

[Results of Tokyo Cap-and-Trade Program in the Second Compliance Period]

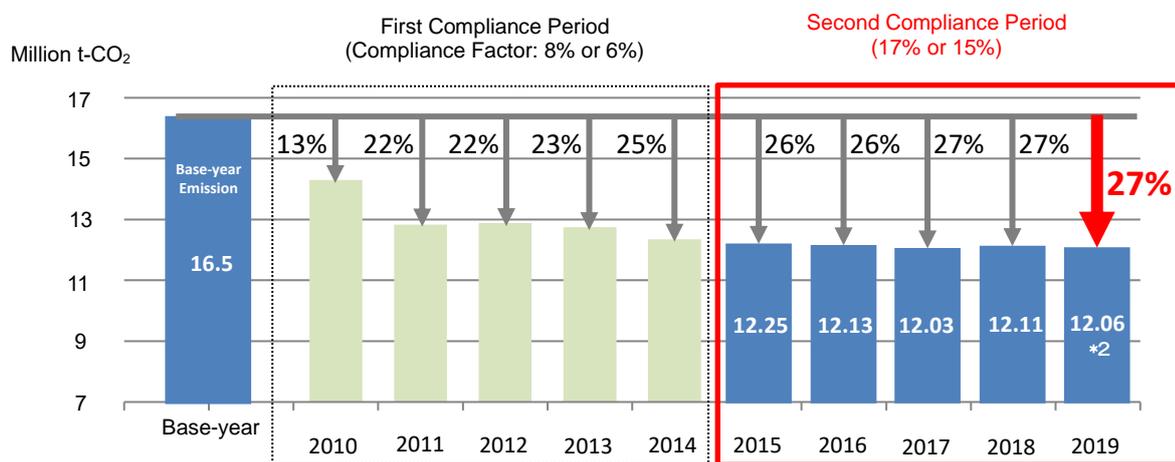
**Emission Reduction of Approximately 21.9 Million Tonnes over 5 Years
- Achieved by Continued Reduction Measures throughout the Period -**

In FY2019, emissions from covered facilities achieved a **27% reduction** from the base-year emissions*1 as a result of continuous energy efficiency efforts and increased use of low-carbon electricity or heat (see reference), therefore achieving approximately 21.9 million tonnes in reduced emissions over the five years of the second compliance period.

The Tokyo Metropolitan Government (TMG) will continue to encourage CO₂ reductions in the third compliance period (FY2020 to FY2024) to enable all covered facilities to meet their obligations.

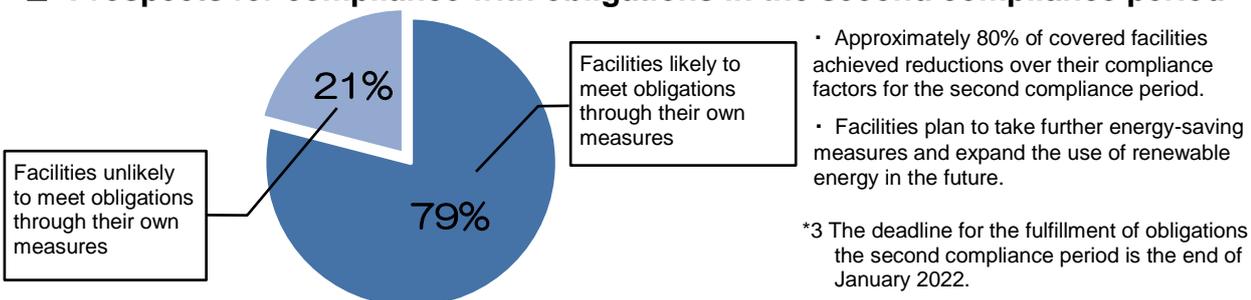
*1 Base-year emission is the average emissions of three consecutive fiscal years selected by facilities between FY2002-FY2007.
(Aggregated value resulting from emission factors for electricity, etc. in the second compliance period)

Continued high emission reductions throughout the second compliance period



*2 Aggregated value as of May 31, 2021 resulting from emission factors for electricity, etc. in the second compliance period

Prospects for compliance with obligations in the second compliance period*3



○ About the Tokyo Cap-and-Trade Program

In FY2010, TMG started the Tokyo Cap-and-Trade Program for large facilities according to the Tokyo Metropolitan Environmental Security Ordinance.

- Compliance factors: 8% or 6% in the first compliance period from FY2010 to FY2014
17% or 15% in the second compliance period from FY2015 to FY2019
27% or 25% in the third compliance period from FY2020 to FY2024
- Covered facilities: Approximately 1,200 facilities which have an annual energy usage equivalent to 1,500 kL or more of crude oil equivalent.

(Contact Information)

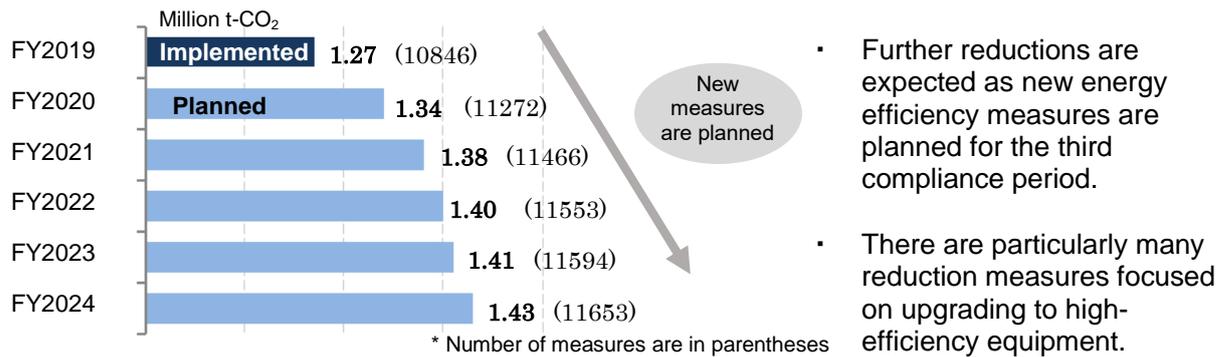
Emission Cap and Trade Section, Climate Change & Energy Division, Bureau of Environment

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Reference

> Analysis of implementation or planning of measures

Reductions resulting from measures implemented or planned by covered facilities



Reduction measures indicated in GHG Emission Reduction Plans

Measures for heat sources, air conditioning, and lighting	Quantity	Reductions (tonnes)
Installation of high-efficiency heat source equipment	420	148,309
Installation of high-efficiency pumps for air conditioning and energy-saving control	340	31,618
Installation of high-efficiency air conditioning equipment	438	39,616
Installation of high-efficiency packaged air conditioning equipment	115	4,968
Installation of variable-air-volume systems for air conditioning equipment	39	6,658
Installation of systems for cooling using outside air	261	23,163
Installation of external air volume control based on CO ₂ concentration	128	14,481
Installation of total heat exchangers	38	3,907
Installation of high-efficiency fans	244	14,072
"Cool Biz" and appropriate room temperatures during summer	105	11,888
Implementation of warming-up control	28	604
More careful timing of starting up air-conditioning before using rooms	124	12,055
Installation of building energy management systems	41	8,131
Visualization of energy consumption included in above	7	723
Demand control systems	6	2,984
Installation of high-efficiency lighting and energy saving control	2,193	158,027
LED lights included in above	1,913	138,266
Hf lights included in above	147	13,001
Sensors included in above	91	2,982
Relaxing illumination conditions	213	16,503
Total or partial lights-out during lunch break and outside business hours	25	768
Installation of energy saving control for elevators	127	2,748
Total (above measures and others)	11,653	1,428,669

> Status of low-carbon electricity or heat use and feedback from facilities in plans

Selection of low-carbon electricity or heat as a means to meet obligations

- In the second compliance period, a new mechanism has been introduced to accept equivalence to CO₂ reductions when covered facilities procure electricity or heating from TMG-certified suppliers with lower emission factors*.
- In the second compliance period, this mechanism was used by 158 facilities for low-carbon electricity and 162 facilities for low-carbon heat.

[Facilities selecting low-carbon electricity or heat in the second compliance period]

Categories	No. of facilities	Reductions of facilities in plans	
		Total reductions	Average ratio of reductions to emissions
Low-Carbon Electricity	158	Approx. 62,500 t-CO ₂	Approx. 2.6%
Low-Carbon Heat	162	Approx. 33,900 t-CO ₂	Approx. 0.5%

* Certification requirements of suppliers in the second compliance period

Low-Carbon Electricity: a) 0.4t-CO₂ /1,000 kWh or less, and introduction rate of renewable energy of 20% or more

b) 0.4t-CO₂ /1,000 kWh or less, and introduction rate of low-carbon thermal power of 40% or more

Low-Carbon Heat : CO₂ emission factor of 0.058 t-CO₂ / GJ or less

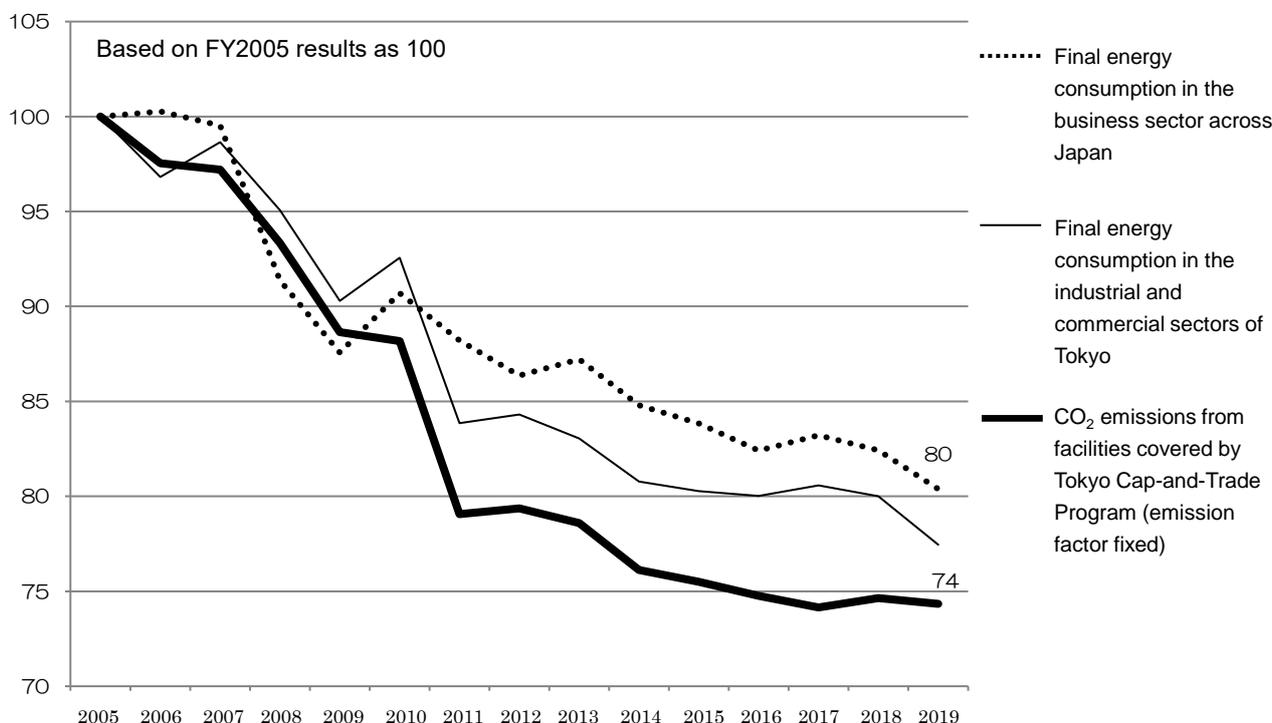
Feedback from facilities in plans (regarding introduction of renewable energy, etc.)

- ✓ Considering measures for effective use of renewable energy (procurement of electricity sourced from more renewable energy, corporate PPAs, certificate acquisition, etc.) to achieve the 2030 and 2050 targets for GHG emission reduction
- ✓ Planning to install renewable energy equipment during facility renovations
- ✓ Anticipating implementation of policies for technological innovations, stable supply of renewable energy (such as enhancement mechanism for selecting low-carbon electricity or heat)

➤ Comparison with national levels

- Trend of CO₂ emissions from facilities under the program* shows that the facilities have achieved continued significant reductions more than national levels compared to those in energy consumption in the business sector across Japan and the industrial and commercial sectors of Tokyo.

[Comparison of reductions in CO₂, etc. in the business sector across Japan, in the industrial and commercial sectors of Tokyo, and at facilities covered by Tokyo Cap-and-Trade Program]



- * The changes in CO₂ emissions from facilities covered by the Tokyo Cap-and-Trade Program almost correspond to those in energy consumption at the facilities as the emissions are calculated by fixing CO₂ emission factors.

Data sources:

- Final energy consumption across Japan announced by the Agency for Natural Resources and Energy: (https://www.enecho.meti.go.jp/statistics/total_energy/pdf/gaiyou2019fy.pdf)
- Final energy consumption in Tokyo announced by TMG: (https://www.kankyo.metro.tokyo.lg.jp/climate/zenpan/emissions_tokyo.files/2019sokuhou.pdf)
- CO₂ emissions from large facilities in Tokyo (FY2005-FY2009) announced by TMG: (https://www.kankyo.metro.tokyo.lg.jp/climate/large_scale/overview/current_program/index.files/zenseidomatome.pdf)