

AIR QUALITY MANAGEMENT

1970s TMG regulated air pollutants such as soot and smoke from factories through ordinances and other regulations.

1990s In parallel with an increase in traffic, air pollution escalated, which was attributable to black smoke (particulate matter) caused by automotive emissions. TMG regulated exhaust gas from diesel vehicles in 2003.

Present The air environment in Tokyo has improved, allowing the environmental standards for PM_{2.5} to be met at all monitoring stations for the first time in FY 2019. However, the concentration of photochemical oxidants still exceeds environmental standards.



Kasumigaseki, Tokyo

Comparison of achievements made when the national environmental standards were established and those at present

	When the standards were established:			>>>	In FY 2019:		
	Year of est.	Achievements ^{*1}	Avg. conc.		Achievements ^{*1}	Avg. conc.	
SO ₂	1973	10/19 (53%) ^{*2}	0.019 ppm ^{*2}		20/20 (100%)	0.001 ppm	
CO	1973	17/17 (100%) ^{*2}	1.8 ppm ^{*2}		10/10 (100%)	0.2 ppm	
SPM	1973	0/19 (0%) ^{*2}	0.085 mg/m ³ ^{*2}		46/46 (100%)	0.016 mg/m ³	
O ₃	1973	0/19 (0%) ^{*2}	0.029 ppm ^{*2}		0/40 (0%)	0.032 ppm	
NO ₂	1978	10/35 (29%)	0.034 ppm		43/43 (100%)	0.014 ppm	
PM _{2.5}	2009	2/16 (13%) ^{*3}	15.7 µg/m ³ ^{*3}		46/46 (100%)	10.5 µg/m ³	

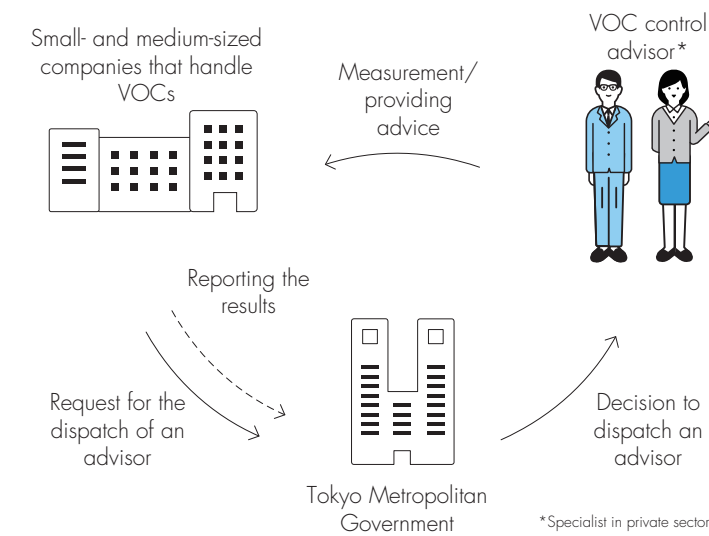
^{*1} Number of ambient air monitoring stations meeting the standard / The number of ambient air monitoring stations with effective results
^{*2} FY 1974 data
^{*3} FY 2011 data

Recent Efforts

As the concentration of PM_{2.5} and photochemical oxidants has to be lowered, TMG is working on measures to reduce emissions of the causative agents, including volatile organic compounds (VOCs) and nitrogen oxide (NOx). As the environmental standards for PM_{2.5} were met at all monitoring stations in FY 2019, we will aim to achieve the world's strictest index of 10 µg/m³ (average of all monitoring stations) stipulated by WHO by FY 2030.

VOC Control Advisor Dispatching Program

Advisors are dispatched to factories that use VOCs.



Guide for Reducing VOC Emissions

Guidebooks are distributed to VOC-emitting businesses for emissions control.



Certification labels for small combustion devices with good environmental performance

A label of a specific grade is attached to a certified device.



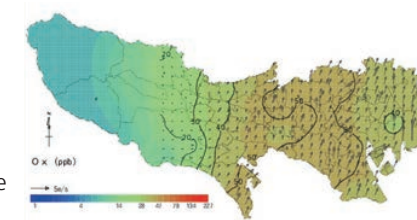
Air Environment Improvement Promotion Project to Realize a Clear Sky

By recruiting businesses that work on NOx or VOC emission reduction measures as Clear Sky Supporters and making their efforts public, TMG encourages emissions reductions through voluntary efforts and raises awareness of the situation and provides information to Tokyo residents.



Air Pollution Monitoring System

TMG has installed air pollution monitoring equipment at 82 locations in Tokyo for 24-hour continuous monitoring. Measurements are updated on an hourly basis on air pollution maps on the website of the Bureau of Environment.



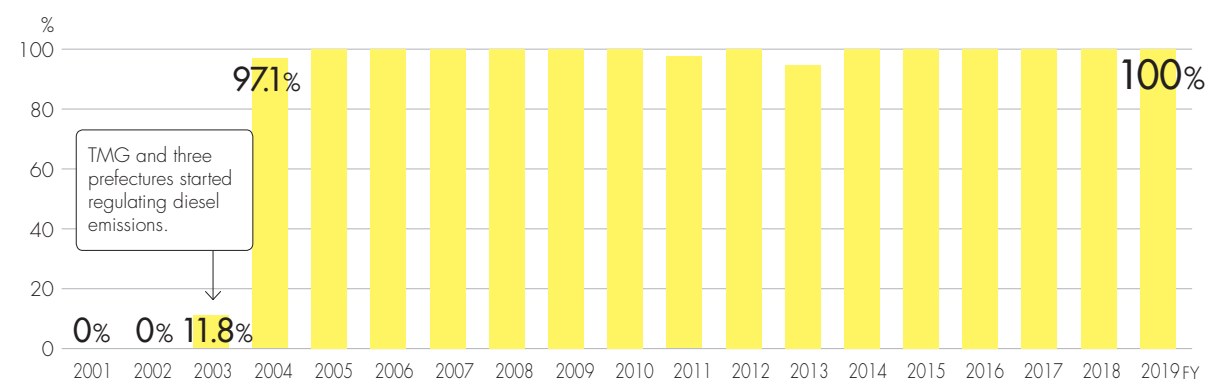
Roadside air quality monitoring station

AUTOMOTIVE EMISSIONS REGULATIONS AND USE OF BICYCLES

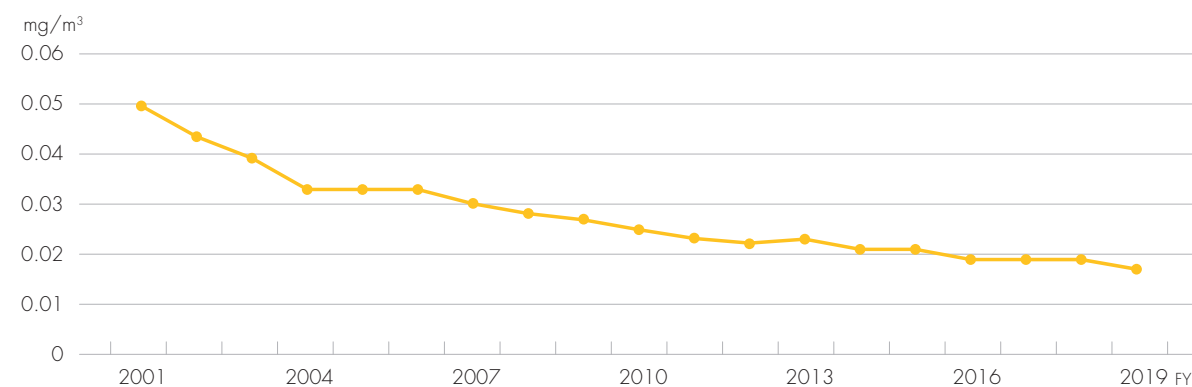
Measures against Diesel Emissions

Since 2003, TMG has been regulating exhaust gas from diesel vehicles in accordance with ordinances. Diesel vehicles subject to the regulation include large vehicles, such as trucks and buses. Passenger vehicles are exempt. Since the beginning of the regulation, diesel vehicles that do not meet the particulate matter (PM) emission standards stipulated by the ordinances have not been allowed to be driven in the metropolitan area. These diesel vehicles must be replaced with low-emission vehicles or equipped with PM reduction devices that meet TMG specifications in order to satisfy the regulation.

To boost the start of the regulation, TMG strongly urged auto manufacturers to develop PM reduction devices and the oil industry to supply low-sulfur light oil while consolidating crackdown systems and providing financial support to users. As a result, the air environment in Tokyo has drastically improved since 2004 in terms of suspended particulate matter (SPM).



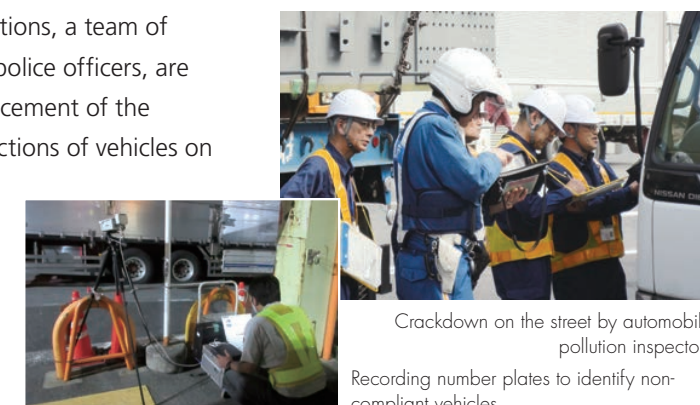
Achievement rates for the environmental standards for SPM concentration at roadside air quality monitoring stations



Annual average SPM concentration at roadside air quality monitoring stations (mg/m³)

Enforcement of Diesel Regulations

To ensure effective enforcement of diesel regulations, a team of automobile pollution inspectors, mainly former police officers, are dispatched to identify vehicles in violation. Enforcement of the regulations involves the team carrying out inspections of vehicles on the street and at distribution centers, and the use of video cameras to record vehicles driving in Tokyo. Violators are subject to an order prohibiting operation of the vehicle. In the case of a repeated offense, a fine is imposed.



Crackdown on the street by automobile pollution inspectors
Recording number plates to identify non-compliant vehicles

Reducing Environmental Load of Business Vehicles

In addition to a crackdown against non-compliant diesel vehicles, TMG is now working to support the shift to hybrid buses and trucks, etc.

We also require businesses with 30 or more vehicles (approximately 1,600 businesses at the end of FY 2019) to submit a Vehicle Emission Reduction Plan for further reductions in greenhouse gases and exhaust gases caused by vehicles.

Through the Vehicle Emission Reduction Program, 1.43 million tonnes of CO₂ was reduced in the five years from FY 2011 to FY 2015 (third compliance period) by encouraging a shift to low-emission/fuel-efficient automobiles, such as hybrid vehicles, making efforts for eco-driving, etc. (the value is a total of approximately 1,500 businesses submitting their reports for the five consecutive years).

Overview of Vehicle Emission Regulation Program

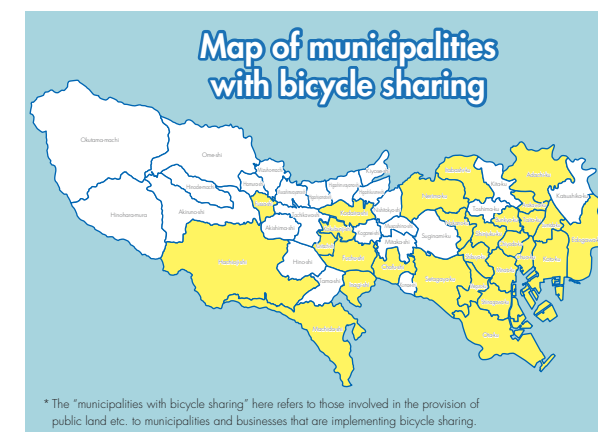
Applicable businesses	Those that have businesses in Tokyo and use 30 or more vehicles
Compliance period	Six years from FY 2016 to FY 2021 (fourth compliance period) * The compliance period supposed to end in FY 2020 has been extended by one year in consideration of the impact of the stagnation of economic activity due to the COVID-19 pandemic.
Obligations	Submission of Vehicle Emission Reduction Plan and annual performance report
Main contents of the Plan	<ul style="list-style-type: none"> > Setting reduction targets for GHG and exhaust gas from vehicles > Efforts to introduce specified low-emission vehicles and fuel-efficient vehicles > Efforts for eco-driving > Efforts to use vehicles more intelligently

Promoting the Use of Bicycles

Since bicycles are a familiar and environmentally friendly means of transportation, we need to improve the safety, comfort, and convenience for bicycle users in conjunction with promoting the use of bicycles.

Bicycle sharing is an effective mechanism for promoting the use of bicycles, and is now being developed in various parts of Tokyo.

TMG supports the securing of sites for cycle ports and the initial investment made by municipalities, and collaborates with them to ensure the broader use of cycle ports.



* The "municipalities with bicycle sharing" here refers to those involved in the provision of public land etc. to municipalities and businesses that are implementing bicycle sharing.

As of November 2020