chain and work with society to move ahead with systematic environmental conservation.

### Environmental Policies

#### ● Product Environmental Policy

We consider environmental friendliness to be an important aspect of product value. To help create a more sustainable society and build product value we strive to combine ecological and economic value in our products.

#### ● Biodiversity Conservation Policy

We recognize how much we rely on and receive from the abundance of nature and many living things, so we seek to accurately grasp the effects on biodiversity in our value chain and to lessen and prevent such impact.

#### ● Fukusaki Factory Environmental Policy

We seek to accurately grasp the effects on the environment of the production of cosmetics and quasi-drug products; to help create a more sustainable society we will carry out environmental activities aimed at improving global environmental conservation and relations with the local community.

1. We seek to accurately grasp the effects of our factory operations on the environment, and set, implement, and regularly review environmental targets within our technical and economic capabilities in the effort to continually improve our environmental conservation.
2. In our factory operations we aim to reduce environmental load and help create a more sustainable society through activities that focus on the following areas:
  - a. Saving energy and reducing greenhouse gas (CO<sub>2</sub>) emissions
  - b. Working to achieve zero landfill disposal ("Zero Waste Emissions")
  - c. Reducing the volume of industrial waste
  - d. Conserving local environments by preventing wastewater risks
3. We strive to comply with environmental regulations, uphold agreements with the community and stakeholders, and prevent pollution.
4. We strive to make every one of our employees aware of their role in following this environmental policy in their daily actions.

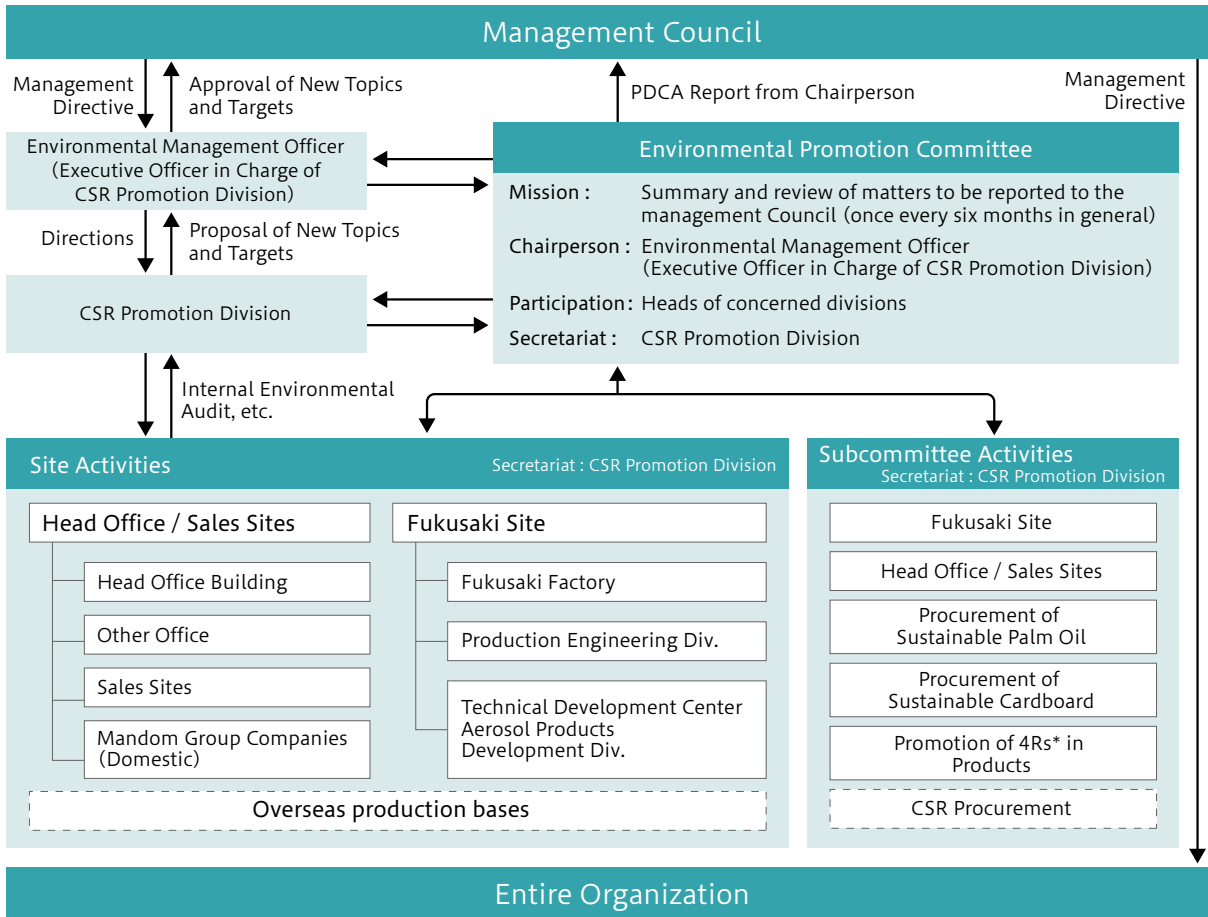
This environmental policy is open to anyone who needs this information inside and outside our group.

## ■ Environmental Promotion System

Mandom considers environmental conservation to be a key issue in our business activities, and we carry out environmental measures based on the Environmental Philosophy and Environmental Policy.

The Fukusaki Factory became ISO 14001-certified in November 2000, and in Mandom's offices (head office building, Tokyo Nihonbashi Building, sales sites and so on) we have set up environmental management systems based on the ISO standard. We also promote environmental action based on environmental targets using a Plan-Do-Check-Act (PDCA) cycle.

### Environmental Promotion System



## ■ Three-Year Activity Topics and Targets by Subcommittees and Sites

To promote environmental action, we carry out activities at each site, and activities by subcommittees.

In FY2018, we will begin efforts to calculate Scope 3 supply chain emissions.

2017 Subcommittees	Three-Year Activities and Targets (FY2017–FY2019)
Fukusaki Site	● Draft and implement a CO <sub>2</sub> emissions reduction and energy savings plan to achieve long-term targets
Head Office / Sales Sites	● Continued recycling of industrial waste (zero emissions) and improvement of recycling rate
Procurement of Sustainable Palm Oil	● Shift to RSPO-certified oil (Book & Claim (B&C)) for all glycerin purchased by the Fukusaki Factory
Procurement of Sustainable Cardboard	● Shift to FSC-certified paper for all cardboard used in product distribution (non-binding target)
Promotion of 4Rs* in Products	● Use of biomass material in all laminated packaging ● Shift to FSC-certified paper for paper containers and packaging (target: over 50%)
CSR Procurement	● Continuous review of Mandom Group Supplier CSR Guidelines ● Strengthen supply chain monitoring function and expand scope

\*Promotion of the 4Rs: Reduce, Reuse, Recycle, and Renewable (use of renewable resources and raw materials)

## ■ Environmental Considerations in Products and Services

### ■ Policy on Plastic Microbeads

In recent years the issue of plastics released into the oceans and their impact on ecosystems as they move through the food chain has come under scrutiny. In the United States a law was passed in December 2015 to phase in the ban of Plastic Microbeads in personal care cleansing products.

In light of this situation, the Mandom Group has set a policy to stop using Plastic Microbeads in its facial cleansing products by the end of 2017, replacing Plastic Microbeads using a formulation that does not cause such concerns.

In August 2016, Mandom introduced an updated version of the Gatsby facial scrub available in Japan, now with an environmentally friendly biodegradable scrub. Also, in fiscal 2017 we completed the switch to alternative raw materials in Gatsby facial scrub manufactured in Indonesia for overseas markets, and started shipments of the new product.

### ■ Protecting Biodiversity

In April 2016, we established a policy for protection of biodiversity, and incorporated it into our Environmental Policies (see P.35). At the CSR Promotion Committee meeting in February 2017, we established the following long-term targets as Mandom Group CSR Material Issues (Ver. 2).

1. To switch completely to the use of RSPO-certified palm oil as a raw material source by 2027
2. To switch completely to the use of FSC-certified paper for paper containers and packaging by 2027

(RSPO: Roundtable on Sustainable Palm Oil)



External Site  
RSPO Official Website  
● About RSPO



External Site  
FSC  
● FSC Official Website

These efforts will not only protect both the environment and biodiversity; they will help to actively build and strengthen cooperative relationships with related suppliers and experts, NGOs and NPOs, and people in various communities. At the same time, the efforts will lead to our building and implementing a CSR procurement system that also considers human rights and labor issues.

### ■ Procurement of Sustainable Palm Oil

To move toward procurement of sustainable palm oil in light of impacts on the environment, we joined the Roundtable on Sustainable Palm Oil (RSPO) in March 2018 as an initiative for FY2017. With an eye toward future long-term targets, we have developed a plan to purchase credits via the RSPO supply chain certification model (Book & Claim system) for our purchased amount of glycerin—the raw material derived from palm oil that is used in the greatest volume at our Fukusaki Factory.

### ■ Procurement of Sustainable Paper Container and Packaging Materials

As a FY2017 initiative relating to the procurement of sustainable paper container and packaging materials, we began phased switching to FSC-certified cardboard at the Fukusaki Factory, starting from new deliveries in February 2018, with a focus on cardboard used to transport products manufactured by Mandom.

## Promoting Measures Toward a Carbon-Free Society

### Factory Systems

At the Fukusaki Factory, the power consumption data taken from the power monitoring system is shared at a monthly supervisors' meeting and used in the various sections of the factory to develop energy-saving measures. A switch was made to thermal energy for nighttime power for the air-conditioning and refrigeration system, and an ice thermal storage system was adopted for the daytime for the most effective use of power. We are also upgrading air-conditioning equipment, and changing lighting to LEDs.

Power consumption at the Fukusaki Factory in FY2017 was 7.492 million kWh, up by roughly 0.1% year-on-year (with a 3.7% decrease in specific consumption per unit sales). CO<sub>2</sub> emissions (Scope 1 + 2) were 4,125 tons, down by 2.7% from the previous year (a 6.3% decrease in specific emissions per unit sales).

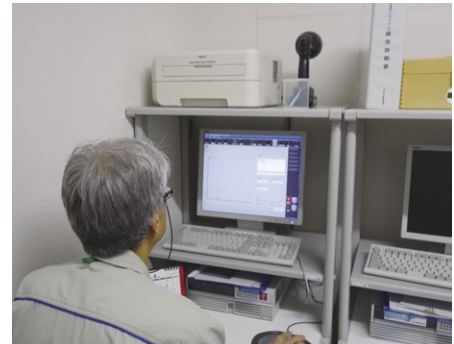


Power monitoring system of the Fukusaki Factory

### Office Systems

Our head office building uses demand monitoring to manage electric power consumption in different ways at different times of the day and reduce peak demand-side consumption. Furthermore, we are engaged in an ongoing shift to LED lighting and high-efficiency transformers.

Power consumption in domestic offices in FY2017 was 3.117 million kWh, for an increase of 3.1% over the previous year, and CO<sub>2</sub> emissions (Scope 1 + 2) declined by 0.2% year-on-year to 2,091 tons.



Demand monitoring equipment at the head office building

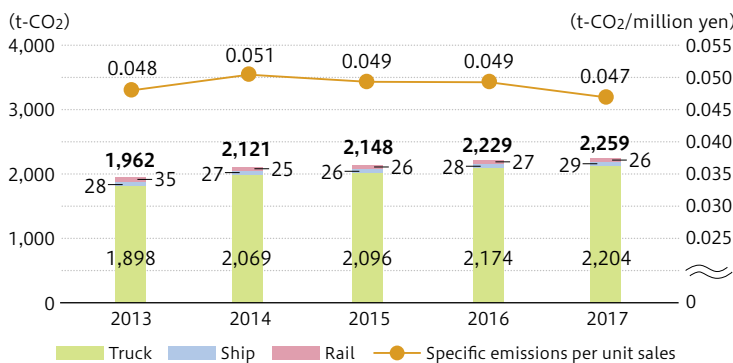
### Product Distribution

To reduce CO<sub>2</sub> emissions in distribution, we have been streamlining operations and pursuing a modal shift from trucks to freight trains and cargo ships. We started outsourcing operations in October 2004 with the aim of streamlining our distribution operations, using freight trains primarily for transporting products from Himeji to Kyushu, and cargo ships for transporting products from Maizuru to Hokkaido.

In truck transportation, we strive to continue achieving as close to a 100% load efficiency as possible.

CO<sub>2</sub> emissions attributable to distribution in FY2017 were 2,259 tons, a year-on-year increase of 1.3% (with a 4.1% decrease in specific emissions per unit sales).

CO<sub>2</sub> emissions in distribution (Scope 3, part of Category 4)



## Promoting a Recycling-Oriented Society

### Efficient Water Use

At the Fukusaki Factory, we are working to reduce water use by regularly calling upon each department to save water, and reviewing methods of cleaning production equipment, piping and other facilities. Also, at the head office building we use water-saving equipment that controls water flow and low-flush toilets to reduce water use.

Water resource consumption in FY2017 was 83,649 m<sup>3</sup>, a dramatic year-on-year decrease of 7.3% (a 10.8% reduction in specific consumption per unit sales).

### Reducing Waste

Since October 2003 at the Fukusaki Factory we have been maintaining a 99% or higher rate of resource recovery from industrial waste to qualify as "zero waste emissions." In FY2017, this was achieved at all Mandom business sites in Japan.

To encourage waste reduction and recycling at our head office building, we conduct annual environmental awareness seminars in June relating to such topics as environmental problems, and rules for proper waste classification and disposal for new employees and individuals who have transferred to the head office building.

Waste emissions including general wastes were 3,433 tons\* in FY2017, a year-on-year increase of 0.3%.

\*From the FY2017 report, waste calculations include waste from returned products (including air emissions) and sales promotion materials.

Waste Recycling Rate (including industrial waste and general waste)

	FY2013	FY2014	FY2015	FY2016	FY2017
<b>Fukusaki Factory</b>	99.7%	99.7%	99.8%	99.7%	99.8%
<b>Office*</b>	80.5%	76.8%	73.8%	78.3%	78.6%
<b>Domestic total</b>	98.5%	99.0%	99.3%	99.3%	99.4%

\*Office is the total for the head office building and Tokyo Nihonbashi Building

### Preventing Pollution

At the Fukusaki Factory, when the boilers operate for an extended time, there are increased emissions of the air contaminants sulfur oxide (SOx) and nitrogen oxide (NOx). We are therefore taking measures to improve boiler usage efficiency, introducing electric water heaters, etc.

In FY2017, emissions of sulfur oxides (SOx) were 21 kg, a 38.2% decrease year-on-year, but emissions of nitrogen oxides (NOx) were 342 kg, a 39.6% increase over the previous year.

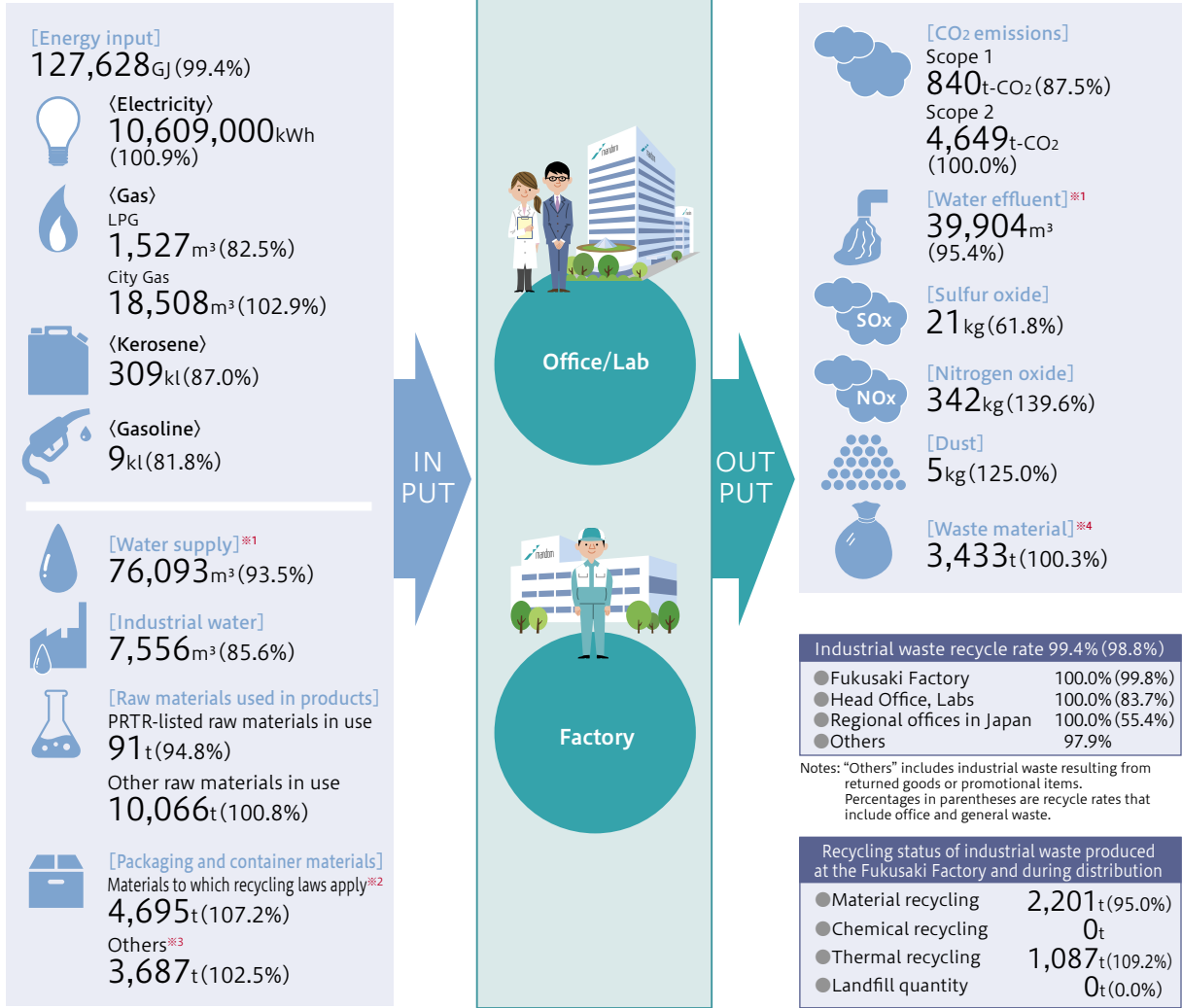
### Wastewater Efforts

Starting in September 2015, wastewater from the Fukusaki Factory began to be discharged directly into Hyogo Prefecture's Fukusaki municipal sewage system, in effect relaxing effluent standards, but Mandom has continued to set standards higher than agreed values and treats wastewater accordingly. Also, the results of measuring water quality discharged into the sewage system are reported to the town of Fukusaki once a month.

The total domestic volume of wastewater in FY2017 was 39,904 m<sup>3</sup>, a year-on-year decrease of 4.6% (with an 8.2% decrease in specific volume per unit sales).

# Overview of Domestic Environmental Load of the Mandom Group (FY2017 results and year-on-year comparisons with previous years)

## 【Factory, Office/Lab】



(Note: figures do not include outsourced processing)

## 【Distribution/Transport】

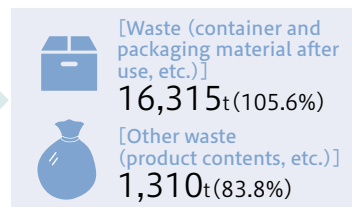


## 【Sales activities】



- \*1 Water supply and water effluent quantities do not include regional office data (because of difficulty in obtaining such information).
- \*2 Containers using materials such as glass, paper, plastic, etc.
- \*3 The figure for container and packaging materials does not include distribution materials (because of difficulty in calculating such information).
- \*4 Waste figures include industrial waste, as well as returned goods (including atmospheric dispersal) and promotional items.
- \*5 Including estimates for field staff, etc.

## 【Customer】



## <Environmental Impact Data for the Mandom Group in Japan>

Data collection period: April of the year shown to March of the following year

Data gathered from: 1 manufacturing location, 10 non-manufacturing locations, 1 consolidated subsidiary, and 1 non-consolidated subsidiary (all in Japan)

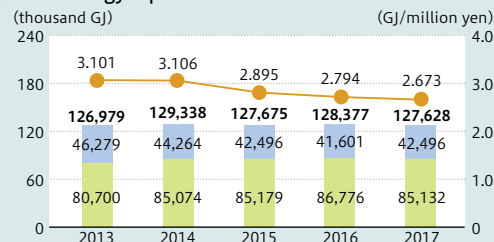
Per unit of sales: Calculated in units of 1 million yen sales

	FY2013	FY2014	FY2015	FY2016	FY2017
<b>Total energy input(GJ)</b>	126,979	129,338	127,675	128,377	127,628
Fukusaki Factory	80,700	85,074	85,179	86,776	85,132
Office	46,279	44,264	42,496	41,601	42,496
Per unit of sales	3.101	3.106	2.895	2.794	2.673
<b>Breakdown of energy input(GJ)</b>	126,979	129,338	127,675	128,377	127,628
Electric power (thousand kWh)	10,056	10,470	10,354	10,511	10,609
Fukusaki Factory	6,809	7,273	7,281	7,487	7,492
Office	3,247	3,198	3,073	3,024	3,117
Per unit of sales	0.246	0.251	0.235	0.229	0.222
Gas (m <sup>3</sup> )	20,457	20,175	20,929	19,838	20,035
LP Gas	1,671	1,981	1,988	1,852	1,527
City gas	18,786	18,194	18,941	17,986	18,508
Kerosene (kl)	369	368	367	355	309
Gasoline (kl)	377	350	333	323	322
<b>Water usage(m<sup>3</sup>)</b>	99,097	86,669	95,416	90,229	83,649
Fukusaki Factory	87,040	76,292	85,358	80,619	73,352
Water supply	63,843	63,944	74,872	71,789	65,796
Industrial water supply	23,197	12,348	10,486	8,830	7,556
Office	12,057	10,377	10,058	9,610	10,297
Per unit of sales	2.420	2.082	2.163	1.964	1.752
<b>Raw material usage(t)</b>	15,278	15,894	17,256	18,055	18,539
Raw materials used in products	9,283	9,490	10,100	10,078	10,158
PRTR	69	46	102	96	91
Other raw materials	9,214	9,443	9,998	9,982	10,066
Packaging and container materials	5,996	6,404	7,156	7,977	8,382
Materials to which recycling laws apply	3,314	3,563	4,083	4,380	4,695
Other materials*1	2,682	2,842	3,073	3,597	3,687
Per unit of sales	0.373	0.382	0.391	0.393	0.388
<b>CO<sub>2</sub> emissions(Scope 1+2) (t-CO<sub>2</sub>)</b>	6,650	6,616	6,729	6,334	6,216
Fukusaki Factory	4,284	4,352	4,486	4,239	4,125
Office	2,366	2,264	2,242	2,095	2,091
Per unit of sales	0.162	0.159	0.153	0.138	0.130
<b>Water effluent(m<sup>3</sup>)</b>	47,336	45,109	48,740	41,845	39,904
Fukusaki Factory	35,279	34,732	38,546	32,235	29,607
Office	12,057	10,377	10,194	9,610	10,297
Per unit of sales	1.156	1.083	1.105	0.911	0.836
<b>Waste material(t)</b>	4,080	3,743	3,649	3,422	3,433
Fukusaki Factory, distribution	3,984	3,652	3,571	3,337	3,314
Office*2	96	90	78	85	119
Resource recovery rate(%)	98.5%	99.0%	99.3%	99.3%	99.4%
<b>Sulfur oxide(SO<sub>x</sub>) emissions(kg)</b>	26	28	25	34	21
<b>Nitrogen oxide(NO<sub>x</sub>) emissions(kg)</b>	263	210	141	245	342
<b>Dust emissions(kg)</b>	5	14	3	4	5
<b>Reference: CO<sub>2</sub> emissions in distribution(upstream) (Scope 3, Category 4 only)</b>					
<b>CO<sub>2</sub> emissions(t-CO<sub>2</sub>)</b>	1,962	2,121	2,148	2,229	2,259
by truck	1,898	2,069	2,096	2,174	2,204
by ship	28	27	26	28	29
by railroad	35	25	26	27	26
Per unit of sales	0.048	0.051	0.049	0.049	0.047

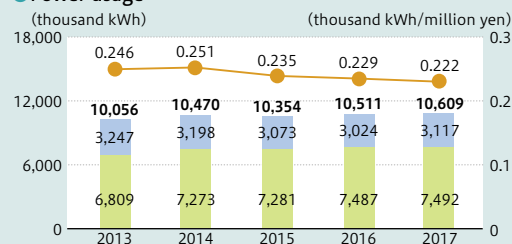
\*1: Does not include materials used in distribution \*2: From FY2017, returned products (including air emissions) and wastes from sales promotion materials are added to waste material emissions

Office (Head Office, Tokyo Nihonbashi, Aoyama, business sites)  
Fukusaki Factory  
Per unit of sales  
Resource recovery rate

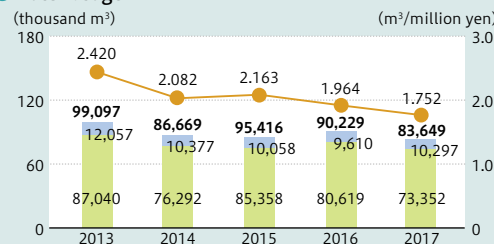
### Total energy input



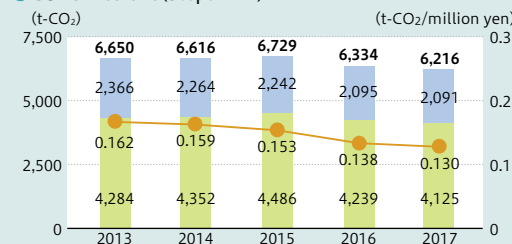
### Power usage



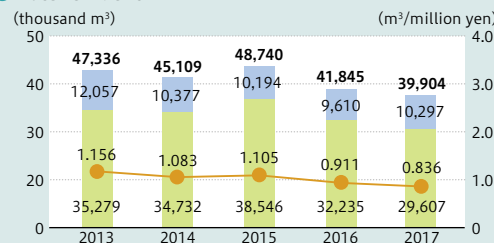
### Water usage



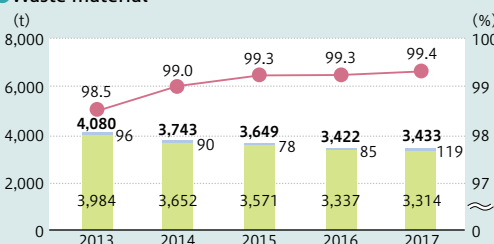
### CO<sub>2</sub> emissions(Scope 1 + 2)



### Water effluent



### Waste material



For detailed information, such as environmental impact data including overseas operations, please see environment information pages under CSR Information on Mandom's official website.