



CREATING A SUSTAINABLE CITY

TOKYO'S ENVIRONMENTAL POLICY



Photo: Kominato Beach, Chichijima (Ogasawara Islands)

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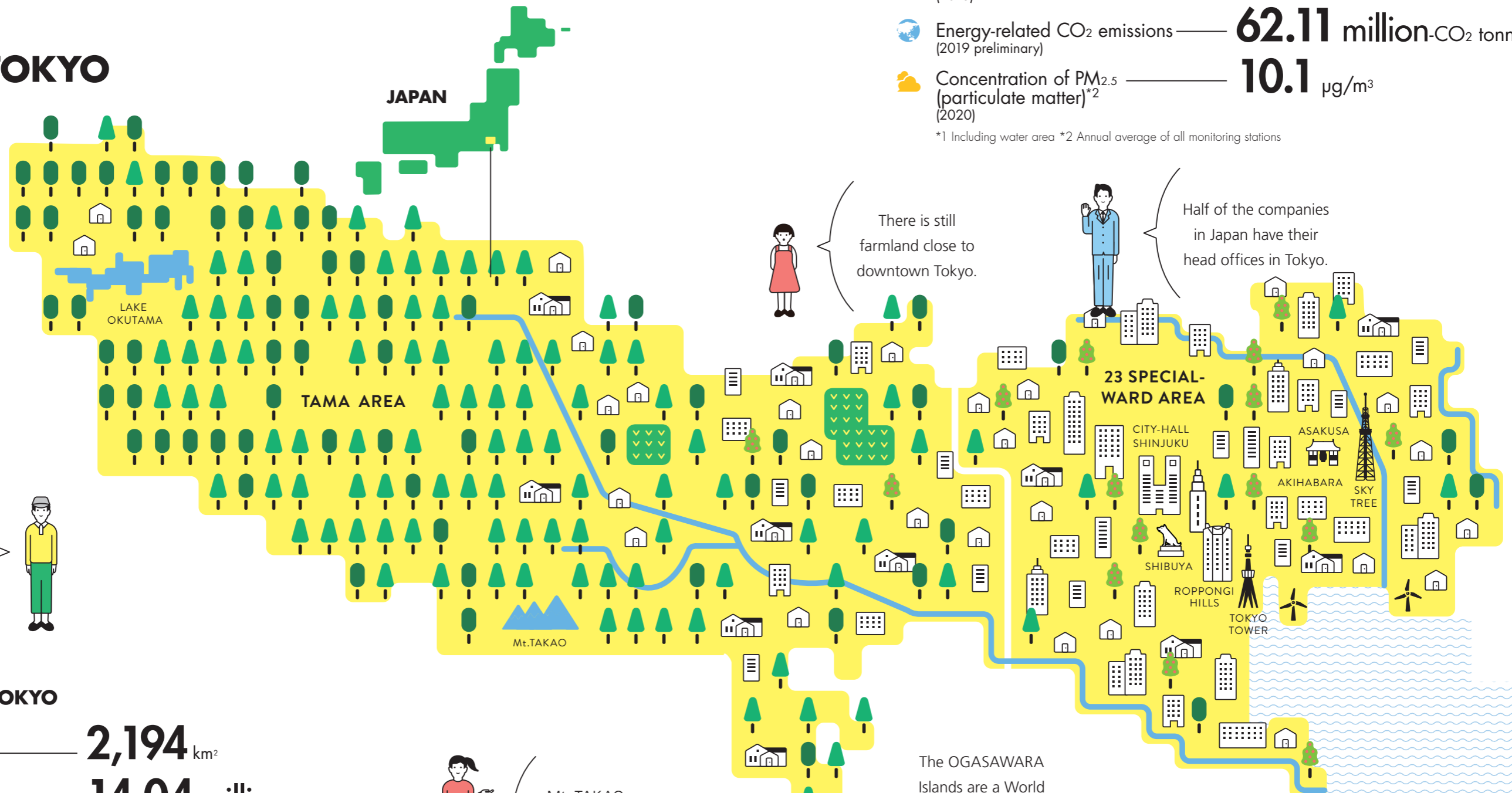
TOKYO DATA

MAP of TOKYO






LAKE OKUTAMA is a precious water resource for Tokyoites.



The backwoods of the Tama area have a rich ecosystem. You might even see a bear!



PROFILE OF TOKYO

 Area (2020)	2,194 km ²
 Population (August 2021)	14.04 million inhabitants
 GDP (2018)	107.0 trillion yen (19.5% of national GDP)
 Number of enterprises (2016)	622 thousand
 Number of foreign tourists (2019)	15.18 million





Mt. TAKAO has won three Michelin stars.

The OGASAWARA Islands are a World Heritage site.



ENVIRONMENTAL INFORMATION

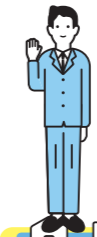
 Greenery* ¹ (2018)	52.5%
 Final disposal amount of waste (2018)	0.96 million tonnes
 Energy-related CO ₂ emissions (2019 preliminary)	62.11 million-CO ₂ tonnes
 Concentration of PM _{2.5} (particulate matter)* ² (2020)	10.1 µg/m ³

*1 Including water area *2 Annual average of all monitoring stations

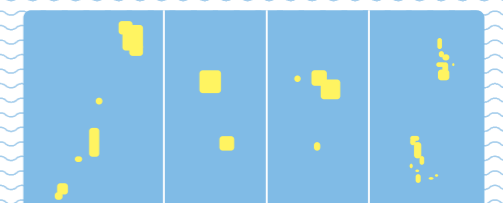
There is still farmland close to downtown Tokyo.



Half of the companies in Japan have their head offices in Tokyo.

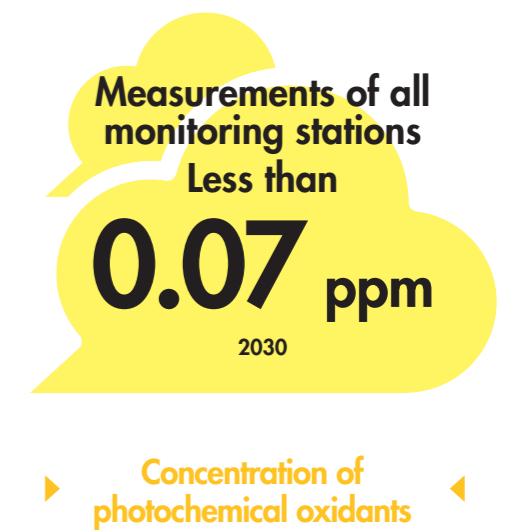
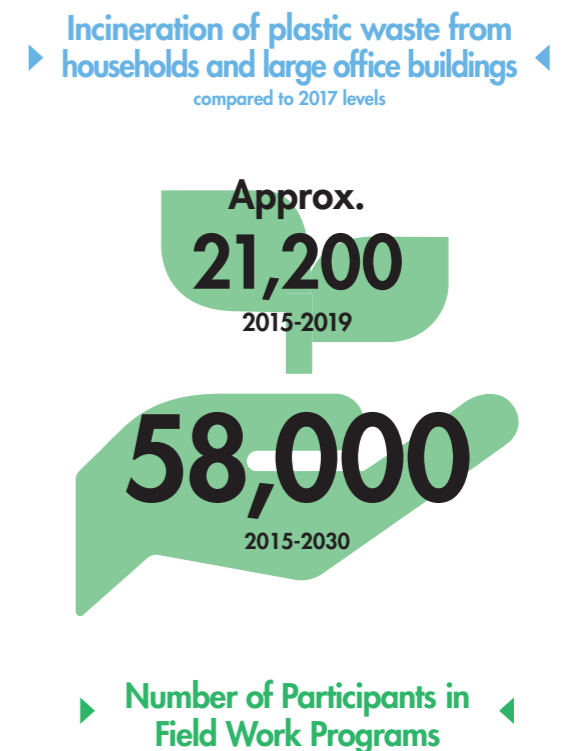
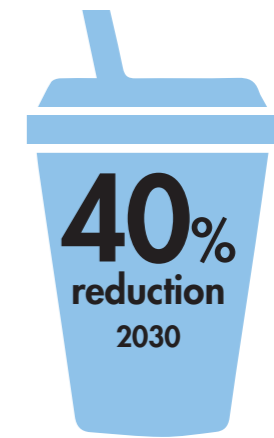
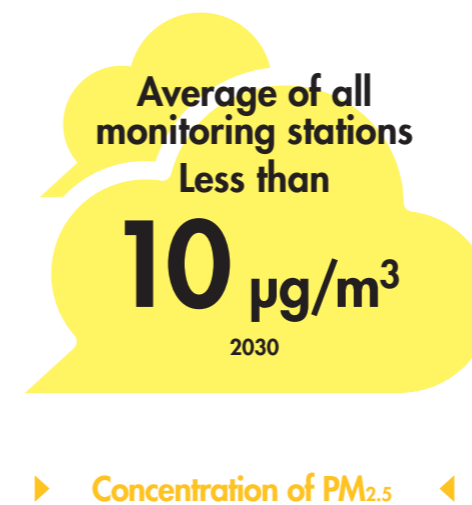
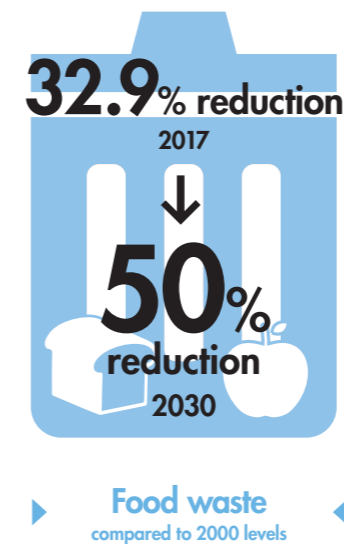
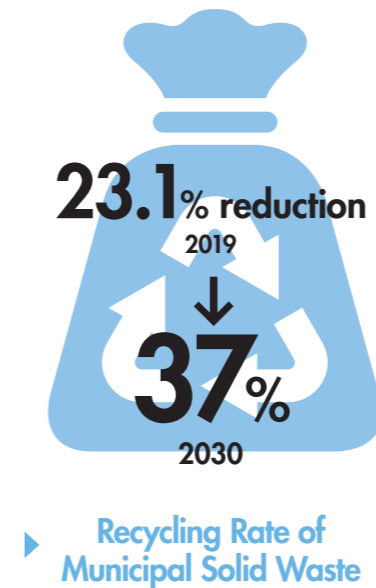
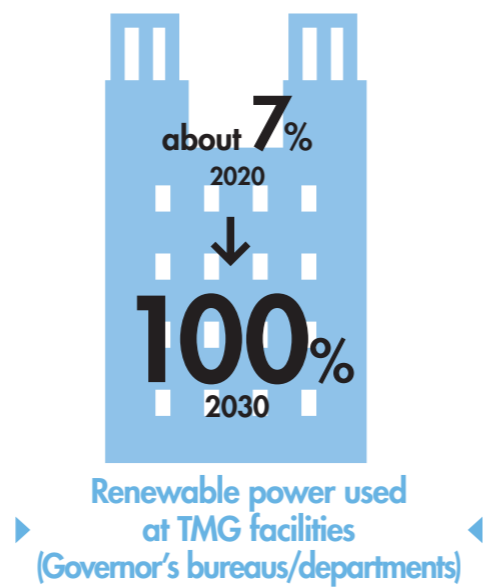
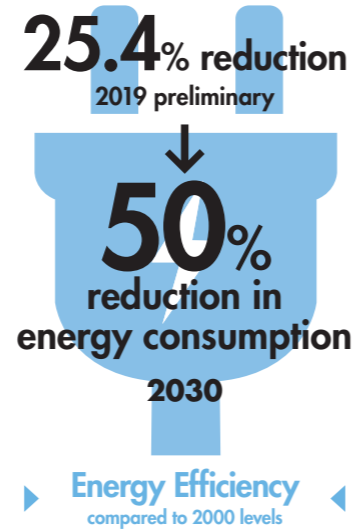
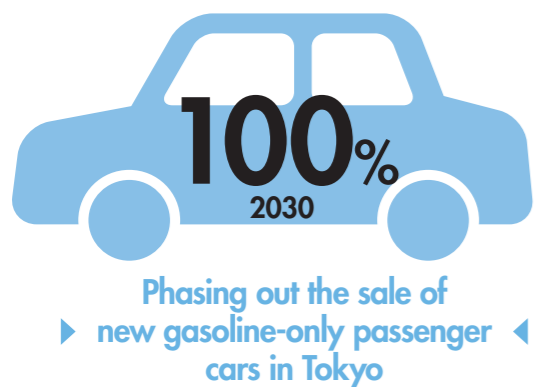
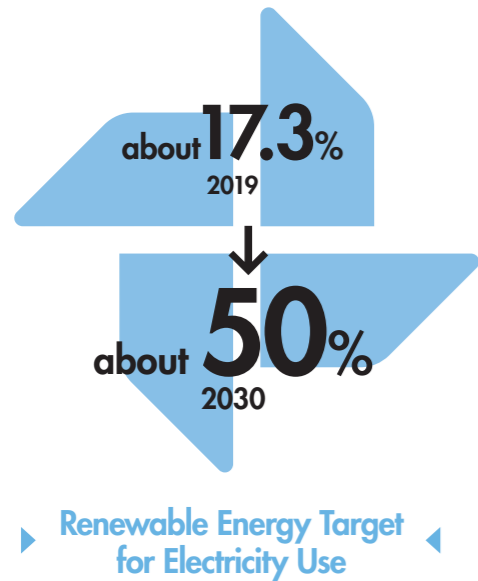
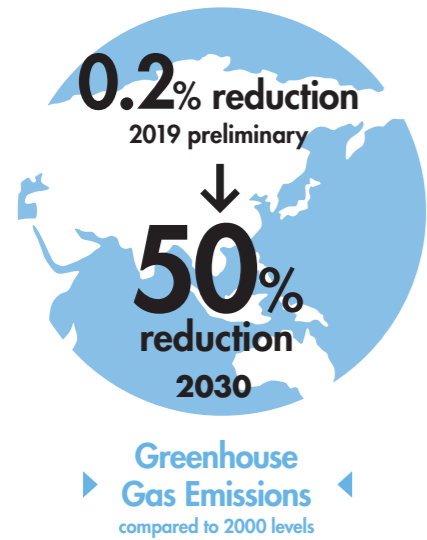


IZU AND OGASAWARA ISLANDS



Tokyo Metropolitan Government (TMG) has determined policy targets for 2030 to aggressively develop cutting-edge environmental and energy initiatives.

2030 GOALS



Zero Emission Tokyo 15

Zero Emission Tokyo Strategy 2020 Update & Report



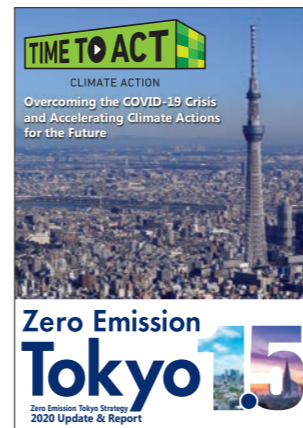
Overcoming the COVID-19 Crisis and Accelerating Climate Actions for the Future

Updating the Zero Emission Tokyo Strategy

Since TMG announced the Zero Emission Tokyo Strategy for the realization of net zero CO₂ emissions by 2050 in December 2019, the climate crisis has become even more serious as the world faces an unprecedented crisis due to rampant COVID-19 spread.

As the world makes rapid progress toward a decarbonized and sustainable society, TMG has the responsibility of a large city to accelerate its actions against exacerbated climate crisis from the perspective of sustainable recovery from the COVID-19 crisis.

The decade leading up to 2030 is extremely important for the realization of net zero CO₂ emissions by 2050. To start action against the increasingly serious climate crisis, TMG announced "Climate Emergency Declaration: TIME TO ACT" in December 2020 and formulated the Zero Emission Tokyo Strategy 2020 Update & Report in March 2021.

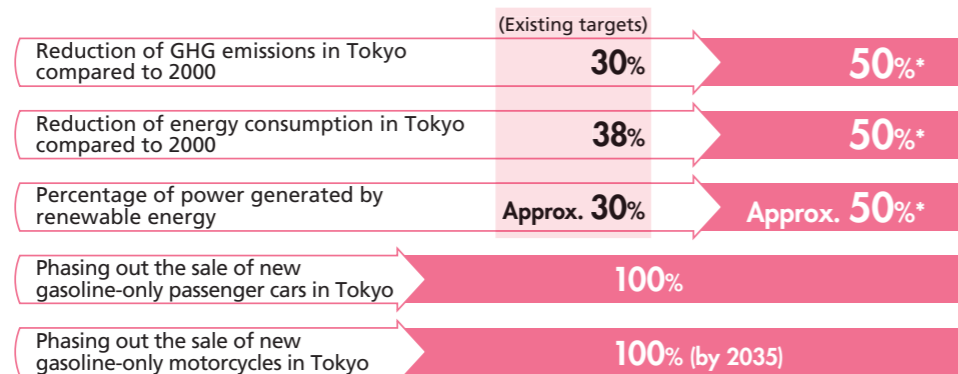


2030 Carbon-Half Style

Looking ahead to 2050, we need to turn the entire social system, including lifestyles and business models, into a more sustainable version capable of halving our carbon output. As a milestone to support the acceleration of actions, TMG announced "Carbon Half" to halve greenhouse gas emissions by 2030, and advocated 2030 Carbon-Half Style as a vision of social change toward 2030.



Strengthening 2030 Targets to Support the Acceleration of Actions

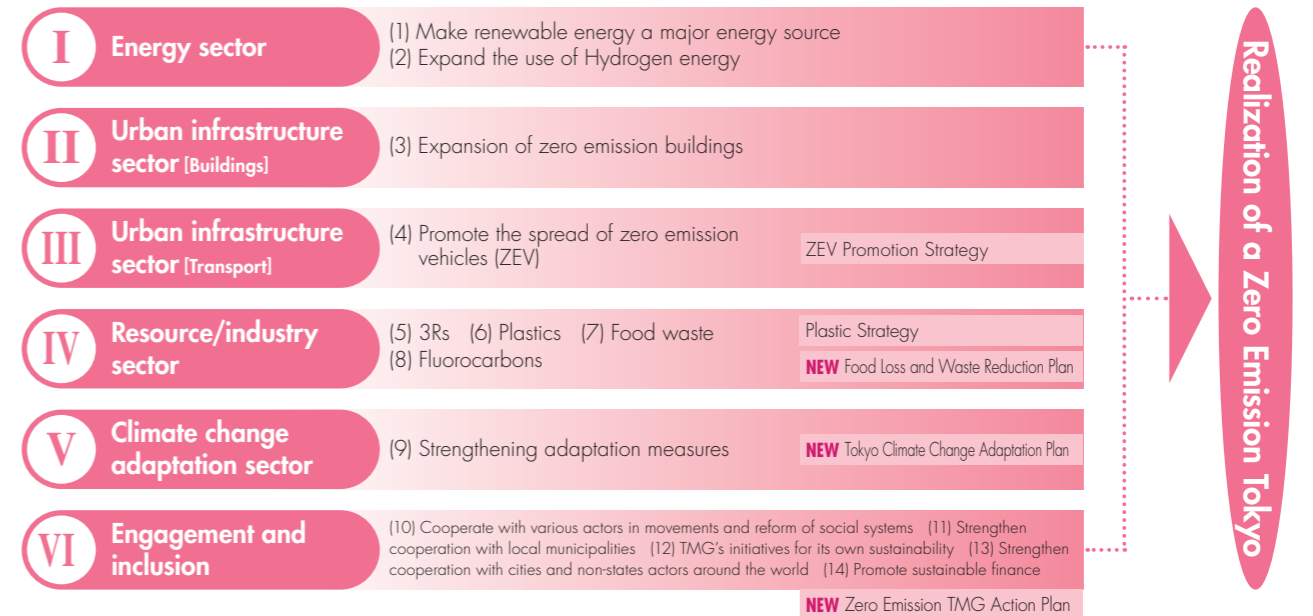


* TMG will discuss further these targets and initiatives for GHG emissions and others in the Tokyo Metropolitan Environmental Council

Updating Policies

To realize "Carbon Half" by 2030, TMG has updated the roadmap set forth in the Zero Emission Tokyo Strategy formulated in December 2019, with 26 visions for social change, 36 approaches, and 94 efforts to accelerate and strengthen immediately.

Six sectors and fourteen policies to promote specific efforts



* Individual plans and strategies have been formulated for sectors requiring prioritized measures.

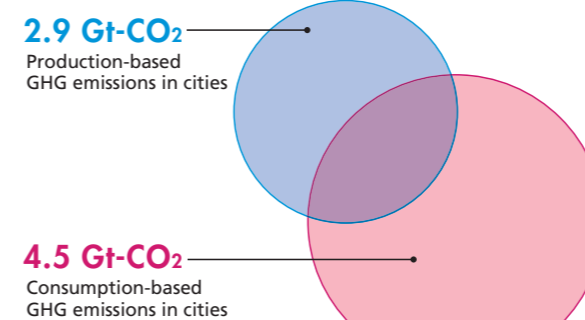
In FY 2020, three new plans were formulated:

Tokyo Food Loss and Waste Reduction Plan, Tokyo Climate Change Adaptation Plan, and Zero Emission TMG Action Plan.

Aiming for Net Zero Emissions in Tokyo, Contributing to the Reduction of CO₂ Imported from Other Regions

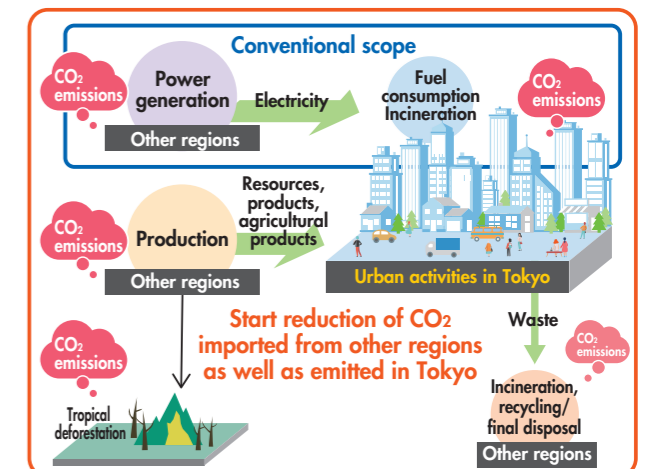
In Tokyo, a huge amount of energy, resources, and products are consumed and then discharged as waste. Most of the energy, products, and resources used in Tokyo are produced or extracted in other regions of Japan or overseas. As one of the largest cities in the world, Tokyo needs to take the initiative in reducing CO₂ emissions in Japan and overseas.

Greenhouse gas emissions from 96 C40 member cities based on production and consumption



Source: The Future of Urban Consumption in a 1.5°C World, C40 Cities Headline Report

Scope of emissions reductions envisaged by Tokyo

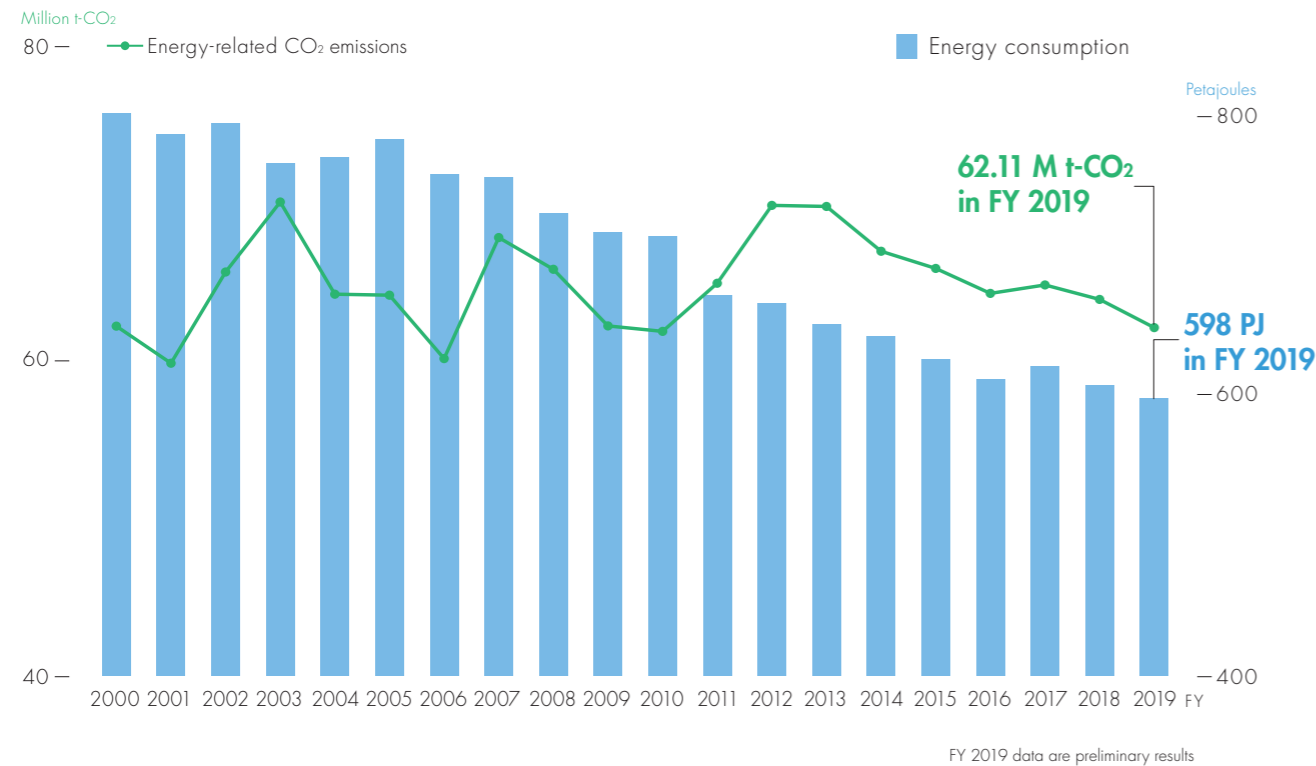




SUSTAINABLE BUILDING POLICY

As a massive energy consumer, TMG has taken pioneering measures for climate change mitigation and energy efficient in the light of the Paris Agreement's long-term goal. Pioneering efforts, such as the Tokyo Cap-and-Trade Program, fine-tuned to the characteristics of a megacity densely packed with a variety of buildings including offices, have produced concrete results and attracted considerable attention of foreign cities, thanks to support from many businesses, citizens, and NPOs in Tokyo.

Tokyo's energy consumption has consistently been falling since its peak in FY 2010. Following the aftermath of earthquakes in March 2011, greenhouse gas emissions in Tokyo increased as CO₂ emission factors of electricity supplied to Tokyo worsened. However, reductions in energy consumption and effects of improvements in the CO₂ emission factor of power have caused greenhouse gas emissions in Tokyo to be on a downward trend since FY 2012.

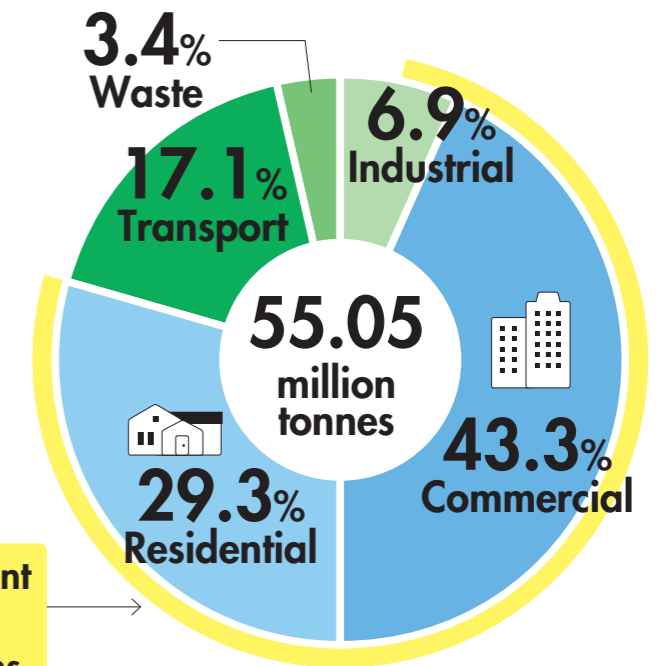


Trend of energy-related CO₂ emissions and energy consumption in Tokyo

FY 2019 data are preliminary results

Sectoral breakdown of energy-related CO₂ emissions in Tokyo

Tokyo's energy-related CO₂ emissions in FY 2019 amounted to 55.05 million tonnes, equivalent to the total emissions of Austria. Commercial and residential sectors constitute a large share of the CO₂ emissions in Tokyo.



Buildings account for more than 70% of emissions.

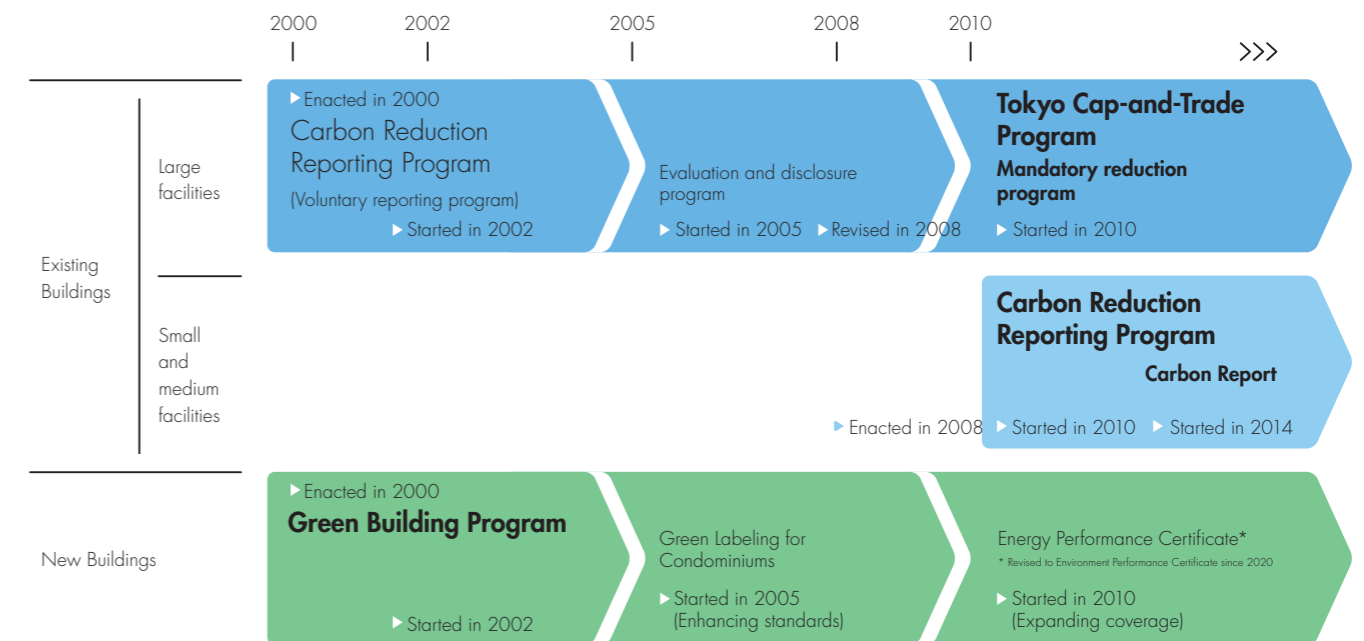
Sectoral breakdown of energy-related CO₂ emissions in Tokyo (FY 2019)

Three Programs Supporting Sustainable Building Policy

TMG has developed effective programs according to building type (new or existing) and size (large or small/medium).

At the core of Tokyo's sustainable building policy, we have the Tokyo Cap-and-Trade Program for existing large facilities, the Carbon Reduction Reporting Program for small and medium facilities, and the Green Building Program for new buildings.

Since 2000 when the Tokyo Metropolitan Environmental Security Ordinance was enacted, we have developed effective policies with step-by-step reviews and enhancements.



World's First Urban Cap-and-Trade Program for Large Facilities

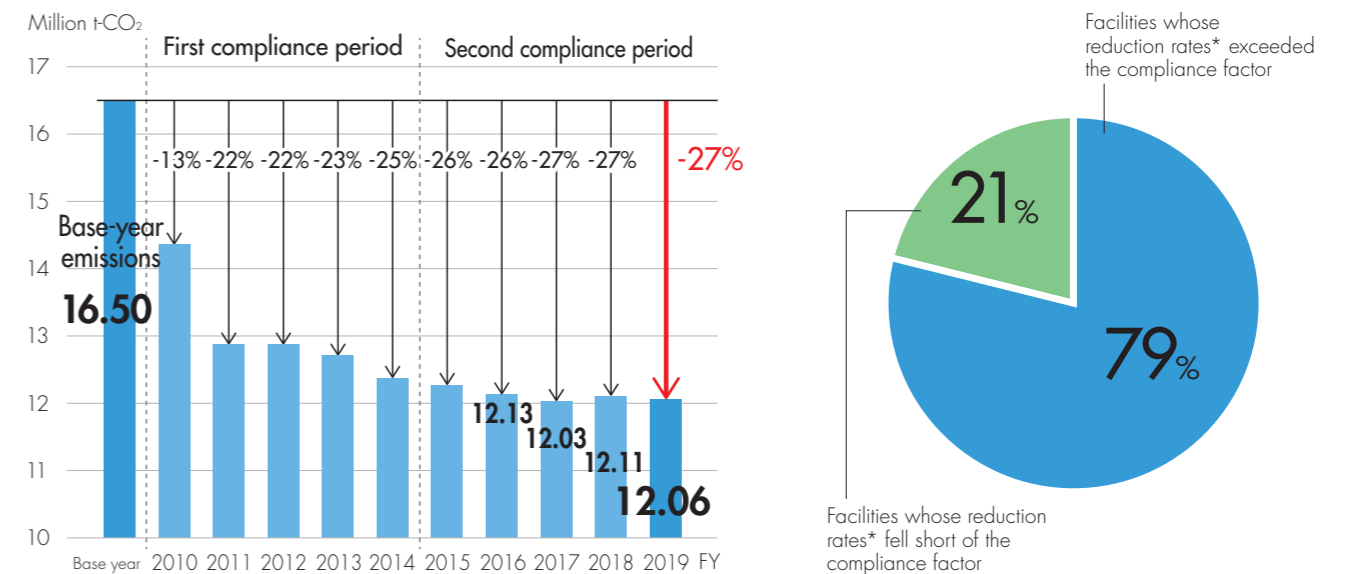
By revising its ordinances in April 2010, TMG introduced the Tokyo Cap-and-Trade Program, which sets mandatory CO₂ emission reduction targets for large facilities. This program is not only the first cap-and-trade scheme in Japan but also the world's first urban cap-and-trade scheme that covers the commercial as well as the industrial sector, including office buildings, which are often concentrated in megacities. Owners of facilities covered by the scheme are required to meet their emission reduction requirements through on-site energy efficiency measures or through emissions trading. Measurements, annual reporting, and verification are also required. CO₂ emissions from covered facilities account for approximately 40% of those from the entire industrial and commercial sectors in Tokyo.

Program design

Covered facilities	Approx. 1,200 large CO ₂ -emitting facilities that consume 1,500 kiloliters or more (crude oil equivalent) of energy annually
Covered gas	Energy-related CO ₂
Compliance periods	Five-year period 1st period: FY 2010-FY 2014 2nd period: FY 2015-FY 2019 3rd period: FY 2020-FY 2024
Compliance factors	1st period: 8% for offices etc. or 6% for factories, etc. 2nd period: 17% or 15% respectively 3rd period: 27% or 25% respectively
Emission trading	Excess reductions and offset credits are tradable
Penalties	Fines, charges (1.3 times the shortfall) Publish the fact of violation

Achievement of 27% Reduction Compared to Base-Year Levels (FY 2019)

CO₂ emissions from the covered facilities in FY 2019, which was the fifth fiscal year of the second compliance period, were 12.06 million tonnes, a 27% reduction from base-year emissions through continued energy efficiency measures and the use of low carbon electricity and heat promoted at the covered facilities. Approximately 80% of the covered facilities have already achieved reductions over and above their compliance factors for the second compliance period.



Encouraging Additional CO₂ Reductions in the Third Compliance Period (FY 2020-2024) by Continuing Energy Efficiency and Promoting the Expanded Use of Renewable Energy

To realize TMG's goals for 2030 and "Zero Emission Facilities" desirable in the future, TMG will strive for further reduction at covered facilities in the third compliance period by setting new compliance factors, promoting further energy efficiency action, and enhancing a mechanism to encourage the use of renewable energy.

Items Applicable in the Third Compliance Period

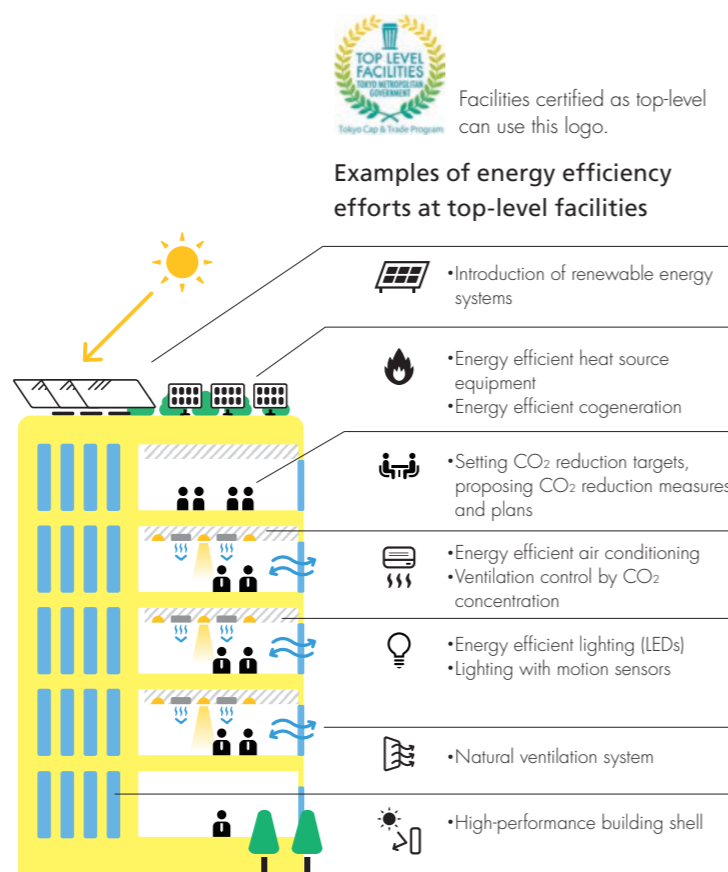
- Compliance factors: 27% for office buildings etc. 25% for factories etc.
- Expanding incentives for promoting the use of low-carbon electricity (electricity from renewable energy sources)
 - All low-carbon electricity that has been procured is calculated as reductions at covered facilities
 - Additional reductions are calculated at covered facilities when procuring electricity with a high percentage of renewable energy sources

Realization of "Zero Carbon 4 Days in 2020" and cooperation in "Carbon Offset Programme for the Tokyo 2020 Games"

TMG has gained the cooperation of businesses under the Tokyo Cap-and-Trade Program in the provision of CO₂ reduction credits for the "Tokyo Zero Carbon 4 Days in 2020" project offsetting all CO₂ emissions generated across Tokyo during the four days of the opening and closing ceremonies of the Tokyo 2020 Games. We have also obtained the cooperation for the efforts made by the Tokyo 2020 Organising Committee on behalf of the host city for the Tokyo 2020 Games to offset CO₂ emitted by activities connected with the Games. The amount of provided credit was 4.18 million t-CO₂ from 153 businesses. (720,000 t-CO₂ will be allocated to the Tokyo Zero Carbon 4 Days in 2020 project for offsetting and 3.46 million t-CO₂ will be provided to the Tokyo 2020 Organising Committee. We wish to thank those who offered cooperation.)

Top-Level Facilities

In the Tokyo Cap-and-Trade Program, facilities demonstrating outstanding performance in emissions reduction as well as in the introduction, use, and management of energy efficient equipment are certified as top-level facilities that receive lower compliance factors according to their rate of progress. The certification standards for top-level facilities represent the highest-level energy efficiency measures feasible at present, stipulating more than 200 different energy efficiency measures in the case of office buildings. As of the end of FY 2020, which was the first fiscal year of the third compliance period, 64 facilities were certified as top-level. An increasing number of facilities use the standards as reference guidelines for energy efficiency in design and renovation processes.



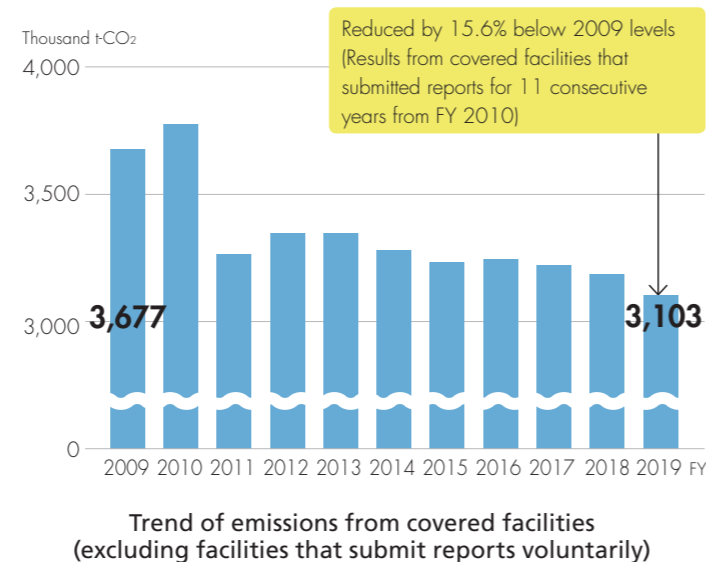
SUSTAINABLE BUILDING POLICY_2

Carbon Reduction Reporting Program for Small and Medium Facilities

CO₂ emissions from small and medium facilities account for approximately 60% of the total of the combined industrial and commercial sectors in Tokyo, underlining the importance of reducing emissions from these facilities.

By revising its ordinances, TMG introduced the Carbon Reduction Reporting Program in April 2010 to encourage owners of small and medium facilities to identify their CO₂ emissions and implement energy efficiency measures. Since FY 2020, TMG has introduced a mechanism that evaluates and publicizes businesses with excellent reduction performance or that have made great efforts to introduce renewable energy in order to motivate businesses to take action.

Using data given in the reports, TMG provides Low Carbon Benchmarks to recognize their performance; self-rating of emission levels compared to the same business type and a Carbon Report that depicts energy efficiency levels in an easy-to-understand format.



SUSTAINABLE BUILDING POLICY_3

Green Building Program for New Buildings

Based on its ordinances, TMG has been implementing the program to require owners who build large buildings to submit a Building Environmental Plan. An outline of the plan is then made public by TMG. Through this program, we encourage their voluntary environmental conservation efforts at the architectural planning stage and aim to form a market that attributes value to environmentally conscious buildings.

Subject to TMG's evaluation criteria, building owners make three-grade evaluations of their efforts in four areas of environmental considerations: rational use of energy, proper use of resources, natural environment conservation and mitigation of heat island effects.

Since FY 2020, TMG has expanded the program coverage to medium-sized buildings and introduced ZEB (Net Zero Energy Building) Evaluation as the highest rank in the energy efficiency assessment.



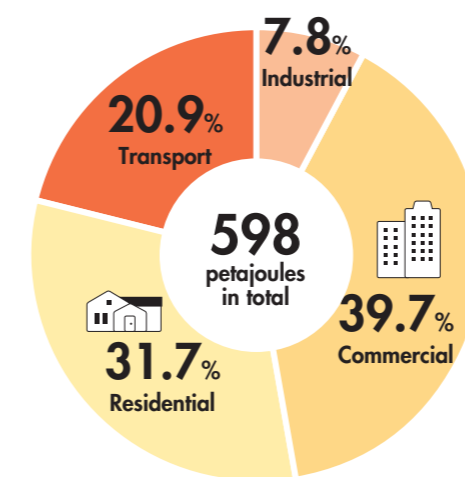
Condominium owners are required to display the environmental performance label on all advertisements upon sale or lease.

PROMOTING ENERGY EFFICIENCY MEASURES AT HOME

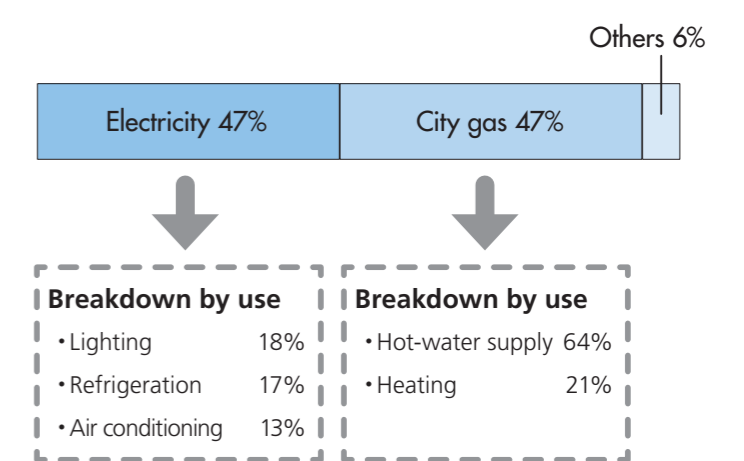
The energy consumption of the residential sector in Tokyo accounts for approximately 30% of total consumption, of which over 90% is caused by the use of electricity and city gas.

Through the LED light bulb exchange campaign from 2017 to 2018, TMG promoted the switch to LED from lighting with high energy consumption.

In order to encourage additional energy efficiency action at home, TMG continues promoting LED lights and expanding the introduction of energy-efficient home appliances and housing with high energy-efficient performance.



Sectoral breakdown of energy consumption in Tokyo (FY 2019)

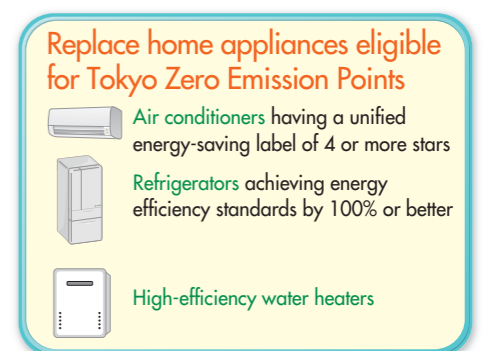


Breakdown of energy consumption by use at home (FY 2019)

Promoting Zero Emission Action at Home

Since October 2019, TMG has been implementing new action to grant Tokyo Zero Emission Points that can be exchanged for gift certificates or LED light bulbs coupons. The points will be given to Tokyo residents who have replaced their air conditioners, refrigerators or water heaters, which typically consume larger amounts of energy, with those having a high energy-efficient performance.

TMG also provides energy efficiency advice to those who have made the replacement to improve their energy efficiency awareness.



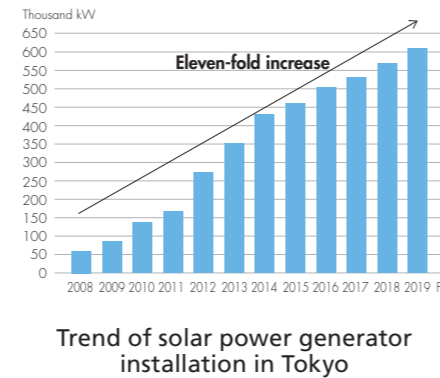
Promoting the Tokyo Zero Emission House

To reduce energy consumption at home, it is critical to make residential buildings more energy efficient, including improvements in thermal insulation.

Aiming for the spread of houses with high energy-efficient performance matching the regional characteristics of Tokyo, since October 2019 TMG has subsidized new residential buildings that meet the Tokyo Zero Emission House standards.

EXPANSION OF USE OF RENEWABLE ENERGY

Tokyo, one of the largest cities in the world, is a major consumer of energy. To realize a Zero Emission Tokyo, it is essential to further increase energy efficiency, and switch from fossil fuels to decarbonized energy, such as renewable energy. FY 2019, power generated by renewable energy accounted for approximately 17.3% of the total electricity used in Tokyo. The introduction of solar power generation has been increased through support projects of TMG with information available online through the Tokyo Rooftop Solar Register, and the Feed-in-Tariff (FIT) system started by the national government in 2012. Aiming for the decarbonization of all energy used in 2050, TMG will focus on efforts for local production and consumption of renewable energy generated in Tokyo and expanded use of renewable power until 2030.



Local Production and Consumption of Renewable Energy Generated in Tokyo

As natural disasters increase, local production and consumption of renewable energy is becoming more important from the perspective of improving local resilience, helping ensure autonomous power supplies in preparation for prolonged power outages.

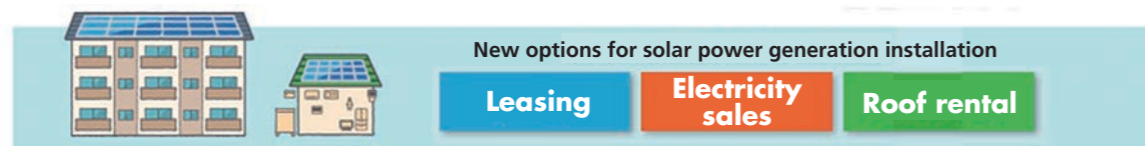
Promoting self-sufficiency in electricity at home

With the aim of increasing the self-consumption of electricity by solar power generation at home and improving disaster preparedness in an emergency, TMG is implementing the Self-Consumption Plan subsidy project for houses with storage batteries installed. We will receive electricity data for solar power generation from subsidized households to utilize it in determining TMG's policies to improve effective use of electricity in the future.



Support for solar power generation with no setup costs

For businesses that provide services to install solar power generation equipment with no setup costs for homeowners, TMG is promoting the Project for Promoting Residential Solar Power Generation with No Setup Costs to subsidize part of the installation costs (subsidies are returned to homeowners in full by lowering usage fees or other means). By reducing the setup cost burden for homeowners, we will promote further the installation of solar power generation equipment in Tokyo.



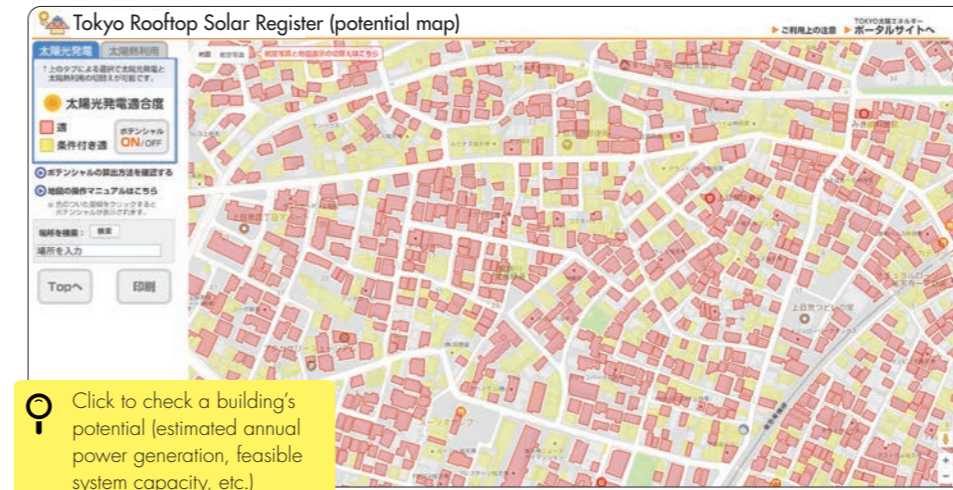
Promoting local production and consumption of renewable energy at facilities

To expand the use of renewable energy in Tokyo, TMG is implementing the Local Production and Consumption Renewable Energy Enhancement Project to subsidize the introduction of self-consumed renewable generation equipment and renewable energy heat utilization equipment (solar power generation, wind power generation, ground source heat, solar heat, etc.) to facilities.



Tokyo rooftop solar register (potential map)

Online information is provided by the Tokyo Rooftop Solar Register, which clearly shows buildings' suitability for solar power generators and other equipment.

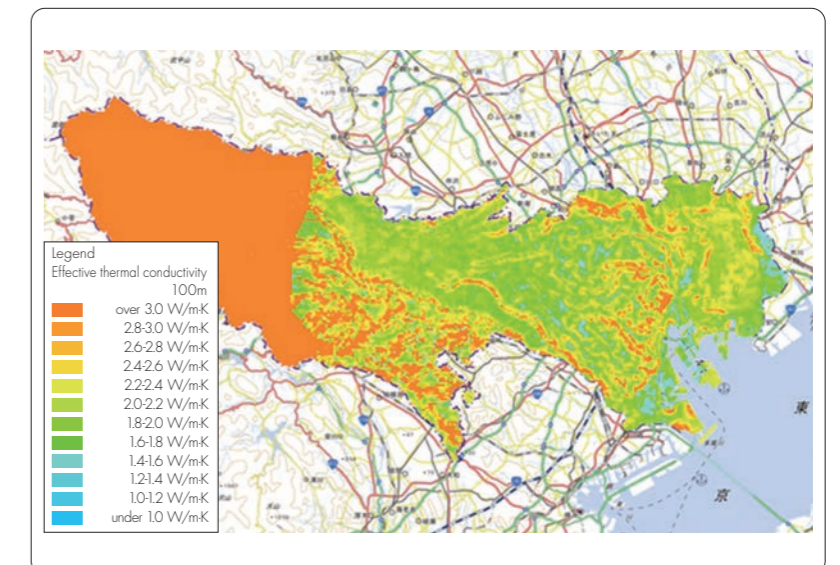


TMG's official mascot character: Roof Power

Ground source heat potential map

TMG provides online information on the potential for the adoption of geothermal heat and subsidizes the early stages of adoption.

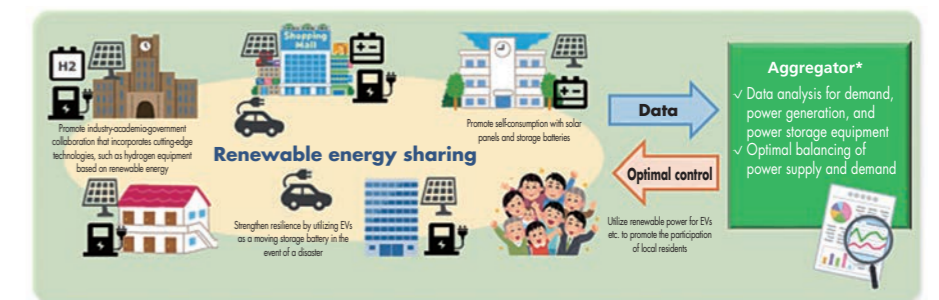
We also encourage energy use matching business characteristics, including the use of sewage heat, as well as small hydroelectric generation at water supply and sewage facilities.



Ground source heat potential map: potentiality is color-coded with warmer colors indicating higher heat exchange efficiency.

Demonstration of balancing supply and demand in anticipation of a massive introduction and supply of renewable power

Looking for a massive introduction and supply of renewable power, TMG is promoting the Model Project for Regional Renewable Energy Sharing in the Minami-Osawa district, which utilizes solar power generation, storage batteries, hydrogen equipment based on renewable energy, and EVs to balance the supply and demand of electricity for the efficient use of renewable energy in the district.



▶ Drastically Increasing the Use of Renewable Power

To drastically increase the use of renewable energy, TMG has strengthened systems for buildings in Tokyo, such as the Tokyo Cap & Trade Program and Tokyo Green Building Program, to expand the use of renewable energy at buildings. In addition, we are promoting efforts to encourage the purchase of renewable power by Tokyo residents etc.

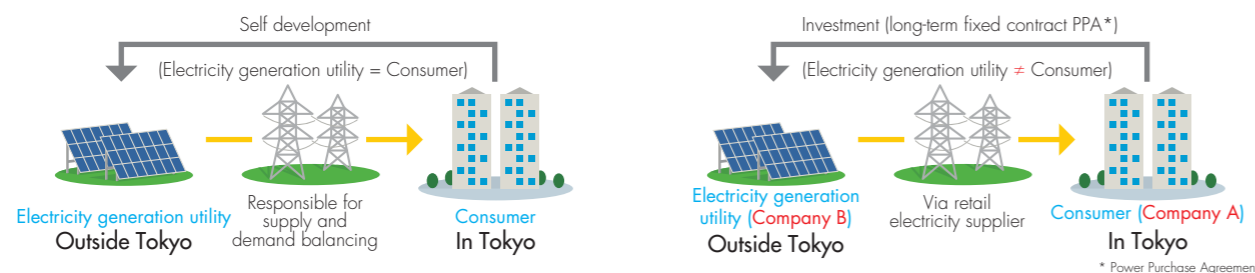
“Renewable Electricity Together” campaign (Renewable electricity group buying project)

TMG is committed to realizing a reduction in the price of renewable electricity by recruiting prospective purchasers of renewable electricity from households etc. to increase purchasing power. We are conducting the “Renewable Electricity Together” campaign in collaboration with local governments in the metropolitan area to encourage residents etc. to purchase renewable power. It is a mechanism that allows renewable power to be used even in households where solar panels cannot be installed.



A corporate power purchase leading to the installation of new renewable energy equipment outside Tokyo (Outside-Tokyo PPA)

As indicated by an increase in the number of RE100 declaration businesses, the need for mass procurement of renewable power is expanding among private businesses. Considering the future era of massive introduction and supply of renewable power, local production and consumption of renewable power, which does not impose a heavy load on the power grid, is important for improving local resilience. In addition, large-scale renewable energy equipment cannot be installed easily in Tokyo due to its limited land area. Almost all electricity consumed in Tokyo is supplied from other regions. For this reason, decarbonizing the electricity supplied from the power grid is crucial. Under such circumstances, TMG is supporting power purchase that takes advantage of the large demand for electricity in Tokyo and will cause electricity consumers in Tokyo to install new renewable energy equipment outside Tokyo.



Measures for electricity suppliers

To improve the environmental properties of electricity supplied to Tokyo, TMG requires electricity suppliers for Tokyo to reduce CO₂ emission factors, set targets for renewable energy volume, and report the results through the Environmental Energy Reporting Program.

We provide information that helps consumers select environmentally friendly electricity

▶ Initiatives Taken by TMG

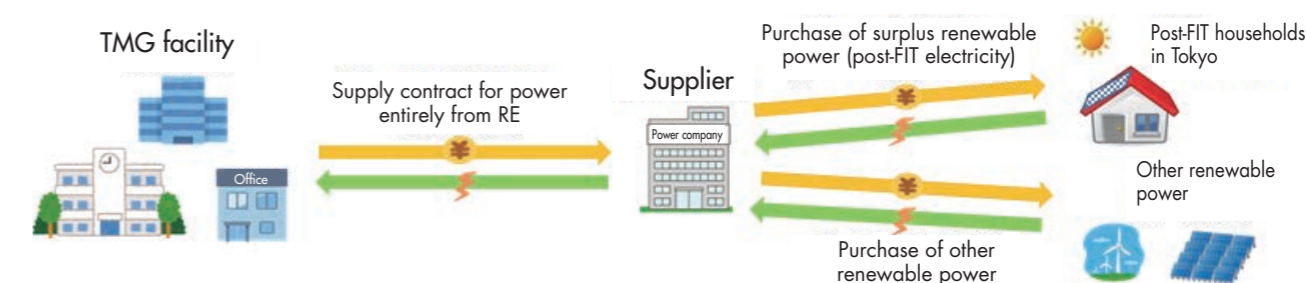
TMG facilities (governor’s bureaus/departments) consume approximately 900 million kWh of electricity, which is equivalent to approximately 1% of the electricity consumption in Tokyo. Therefore, TMG wants all electricity used at TMG facilities (Governor’s bureaus/departments) to be sourced from renewable energy by 2030.



Since FY 2019, we have switched electricity supplied to the TMG No.1 Building to power entirely sourced from renewable energy.

In addition, since FY 2020, we have been promoting the TMG Power Plan that aggressively uses power entirely sourced from renewable energy at TMG facilities, which includes post-FIT* electricity generated by solar power generators at home in Tokyo.

* Post-FIT refers to equipment for which the purchase period of FIT (the national government’s system for purchasing renewable power at a fixed price for a certain period started by the national government in 2012) has ended. Such equipment is expected to increase at an accelerating rate from November 2019



Formulation of the Zero Emission TMG Action Plan

As a business that consumes a lot of energy and resources, TMG with “Let’s Start from Here” in mind has to intensify its efforts to reduce greenhouse gas emissions associated with its own office work and lead by example the efforts of Tokyo residents and businesses to achieve “Carbon Half” by 2030.

In March 2021, TMG formulated the new Zero Emission TMG Action Plan for FY 2020 to 2024 to achieve “Carbon Half” by 2030 at TMG itself, aggressively promoting agency-wide efforts in line with the plan.

Main goals set forth in the Zero Emission TMG Action Plan

- Greenhouse gas emissions at TMG (governor’s bureaus/departments) compared to FY 2000 → **Reduced by 40%**
- Energy consumption at TMG (governor’s bureaus/ departments) compared to FY 2000 → **Reduced by 30%**
- Renewable power used at TMG facilities (governor’s bureaus/departments) → **Approx. 50%**
- TMG-owned non- gasoline passenger cars → **100% (Except special-purpose vehicles)**
- Installation of public chargers at TMG facilities → **300+**
- Incineration of plastic waste from the TMG city hall compared to FY 2017 → **Reduced by 20%**



Zero Emission TMG Action Plan

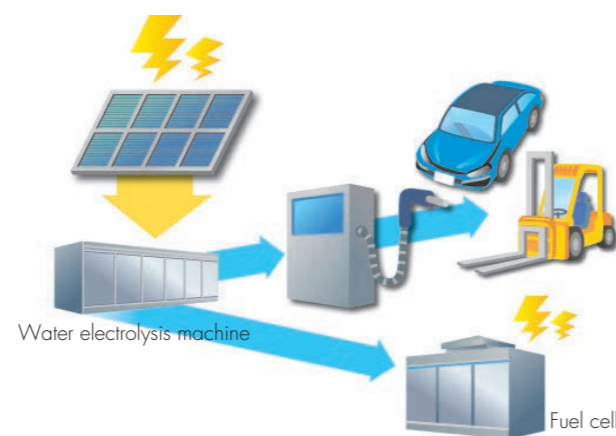
CREATING A HYDROGEN-BASED SOCIETY

Hydrogen is a clean energy that emits only water when used, helping reduce environmental load as well as contributing to a diversified energy mix and response to emergencies. Hydrogen is expected to be used in a wide range of fields, such as transportation, electricity generation, and heat utilization, and is also promising as a means to balance the supply and demand of renewable power. We are working toward the realization of a hydrogen-based society by providing support from various perspectives, such as institutional and financial aspects, and actively promoting the effective use of hydrogen-related technologies.

▶ Promoting the Use of CO₂ Free Hydrogen from Renewable Energy

Since hydrogen allows the long term storage of energy in large amounts, it is expected to play a role in compensating for output fluctuations when there is a massive introduction of renewable power toward the realization of a decarbonized society.

For the production and future use of CO₂-free hydrogen derived from renewable energy, TMG has encouraged facilities and municipalities in Tokyo to install equipment for using hydrogen derived from renewable energy and consider hydrogen supply systems that use renewable energy-sourced power from Tohoku and other regions.



Use of CO₂-free hydrogen from renewable energy (image)

▶ Promotion of Efforts for Technology Development and Social Implementation

Development and test operations of fuel cell garbage trucks

The use of hydrogen for service vehicles, which travel a long distance and require a lot of energy to power, is crucial for the decarbonization of the transport sector and expansion of hydrogen use. TMG develops and operates fuel cell garbage trucks in collaboration with universities, wards in Tokyo, etc. Since they do not emit any CO₂ while being driven and are quiet during operation as well as in motion, they also contribute to improving the working environment and living environment while garbage is collected.



Fuel cell garbage truck

TMG aims to expand the use of fuel cell garbage trucks in the future by developing vehicles suitable for the characteristics of the city as well as testing operations on garbage collection routes and analyzing data for the test operations.

▶ Effective Use of Hydrogen as the Legacy of the Tokyo 2020 Games

Hydrogen used for the Olympic cauldron

Hydrogen was used as fuel for the Olympic cauldron for the Tokyo 2020 Games for the first time in the history of the Olympic and Paralympic Games.

To make the Games environmentally friendly and sustainable, TMG widely publicized the significance of hydrogen use by making symbolic efforts during a scene that attracted attention from all over the world.



Olympic cauldron for the Tokyo 2020 Games

Hydrogen used around the Olympic Village

TMG will install hydrogen stations in the Olympic Village after the Tokyo 2020 Games to supply hydrogen to FCVs and Bus Rapid Transit (BRT).

At the stage of practical use, we will present a model for realizing a hydrogen-based society by supplying hydrogen to city blocks through pipelines for the first time in Japan and using electricity generated with pure hydrogen fuel cells for common areas of residential buildings.



Olympic Village after the Tokyo 2020 Games (image)

▶ Education Center

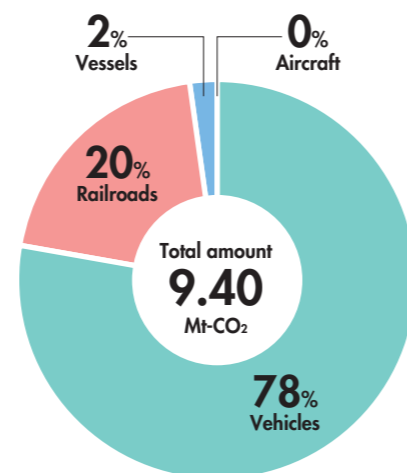
At the end of July 2016, TMG opened an education center to promote the spread of information about hydrogen energy, and allow citizens and facilities in Tokyo to learn more about the significance, technologies, safety, and future of a hydrogen-based society. It also helps small and medium operators of hydrogen stations learn the skills necessary to operate their stations successfully and safely, as well as promoting facility tours at home and abroad.



Tokyo Hydrogen Museum

EXPANDING THE USE OF ZERO EMISSION VEHICLES (ZEVs)

To realize a Zero Emission Tokyo, TMG aims to eliminate the sale of new gasoline-only passenger cars by 2030 and new gasoline-only motorcycles by 2035 in Tokyo. TMG has set a goal to increase the market share of ZEVs—vehicles not emitting any CO₂ or air pollutants during driving, such as EVs, PHVs and FCVs—to 50% of new passenger car sales by 2030. TMG accelerates the introduction of vehicles and infrastructure development to achieve these goals.



Breakdown of CO₂ emissions in Tokyo by means of transportation in the transport sector (preliminary results for FY 2019)

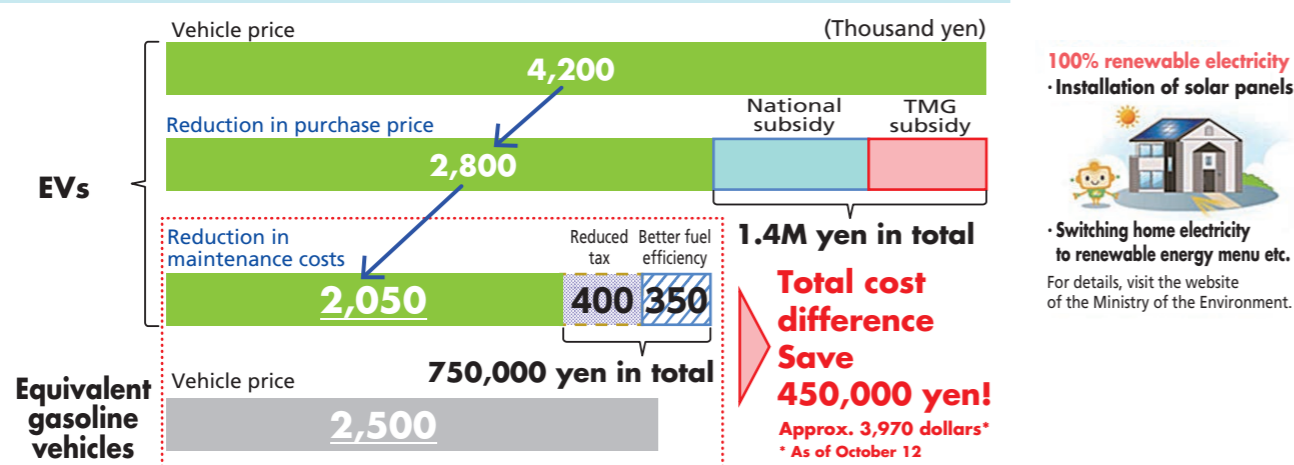
▶ Promoting the Use of ZEVs

Promoting efforts to support the conversion to ZEVs

As the price difference from gasoline-powered vehicles presents an obstacle when residents and businesses in Tokyo consider the purchase of ZEVs, TMG needs to clear obstacles to the purchase of ZEVs by building on the financial support it provides along with the national government. Therefore, we have regarded FY 2021 as the starting point for phasing out gasoline-only vehicles and significantly increased subsidies for ZEV purchases and the number of applicable vehicles.

For passenger cars, TMG has doubled subsidies for EVs from those in FY 2020 by increasing its own subsidies and incorporating subsidies from the Ministry of the Environment in Japan, which are subject to the introduction of 100% renewable electricity. TMG exempt ZEV purchasers from taxation through the ZEV Introduction Promotion Tax System, a mechanism to encourage the introduction of ZEVs.

Estimated total cost difference between EVs and equivalent gasoline vehicles in the case of 10-year vehicle lifetime



To ensure the broader use of EV motorcycles, TMG is expanding subsidies so that they can be purchased at the same cost level as gasoline-powered motorcycles.

In 2017, fuel-cell buses were introduced into Tokyo metropolitan bus lines, becoming the first commercially available municipal fuel-cell buses operated as route buses in Japan. As of the end of September 2021, a total of 85 fuel-cell buses have been introduced, including those operated by private businesses. In FY 2021, in addition to vehicle purchase costs, we have started subsidizing part of the fuel costs associated with running fuel-cell buses.



Fuel cell bus



EV motorcycle (photo courtesy of Tokyo Fire Department)

Proactive introduction to TMG-owned vehicle fleets and TMG facilities

TMG will play a leading role by ensuring the replacement of TMG-owned vehicles (except special-purpose vehicles) with ZEVs in principle when updating, replacing all passenger cars with non-gasoline counterparts by the end of FY 2024 and all motorcycles with non-gasoline counterparts by the end of FY 2029.

▶ Development of Social Infrastructure to Support the Expansion of ZEVs

Ensuring the availability of public chargers

In order to eliminate users' anxiety about insufficient charging opportunities, TMG will promote the installation of EV chargers as social infrastructure. TMG is promoting installation at public facilities and subsidizing installation costs at private facilities, such as multi-family residential buildings and commercial facilities.

Through these efforts, TMG aims to increase the number of public chargers installed in Tokyo to 5,000 by 2025 and increase the number of public fast chargers to 1,000 by 2030.

▶ Promoting the Installation of Hydrogen Stations

Hydrogen stations started operation in Tokyo in 2014 and as of August 2021 are in operation in 22 locations. The key to making full use of hydrogen is to install hydrogen stations which are a familiar energy supply infrastructure.

To promote the installation of hydrogen stations ahead of the expanded use of FCVs, TMG is subsidizing their development and operation costs as these are significantly higher than those of gas stations.

In addition, TMG will support the conversion of an existing gas station into an environment-friendly multi-energy station that is also equipped with hydrogen provision facilities and fast chargers.



Hydrogen station

© Iwatani Corporation

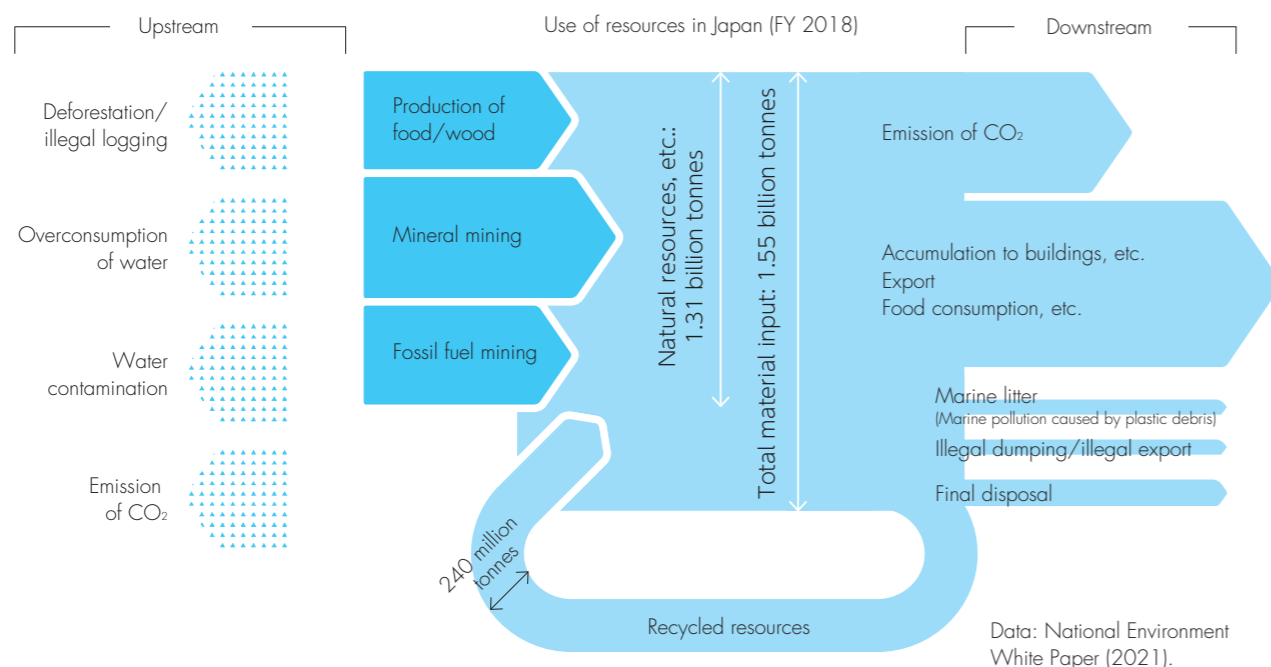
SUSTAINABLE USE OF RESOURCES

The world's consumption of resources will increase, helped along by the economic development of emerging countries. The Sustainable Development Goals (SDGs) adopted by the United Nations in September 2015 set forth Goal 12: Ensure sustainable consumption and production patterns. In 2018, Japan consumed 1.31 billion tonnes of natural resources (DMI), including 692 million tonnes of imported resources and products. Only 238 million tonnes of these were recycled.

Tokyo Has Great Influence on the Use of Resources in Japan

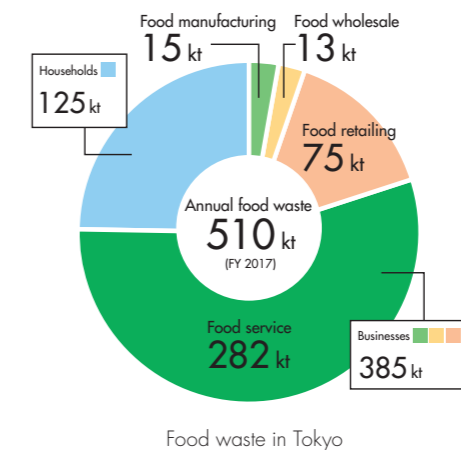
Approximately 40% of Japan's private companies have their head offices in Tokyo. As a city that consumes a significant amount of resources, Tokyo is responsible for reducing its environmental impacts on the planet. By 2030, we should shift our economy to one where we sustainably use resources and develop its vitality as a world city. Aiming to build such a society as envisioned in the Sustainable Materials and Waste Management Plan (September 2021), TMG is strengthening its waste management and recycling systems taking into account social and environmental costs.

Environmental impacts in the upstream and downstream sides of resource use



Reduction of Food Waste

Food waste in Japan is estimated at approximately 6 million tonnes (2018), which is an enormous amount, 1.5 times the amount of food aid provided by the United Nations, approximately 4.2 million tonnes. The quantity of edible but wasted food in Tokyo is approximately 510,000 tonnes per year (2017), and three-quarters of that comes from hotels, restaurants, and other businesses. To halve wasted food by 2030 compared to 2000 levels, TMG formulated the Tokyo Food Loss and Waste Reduction Plan in March 2021 based on discussions in stakeholder meetings. As outlined in the plan, we will encourage new business models that use technology to extend the life of food and use a matching system for emergency food stock coming close to its best-by date.



Tokyo Food Loss and Waste Reduction Plan

More Circular Use of Waste

TMG is pursuing more circular use of waste that contains recyclable resources.

3Rs of business waste

Office buildings and commercial facilities produce various types of waste, including waste paper or food garbage categorized as "general waste" by law and waste plastics and metals classified as "industrial waste." If separated correctly, this waste could furnish valuable resources. TMG will encourage 3R activities by businesses, dispatching 3R advisors to office buildings in cooperation with municipalities and implementing model projects for more efficient and diversified recycling methodologies.



Waste separation at an office building

WEEE (Waste Electronic and Electric Equipment)

Throughout 2017-2019, the Tokyo 2020 Organising Committee conducted the Medal Project to recycle metals in used cellphones and other small WEEE to manufacture gold, silver, and bronze medals. TMG also placed a collection box in its building and cooperated with the committee. This project will be a legacy of the Games. TMG will push for further recycling of WEEE.

▶ For the Sustainable Use of Plastics

Plastics, in part due to the fact they are light and non-degradable, are widely used in our lives. However, from extraction to disposal, all stages of the lifecycle of plastic products emit greenhouse gases. Also, there are concerns that ocean plastic pollution adversely affects the ecosystem.

TMG laid out a vision for the sustainable use of plastics, with net-zero CO₂ and zero marine litter in the Plastic Strategy established in 2019.

The strategy also set 2030 targets for reducing the amount of incinerated plastic waste.



Reduction of single-use plastics

The Act on Promotion of Resource Circulation for Plastic, scheduled to take effect in April 2022, will urge businesses to promote the efficient use of single-use plastic items. This law will encourage the circular use of plastic throughout all stages of its lifecycle, from product design to recycling.

Under such circumstances, TMG is taking every possible opportunity to call for more accelerated actions from all stakeholders, raising public awareness of good practices such as reuse and repair that do not depend on single-use plastics even in the new normal. Furthermore, TMG is disseminating information about innovative circular businesses and closed-loop recycling technologies, collaborating with overseas cities and international organizations.



Innovation creation collaborating with businesses

TMG is supporting and working with private companies developing game-changing reuse business models and closed-loop recycling technologies.

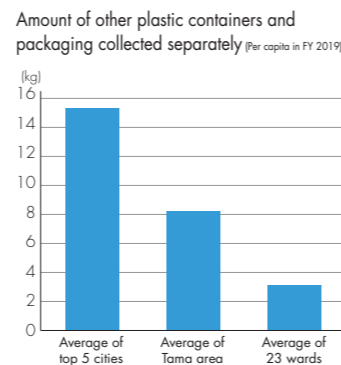


Loop is a private company providing a platform for returnable containers for consumer goods, aiming at eliminating disposable packaging.

Separate collection of plastic containers and packaging

Most of the used plastics discharged from households are containers and packaging. Although all of the municipalities in Tokyo separately collect and recycle plastic bottles, their approaches differ regarding other plastic containers and packaging. Some local bodies do not recover certain items but instead simply dispose of them.

Therefore, TMG is closely working with these municipalities and financially supporting their efforts to introduce and expand separate collection methodologies.



Bottle-to-bottle recycling

Closed-loop technologies that can recover virgin-like material from used plastics are essential to realizing the decarbonized consumption and production of plastic. Bottle-to-bottle loops that recycle used PET bottles to brand new bottles are the most advanced example.

In 2020, TMG and the beverage industry established a consortium to promote more circular use of plastic bottles. In a pilot project by the consortium, a newly designed trash box with a downward input port successfully prevented foreign matter contamination.



A kick-off meeting declaring the establishment of a consortium



Newly designed trash box

Domestic recovery of plastic waste

After Asian nations introduced regulations on plastic waste imports, recycling facilities in Japan have had to deal with overcapacity leading to them applying more stringent criteria for the acceptance of waste. It has become even more crucial to ensure resource circulation routes in Japan because of the revision of the Basel Convention and the enforcement of the Act on Promotion of Resource Circulation for Plastics. Therefore, TMG is conducting a pilot project to transport plastic waste in Tokyo to cement kilns in other parts of Japan, cooperating with the Tokyo Industrial Waste Association.

Prevention of ocean plastic pollution

Each year, 4.8 to 12.7 million tonnes of plastics flow into the ocean from the world's rivers, and the weight of marine debris will exceed that of fish by 2050.

TMG is raising public awareness about ocean plastic pollution and encouraging citizens to participate in voluntary beach and riverside clean-up activities, collaborating with municipalities, NGOs and corporations.



Video "Re-Think Ocean Plastics"



One of the sources of marine debris is litter in the street either intentionally discarded or spilled from waste collection sites. TMG promotes environmental education for children in cooperation with educational institutions to prevent such scattering of litter and encourage a shift to a lifestyle with minimum waste.

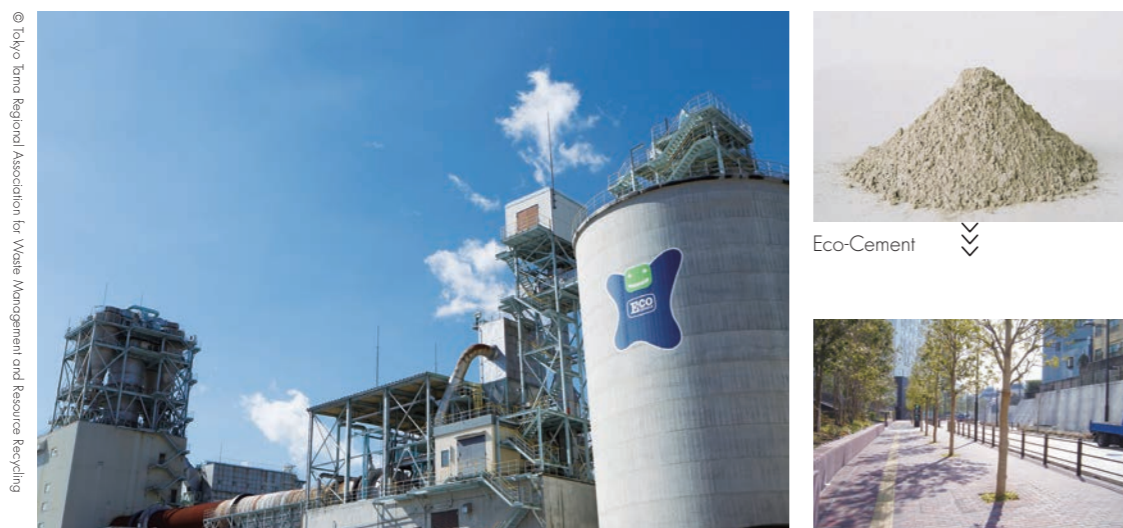


Children surveying river litter

Other efforts

Incinerator ash

In Tokyo, municipalities incinerate almost all unrecyclable waste. Some of the ash is then recycled for cement.



Eco-Cement plant, which produces cement from incinerator ash

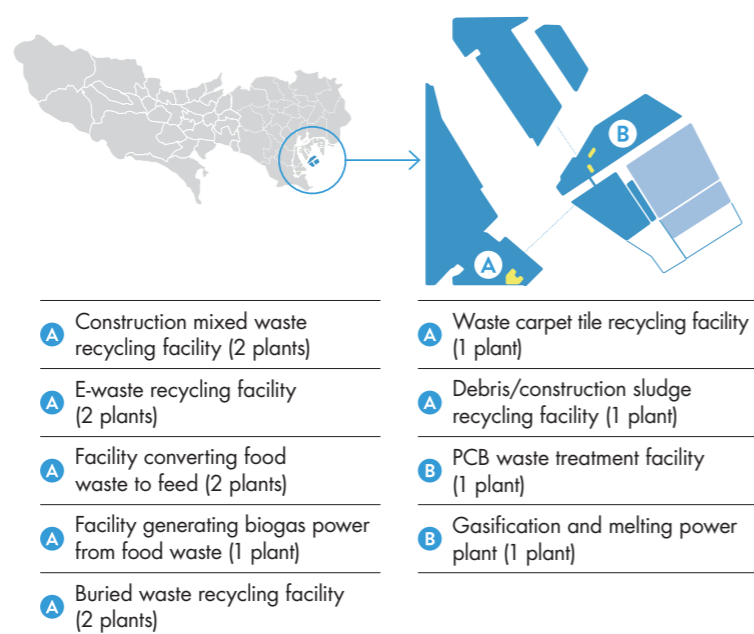
Used as construction materials

Construction and demolition waste

The Construction Waste Recycling Law obligates construction companies to separate materials when demolishing buildings and recycle specified materials (concrete, asphalt concrete, wood). Waste concrete is recycled not only for roadbed materials but also for making new concrete aggregates.

Tokyo Super Eco-Town

TMG has implemented the Tokyo Super Eco-Town Project. TMG has invited companies with advanced and reliable technologies to this industrial park. They have established recycling facilities that produce for example animal feed from food waste, or recycle construction mixed waste. The project will help extend the useful lifespan of landfill areas. Tokyo Super Eco-Town is located in the waterfront area.



FURTHER COOPERATION WITH CITIES AROUND THE WORLD

Climate change measures need to be addressed on a global scale, making it critical to enhance and strengthen cooperation with cities around the world.

TMG cooperates actively with international organizations and cities around the world, promoting policies and sharing our experience and knowledge. In doing so, TMG contributes to finding solutions to global environmental issues.

Development of "TIME TO ACT"

As the climate crisis becomes more serious, it is crucial for the entire world to take action to combat this crisis. TMG is developing "TIME TO ACT", a climate action movement, and held the kick-off meeting in February 2021. The TMG will use its strong global influence and ties with cities around the world to call for global efforts to accelerate effective initiatives to combat climate change.



Kick-off meeting

Cooperation with C40

The C40 Cities Climate Leadership Group is an international network of cities, including megacities such as London, New York, Paris, and Los Angeles that are committed to addressing climate change. Since TMG became a C40 member in 2006, it has been actively participating with other C40 members in the network's initiatives on private building energy conservation and waste management. The governor is serving as a C40 Vice Chair, and is currently taking a leadership role especially in regards to the Sustainable Building and Green Hydrogen initiatives.

Activities through ICAP

ICAP (International Carbon Action Partnership) is an international forum for technical dialogue, ETS (Emission Trading Systems) knowledge sharing and capacity building activities by governments and public authorities that have implemented or are planning to implement ETS.

In May 2009, TMG joined ICAP as the only single city government entity and the first member from the Asian region. Since then, TMG has proactively shared its achievements and know-how with members with a view to disseminating cap-and-trade schemes.

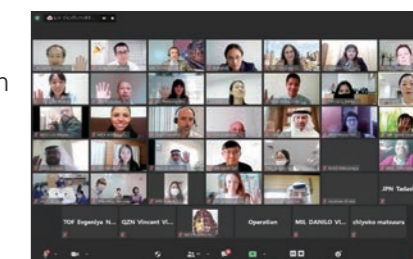


ICAP annual meeting

Technical Exchange with Asian cities

TMG exchanges researchers from the field of air quality improvement with Beijing, and carries out technology exchange, including countermeasures for PM_{2.5} and VOCs.

In the field of waste, we are promoting practical-level efforts to improve waste management through bilateral programs with Yangon and other cities and international training programs.



Online International Waste Management Workshop

Strengthening Adaptation Measures

As the impact of climate change has become more serious, we need to work on not only mitigation measures to reduce greenhouse gas emissions but also adaptation measures to avoid or alleviate damage caused by the impact of climate change.

► Formulation of the Tokyo Climate Change Adaptation Plan

The Tokyo Climate Change Adaptation Policy was formulated in December 2019 to confront the impact of climate change in Tokyo and avoid or reduce damage in a wide range of fields, including natural disasters, health, and agriculture, forestry, and fisheries. In addition to the concept indicated in the policy, the Tokyo Climate Change Adaptation Plan was formulated in March 2021 based on the concept of sustainable recovery, incorporating a variety of perspectives, such as the promotion of digital transformation. Based on this plan, TMG will ensure progress control with the PDCA cycle and promote adaptation measures in cooperation with related bureaus under the government-wide promotional system.



Tokyo Climate Change Adaptation Plan

Establishment of the Local Climate Change Adaptation Center

To provide information and advice on climate change for municipalities and raise awareness of Tokyo residents, TMG will establish the Local Climate Change Adaptation Center in the Tokyo Metropolitan Research Institute for Environmental Protection which has been engaged in research on countermeasures for the urban heat island effect.



Tokyo Metropolitan Research Institute for Environmental Protection

Promotion of adaptation measures against natural disasters

We need to utilize innovative technology to promote more advanced adaptation measures in both structural and non-structural aspects against natural threats, such as floods, inland floods, storm surges, and landslides caused by increasingly intensified heavy rains or typhoons. TMG promotes conservation management of water conservation forests by using drones for checking the forest conditions in ordinary times and on-site investigations in times of disaster.

Using drones

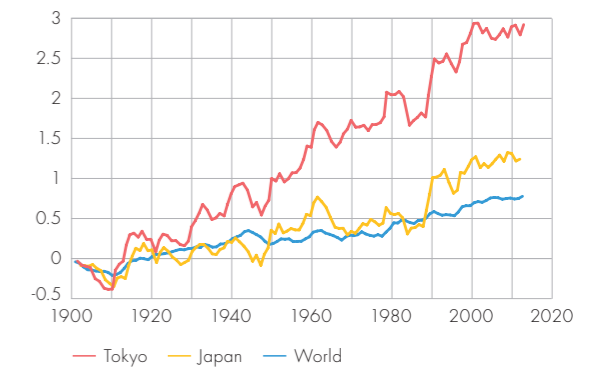


A distant view of a collapsed area (Photo taken by a drone)

A close-up view of a collapsed area (Photo taken by a drone)

► Mitigation of Urban Heat Island

Urban heat island effects have continued in Tokyo as urbanization progresses, posing heat countermeasures as a critical challenge.



Changes in annual average temperature anomalies in the world, Japan, and Tokyo since 1900

Creation of Cool Spots etc.

In collaboration with business operators and municipalities ready to install fine mist generation equipment or plant more flowers and trees, TMG has been creating cool spots for heat mitigation to allow citizens and tourists to stroll comfortably during midsummer.

We will collect temperature, humidity, and other data through smart poles installed in the "Smart Tokyo" pilot project in Nishi-Shinjuku and utilize the data for heat countermeasures and other initiatives.



Fine mist and green walls

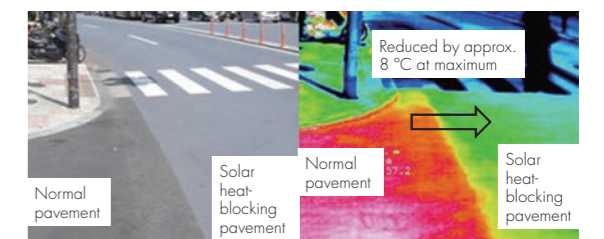
"Uchimizu" (Water Sprinkling)

Sprinkling water is part of the traditional Japanese culture. Sprinkling water in front of houses or stores lowers the temperature of the hot ground surface, helping mitigate the summer heat. TMG is making efforts to promote Uchimizu activities in conjunction with citizens and businesses in Tokyo.



Laying Solar Heat-Blocking Pavements, Maintenance and Management of Trees

For Tokyo metropolitan roads mainly in the central core area, TMG has laid solar heat-blocking pavements and water retaining pavements to mitigate road surface temperature rise. As one of heat countermeasures for the Tokyo 2020 Games, TMG completed approximately 157 km of Tokyo metropolitan roads including circuits for road races as of the end of FY 2020.



Road surface cooled with solar heat-blocking pavement



CONSERVATION OF BIODIVERSITY AND CREATION OF GREENERY

As one of the largest cities in the world, Tokyo spreads out from the mainland to the Ogasawara Islands, up to approximately 1,900 km, and has a variation in elevation of more than 2,000 m.

Tokyo consists not only of urban central areas with green spaces, including roadside trees and parks but also of different natural environments: suburbs partly covered with woods and fields, satoyama (open light-filled woodland near populated areas) and hilly terrain full of biodiversity, steep mountain areas overrun by primeval forests, and islands with a unique natural environment and ecosystem caused by volcanic activity, including the Ogasawara Islands registered as a natural World Heritage site.



Ogasawara islands



Valley in Okutama area



City Hall and the surrounding area

▶ Considering the Revision of the Local Biodiversity Strategy

Since formulating the Tokyo Green Plan 2012 - City Biodiversity Strategy in May 2012, TMG has been developing initiatives with an emphasis on ensuring the quality of greenery, including the conservation of biodiversity, in addition to the efforts to ensure the quantity of greenery. This strategy combines the characteristics of the Local Biodiversity Strategy based on the Basic Act on Biodiversity.

We started considering the revision of the Tokyo Green Plan 2012 in FY 2019 and are studying various aspects related to biodiversity, such as the future of Tokyo, taking into account the formulation of the new Post-2020 Global Biodiversity Framework and the next National Biodiversity Strategy.

▶ Greening in Urban Areas

The percentage of green and blue spaces (water areas) for 2018 announced by TMG is 52.5% for the entire mainland, continuing its slight decline since 2013.

In accordance with the Greenery Program, TMG has been creating greenery in parallel with urban development. In addition to increasing the quantity of greenery with the planting of native species, we are promoting efforts to improve the quality of greenery to nurture biodiversity.



To encourage the conservation of biodiversity, TMG registers green spaces where native species are planted above a certain level, designating them with special logos and highlighting them on our website.

Greenery Program

Requirement

Submission of Greenery Plan satisfying the greenery standards

Target

Newly constructed, renovated, or extended buildings of 1,000 m² or larger in site area. (For public buildings, 250 m² or larger.)

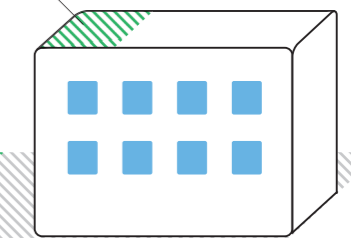
For buildings:

Greening is required for more than **20%** of roof area

On the ground:

Greening is required for more than **20%** of open space area

Examples of TMG greenery standards



*For site areas of 5,000 m² or larger, 25% of greening is required.
*For planned development projects, 30% of greening is required (35% for areas of 5,000 m² or larger).

▶ Measures for Alien Species

Various alien species are brought in Tokyo from both home and abroad, sometimes having a great impact on native creatures etc. For example, raccoons (*Procyon lotor*) and masked palm civets (*Paguma larvata*) are increasingly causing damage to the living environment and ecosystems in the city.

Recently, alien species that can cause damage to the human body have been identified as well. In 2014, redback spiders were found in urban areas. In 2017, red imported fire ants or tropical fire ants were found at piers where cargo from overseas is offloaded. TMG will strengthen measures against these alien species to reduce the impact on the living environment, ecosystem, etc.



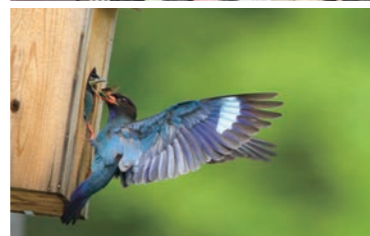
▶ Rich Natural Environment in Urban Neighborhoods

Meiji no Mori Takao Quasi-National Park

It only takes approximately 50 minutes to get from the center of Tokyo to Meiji no Mori Takao Quasi-National Park, a famous tourist spot registered in the Michelin Green Guide. Part of the park is the property of the Head Temple Takao-san Yakuo-in that has historical and cultural features as well as magnificent landscapes. It also offers an ecosystem of abundant nature despite its proximity to central Tokyo, well deserving its world famous reputation. In 2018 when the park celebrated the 50th anniversary of its designation as a quasi-national park in 1967, a 50th anniversary project was held to promote recognition of the region.



Events to draw attention to the attractiveness of the mountain in an urban central part of Tokyo as well as the Mt. Takao area



Efforts to reintroduce the Oriental dollarbird, (*Eurystomus orientalis*) once commonly seen in Mt. Takao, to commemorate 50th anniversary

© Tenryu-mura

Natural Parks with Various Features

In addition to Meiji no Mori Takao Quasi-National Park, there are nine natural parks in Tokyo, each having its own distinctive features. Recently, the number of international visitors has increased, along with the range of activities on offer. Given the situation, the Vision for Tokyo Natural Parks was formulated as a comprehensive blueprint for the Tokyo natural parks to more fully enhance potential attractiveness, conserve the rich natural environment, history, and culture as well as promoting the opportunity to visit the parks.



Fuji-Hakone Izu National Park (Miyakejima) characterized by different volcanic landscapes on each island



Chichibu Tama Kai National Park (Mitosan) where we can enjoy mountain-walking through all four seasons

▶ Conserving Precious Nature Together with Tokyo Residents

To conserve the precious nature in urban neighborhoods, including satoyama (open light-filled woodland near populated areas) in mountain areas and hilly terrain, we are working with local municipalities to promote the designation of conservation areas, striving for preservation and restoration.

In satoyama and green spaces needing conservation, local volunteer groups play a central role in green space conservation activities, such as cutting undergrowth and thinning trees. To recruit new human resources to carry out such conservation activities, we are implementing efforts to promote the activities, such as providing opportunities for experience-based programs in which even inexperienced people can easily participate.



▶ Ogasawara Islands Registered as World Heritage Site in June 2011

Consisting of over 30 islands, the Ogasawara Islands are located in the North West Pacific 1,000 km south of Tokyo, where dolphins and whales inhabit a beautiful blue ocean. Geological features on the island show the evolutionary process of oceanic island arcs. These islands have never been part of any continent, and so the living creatures able to reach the islands over the sea could survive only by adapting to the environment. The Ogasawara Islands were evaluated as an area with a precious ecosystem and registered as a natural World Heritage site in June 2011 as they reveal the evolution of and connection between living things not seen in any other areas. To protect the value of the World Heritage site, we are removing influential alien species while conserving decreasing endemic species. We are also developing ecotourism to help protect and properly use valuable natural resources and are striving to prevent the entry of new alien species.



Preventing alien species from entering the islands on the soles of shoes

AIR QUALITY MANAGEMENT

A period of high economic growth in Tokyo after World War II saw rapid industrialization and a surge in automobile ownership, causing severe environmental issues and threatening the health and welfare of its residents.

TMG has promoted various pioneering environmental measures and made great strides in solving these environmental issues.

We will not only strive to preserve the living conditions improved through existing measures, but also promote new initiatives to create a higher quality environment where all Tokyo residents will be able to enjoy and experience a higher quality of life with peace of mind.

Tracking Changes in the Air Quality of Tokyo

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.

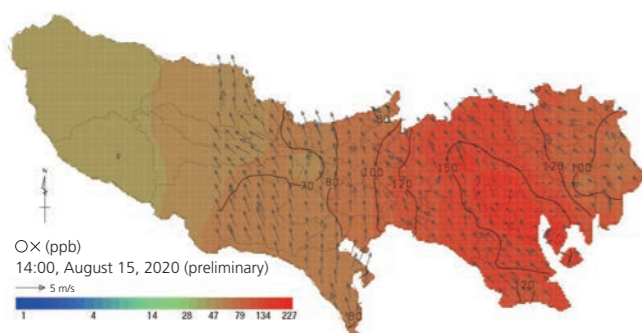
Present The air environment in Tokyo has improved, allowing the environmental standards for PM_{2.5} to be met at all monitoring stations for the first time in FY 2019. However, the concentration of photochemical oxidants still exceeds environmental standards.



Kasumigaseki, Tokyo

Monitoring Air Pollution

Air pollution monitoring devices have been installed at 82 locations in Tokyo for 24-hour continuous measurement. The measurement data is available, updated every hour, on the website of the Bureau of Environment. TMG will provide air quality data as open data to encourage the development of measures for air pollution utilizing 5G and other advanced technologies.



Example of occurrence of high concentration photochemical oxidants

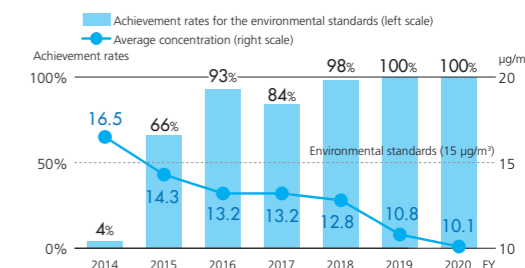


Roadside air quality monitoring station

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).

Since the environmental standards for PM_{2.5} were met at all monitoring stations in FY 2019, TMG will build on the existing measures for further improvements, and aim to reduce the average of all monitoring stations to under 10 µg/m³ by FY 2030.

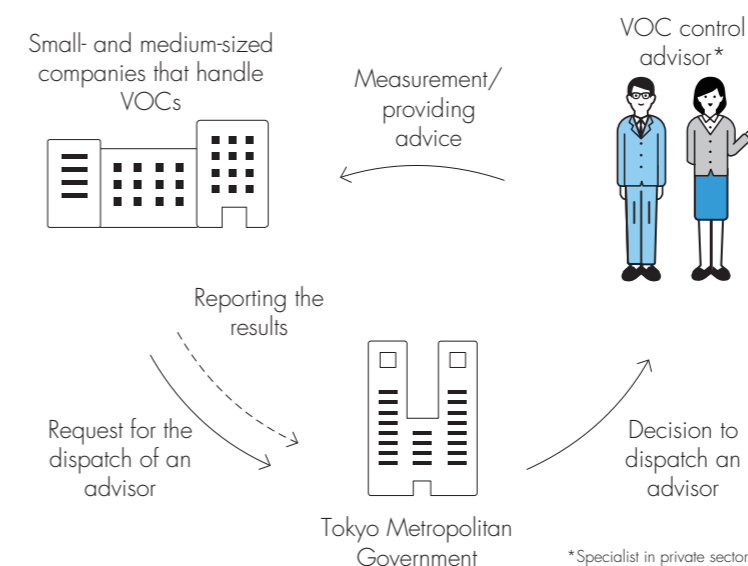


Achievement rates for the environmental standards for PM_{2.5} at monitoring stations in Tokyo and changes in average concentration of all monitoring stations

Main Efforts

VOC Control Advisor Dispatching Program

Advisors are dispatched to factories that use VOCs.



*Specialist in private sector

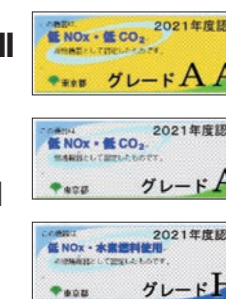
Guide for Reducing VOC Emissions

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.

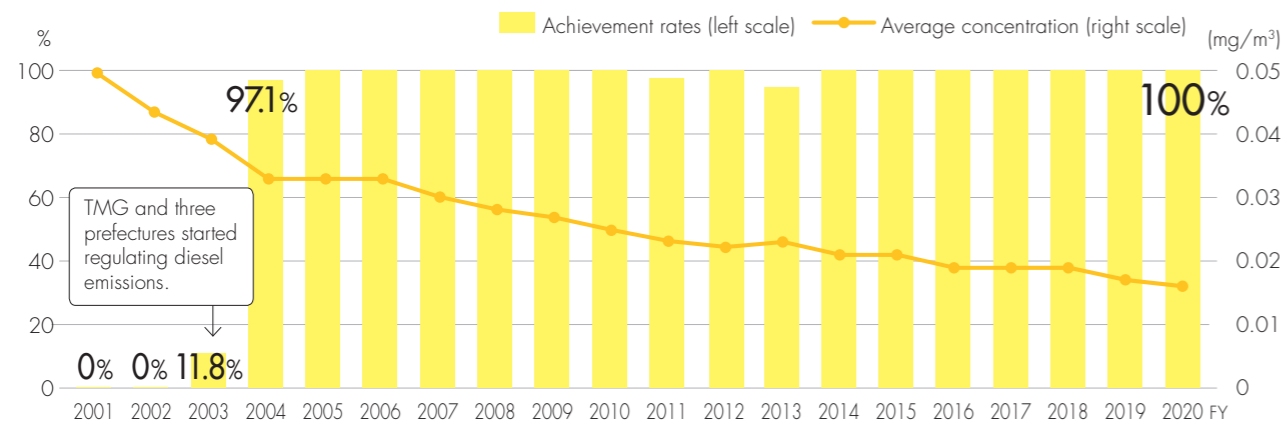


AUTOMOTIVE EMISSIONS REGULATIONS AND USE OF BICYCLES

► 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 and changes in annual average SPM concentration (mg/m³) at roadside air quality monitoring stations

► 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 2020) to submit a Tokyo Vehicle Emission Reduction Plan for further reductions in greenhouse gases and exhaust gases caused by vehicles.

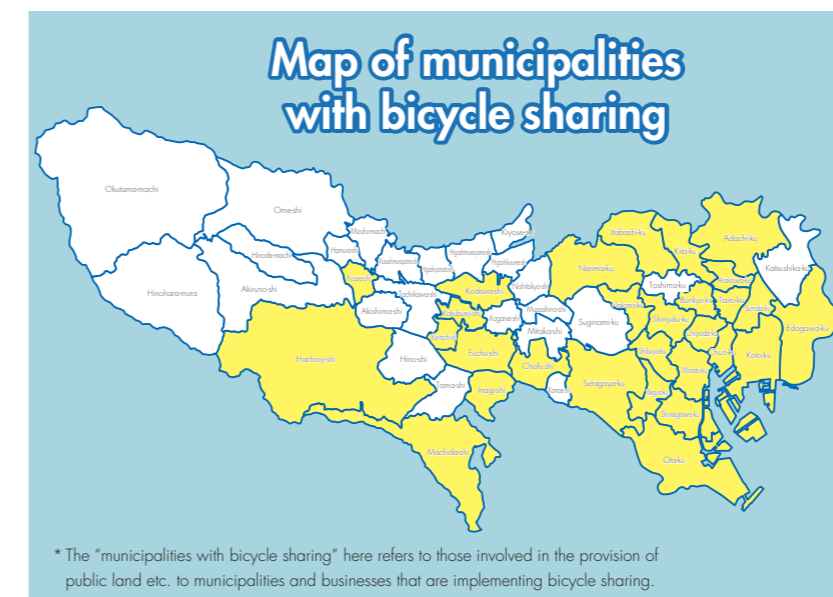
Through the Tokyo Vehicle Emission Reduction Program, 1.43 million tonnes of CO₂ was reduced in the five years from FY 2011 to FY 2015 (third compliance period) by encouraging a shift to low-emission/fuel-efficient automobiles, such as hybrid vehicles, making efforts for eco-driving, etc. (the value 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. As society moves toward a sustainable recovery from the COVID-19 pandemic, there is an even greater appreciation of the more widespread 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.



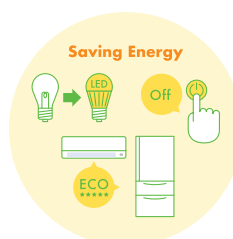
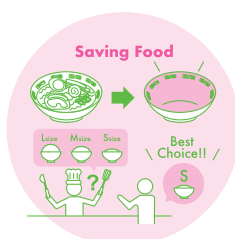
As of October 2021



Recruiting Participants in Team Mottainai!

- ▶ Changes in each individual's awareness and behavior will create an environmentally friendly society.
- ▶ Team Mottainai is a loose framework to raise each individual's awareness of "mottainai" (sense of "too precious to waste" and respect for the Earth's resources) and change their consumption behavior in a variety of situations, focusing on the following three areas.
- ▶ We welcome all businesses, NGOs, and other organizations as well as individuals that support the intent behind the activities, convey awareness of "mottainai," and engage in activities to create an opportunity for behavior change.

Join Team Mottainai to expand your environmentally friendly lifestyle together with us!



Team Mottainai "too precious to waste"

Apply from here →

