

# Environmental Objectives and Targets Achieved

While we worked toward achieving medium-term environmental objectives and targets for the first year of the program, we failed to meet the CO<sub>2</sub> emissions reduction target.

## Achievement of Environmental Objectives and Targets in FY2017

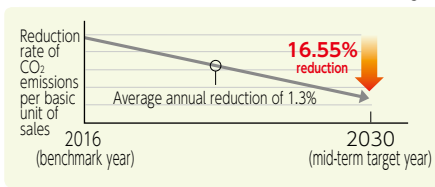
In consideration of the Paris Agreement<sup>1</sup> and the policies of JEITA<sup>2</sup>, Tamron has set new medium-term environmental targets working from FY2016 as a benchmark year, to cut Group-wide CO<sub>2</sub> emissions (on a unit sales basis<sup>3</sup>) by an average of around 1.3% each year, and by 16.55% by FY2030.

In FY2017, while the target was to achieve a 1.3% reduction in CO<sub>2</sub> emissions, emissions actually rose by 3%, missing the target. This is primarily due to the fact that we missed our initial sales targets and were thus unable to achieve CO<sub>2</sub> reductions consistent with sales.

As regards environmental impacts other than CO<sub>2</sub> emissions, each Tamron site has set individual targets, because each site manufactures a different category of products. In FY2017 we were unable to meet three targets. One missed target was the

reduction in the amount of waste plastic from the Head Office Mold & Tooling Technology Center. Significant increases reflected an increase in molding volume due to the transfer of dies, and molding inspection work associated with the introduction of a new molding resin. Two other factors were our failure to meet the targeted waste plastic material recycling rates at the Mold & Tooling Technology Center and Hirosaki Plant. In each case, we were unable to discharge the planned amount of waste plastic due to changes in the status of the recycling process.

### FY2016 to FY2030 Mid-Term Environmental Targets<sup>4</sup> Progress in FY2017



	FY2017
CO <sub>2</sub> reduction target (versus FY2016 basic unit of sales; cumulative annual average)	1.3 reduction (approx.)
Results	3% increase
Status	×

### Environmental Targets Achieved in FY2017

Environmental targets	FY2017 targets	FY2017 results	Status	
Reduce industrial waste	Head Office (Mold & Tooling Technology Center)	Waste plastics volume 3% reduction vs. 2016 (basic unit of sales)	28.7% increase	×
	3 Aomori plants	Material recycling <sup>5</sup> rate for waste plastics 50%	32.3%	×
		Material recycling rate for waste plastics Hirosaki Plant : 50%	Hirosaki Plant : 44.3%	×
		Namioka Plant : 25%	Namioka Plant : 25.4%	○
	Owani Plant : 6%	Owani Plant : 6.1%	○	
Tamron Optical (Foshan)	Industrial Waste Reduced by 2% compared to 2016 (basic unit of sales)	12.7% decrease	○	
Promote Environmentally-friendly design	All sites	<ul style="list-style-type: none"> <li>• Promoted environmentally-friendly designs</li> <li>• Incidents of environmental non-conformity : 0</li> </ul>	<ul style="list-style-type: none"> <li>• Promoted environmentally-friendly designs Lightweight : 0.7% increase, Compact : 1.3% decrease (compared to conventional models ; calculated based on 2017 production volume)</li> <li>• Incidents of environmental non-conformity : 0</li> </ul>	△

### Environmental Targets for FY2018

Environmental targets	FY2018 targets	
CO <sub>2</sub> reduction target	All sites Reduce CO <sub>2</sub> emissions by approximately 2.55% compared to FY2016 (basic unit of sales : cumulative annual average)	
Reduce industrial waste	Head Office (Mold & Tooling Technology Center)	Waste plastics volume 3% reduction vs. FY2017 (basic unit of sales)
	3 Aomori Plants	Material recycling rate for waste plastics Hirosaki Plant : 45% Namioka Plant : 20% Owani Plant : 3%
	Tamron Optical (Foshan)	Industrial Waste Reduce by 2% compared to FY2017 (basic unit of sales) Material recycling rate for waste plastics 10%
Promote environmentally-friendly products	All sites	<ul style="list-style-type: none"> <li>• Promote environmentally-friendly designs</li> <li>• Incidents of environmental non-conformity : 0</li> </ul>

1. A multilateral international agreement to curb climate change adopted on December 12, 2015 in Paris, where the 2015 United Nations Climate Change Conference (COP21) was held, and went into effect on November 4, 2016. The agreement set forth overall targets such as limiting the average rise in global temperatures to under 2° C compared with pre-industrial levels.

2. The Japan Electronics and Information Technology Industries Association (JEITA) is an industrial group representing companies in the fields of IT and electronics that seeks to contribute to the comprehensive development of the electronics and information technology industry as well as facilitate the development of the Japanese economy and cultural prosperity by promoting the sound production, trade and consumption of electronic equipment and components.

3. Basic unit per sales :  $\frac{\text{Total CO}_2 \text{ emissions (t-CO}_2\text{)}}{\text{Consolidated sales (million yen)}}$

4. 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.

5. The material cycle refers to the process of collecting waste from used products and production processes, treating the waste and using the result as a raw material for products. Tamron reuses a form of waste plastic known as runner materials, and is also seeking to improve its material recycling rather than thermal recycling (heat recovery) , so that recycled materials can be reused outside of Tamron. The material recycling ratio of waste plastics indicates the percentage for which material recycling was carried out compared to the total amount of waste plastics.