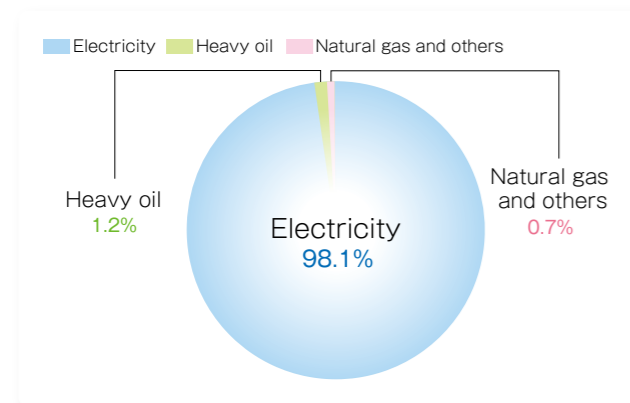


Reducing Environmental Impacts

Tamron strives to reduce CO₂ emissions, electricity consumption, waste and water consumption at the company's plants using its integrated management system.

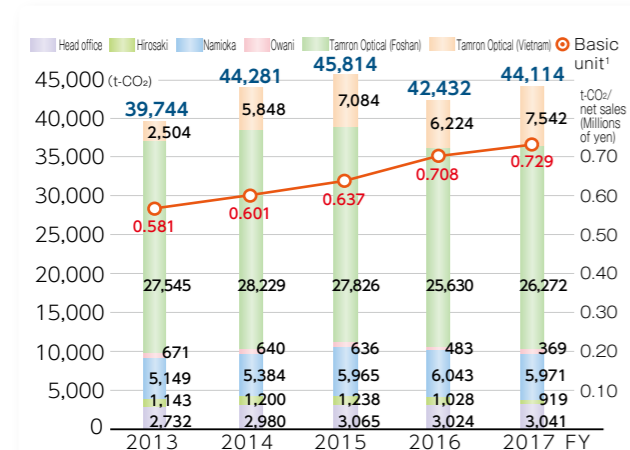
Breakdown of CO₂ emissions

CO₂ accounts for most of the greenhouse gases released by Tamron. As regards the sources of CO₂ emissions(excluding distribution and logistics), electricity usage accounts for 98.1%, followed by heavy oil at 1.2%. Given this mix, our energy saving activities focus on reducing electricity consumption.



Trends in CO₂ Emissions

Since FY2011, the CO₂ emissions(excluding emissions during transportation)from Tamron's head office, the three plants in Aomori Prefecture, Tamron Optical(Foshan)in China and Tamron Optical(Vietnam)has been on the rise. In FY2017, overall CO₂ emissions rose 4.0% compared to FY2016 levels. Viewed by geographic location, our sites in Japan saw a 2.6% decrease, while Tamron Optical(Foshan) saw a 2.5% increase and Tamron Optical(Vietnam) saw a 21.2% increase. The rise from Tamron Optical(Vietnam) is primarily due to a higher rate of in-house production from capital investment, and the heightened requirement for precise air conditioning for humidity control in lens machining rooms as a result. The basic unit of sales for overall CO₂ emissions increased by 3.0% compared with the FY2016 level. In FY2018, we will consider comprehensive energy saving measures to reduce emissions by 16.55% by the year 2030 by adding Tamron Optical(Vietnam) to the integrated management system.



1. The greenhouse gas coefficient from the Greenhouse Effect Gas Measuring & Reporting Manual Version 4.3.1 is used for managing medium-term targets with a benchmark year of FY2016. For consistency purposes, this same coefficient has been used for this report to re-calculate basic unit of CO₂ emissions from FY2010 onward.

Measures to Reduce CO₂ Emissions

In FY2017, Tamron implemented activities through the CO₂ Emissions Reduction Committee, and used streamlined electric power management sensors to identify excess power usage. When excess power was discovered, the committee examined whether reductions could be made. When possible, reduction measures including operational improvements were implemented and the effects verified. A solar power generating system was installed at Tamron Optical(Foshan) in China in August 2017. Cumulative power generation has now reached 128,000 kWh, which is equivalent to reducing CO₂ emissions by 70 tons. Tamron Optical(Foshan) has also replaced 4,167 lights with LED lighting and switched to energy efficient types of motors. At Tamron Optical(Vietnam), efforts are being made to reduce standby power consumption. For instance, on plant closure days, the power supply to equipment such as compressors, cooling towers and process cooling water supply systems is cut, provided it does not run the risk of causing malfunction. In addition, the third Friday of every month has been designated as No My Car Day, and certain days in the summer and winter are designated as Eco Life Days(an initiative launched by Saitama Prefectural Government), as part of the company's efforts to raise environmental awareness among all of the executive officers and employees at the head office. CO₂ emissions were reduced by 13.1t-CO₂ through these efforts in 2017.

Tamron will continue to work on further CO₂ reductions by sharing information and taking a long-term approach in considering the introduction of energy-saving equipment. The measures taken to reduce CO₂ emissions in FY2017 are outlined below.



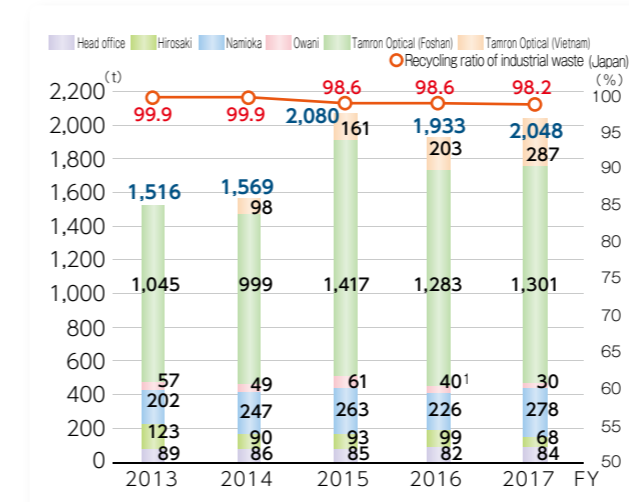
A solar power generating system(Tamron Optical(Foshan)in China)

Main CO₂ Emissions Reduction Measures Implemented in FY2017

| Site | Measure | Reduction (t-CO ₂) |
|------------------------------------|---|--------------------------------|
| Head Office | Improving compressor operation (Mold & Tooling Technology Center) | 1 |
| Namioka Plant | Improving operation of continuous evaporation machine | 17 |
| Owani Plant | Switching air conditioning units to energy-saving types (9 units) | 57 |
| Tamron Optical (Foshan) (in China) | Introduction of a solar power generating system | 70 |
| | Switching over to LED lights (4,167 lights) | 250 |
| | Switching to energy efficient motor types (38 units) | 50 |
| Tamron Optical (Vietnam) | Reducing standby power consumption | - |

Waste Reduction Initiatives

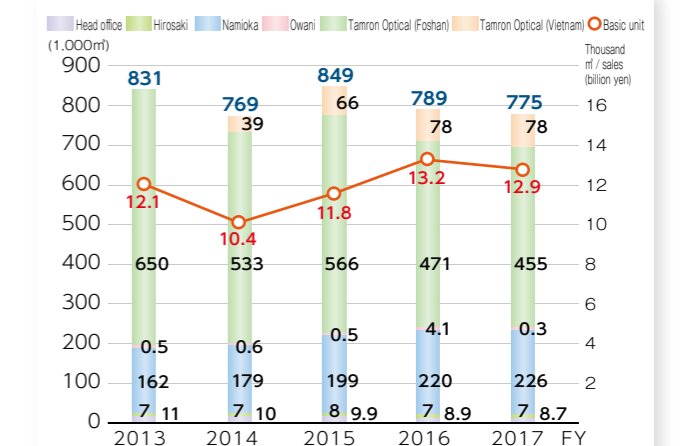
The total amount of waste generated in FY2017 by the Tamron Group as a whole, increased by 5.9% compared with FY2016. This is mainly due to the increased rate of in-house manufacturing, higher molding volume and the increase in disposal of cardboard and waste plastic at Tamron ptical (Vietnam).



1. Waste volume for the Owani Plant reported in FY2016 was corrected from "41t" to "40t." Accordingly, Group-wide waste volume was corrected from "1,934t" to "1,933t."

Trends in Water Consumption

The total water consumption of the Tamron Group as a whole in FY2017 decreased by 1.8% compared with FY2016. In May 2017, reclaimed water recycling facilities were installed at Tamron Optical(Foshan) in China. We have since managed to recycle 2,957 tons of production wastewater. Tamron Optical(Vietnam) made improvements to the cooling water systems of its molding machines to reduce water usage and wastewater production. As a result, water usage and wastewater generation were reduced by 12%. The increased usage at the Namioka Plant was due to a higher number of operating days compared with the previous year, and longer operating times for equipment.



Ascertaining CO₂ Emissions in the Supply Chain(FY2016)

Tamron calculates its CO₂ emissions based on direct emissions (Scope 1) and energy-derived indirect emissions(Scope 2). In 2017, we received support from the Ministry of the Environment in calculating supply chain emissions and also calculated indirect emissions(Scope 3) for FY2016. As a result, we verified that among

Scope 3 emissions, Category 1 emissions(emissions generated from the extraction and production of all products and services that have been purchased or acquired) accounted for a large proportion of the total. Moving forward, we will work to improve the accuracy of our calculations and further reduce CO₂ emissions.

CO₂ Emissions for FY2016 by Scope and Category *

| Scope | CO ₂ Emissions(t-CO ₂) |
|----------------------------|---|
| Scope 1 | 1,395 |
| Scope 2 | 41,541 |
| Scope 3² | 197,325 |
| Category 1 | 112,203 |
| Category 2 | 50,939 |
| Category 3 | 2,365 |
| Category 4 | 13,720 |
| Category 5 | 3,644 |
| Category 6 | 328 |
| Category 7 | 8,393 |
| Category 8 | 50 |
| Category 11 | 1,274 |
| Category 12 | 4,409 |
| Scope 3 Total | 197,325 |

* Scope of Calculation : Head Office, Hirosaki Plant, Namioka Plant, Owani Plant, Tamron Optical(Foshan), Tamron Optical(Vietnam) (including CO₂ emissions of 504t-CO₂ during transportation)

* Method of Calculation : "Emission factor database for corporate GHG emissions accounting over the supply chain Ver. 2.4" and "Carbon Footprint Communication Program Basic Database Ver. 1.01"

2. Please visit the Tamron website for more details such as information on the categories excluded from the calculation of Scope 3 emissions.