

Tokyo Cap-and-Trade Program Tokyo-ETS



Tokyo Metropolitan Government

Total CO₂ Emission in Tokyo (FY2006)

- Large emission comparable to a country
- High growth in Office Sector

	1990FY	2000FY	2006FY	Growth	
	(Mt-CO ₂)	(Mt-CO ₂)	(Mt-CO ₂)	1990-2006	2000-2006
Industry	9.8	6.8	5.2	-47.0%	-23.5%
Commercial	15.7	18.9	20.6	31.1%	9.0%
Household	13.0	14.3	14.4	11.0%	0.7%
Transportation	14.8	17.6	14.7	-1.1%	-16.5%
Others	1	1.2	1.0	-0.5%	-16.7%
Total	54.4	58.8	55.9	2.8%	-4.9%

Prior Programs :

Tokyo CO₂ Emission Reduction Program

The introduction of Tokyo CO₂ Emission Reduction Program

Phase 1: fiscal 2002 – 2004

Phase 2: fiscal 2005 – 2009

- Instructions and advice provided by TMG to push installations to set the reduction targets at higher level
- Submission of yearly progress reports required by installations
- Evaluation and public announcement of outstanding installations

Introduction of the Tokyo-ETS

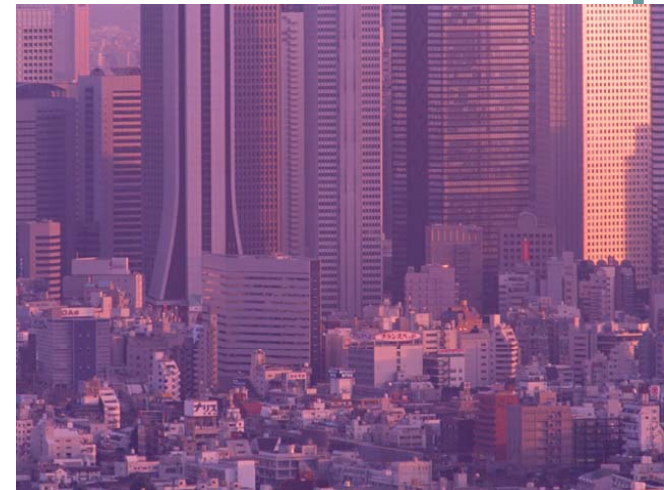
The world's first urban cap and trade program to cover office buildings as its emissions reduction targets

Cap coverage: 1,400 installations (including 1,100 business facilities and 300 industrial facilities)

Start: April 1st 2010

■ Reference ■

- **EU ETS coverage**
: combustion plants, oil refineries, iron and steel plants, cement factories, etc.
- **US RGGI coverage:** thermal power plant
- **UKCRC coverage:** business and public sector organizations



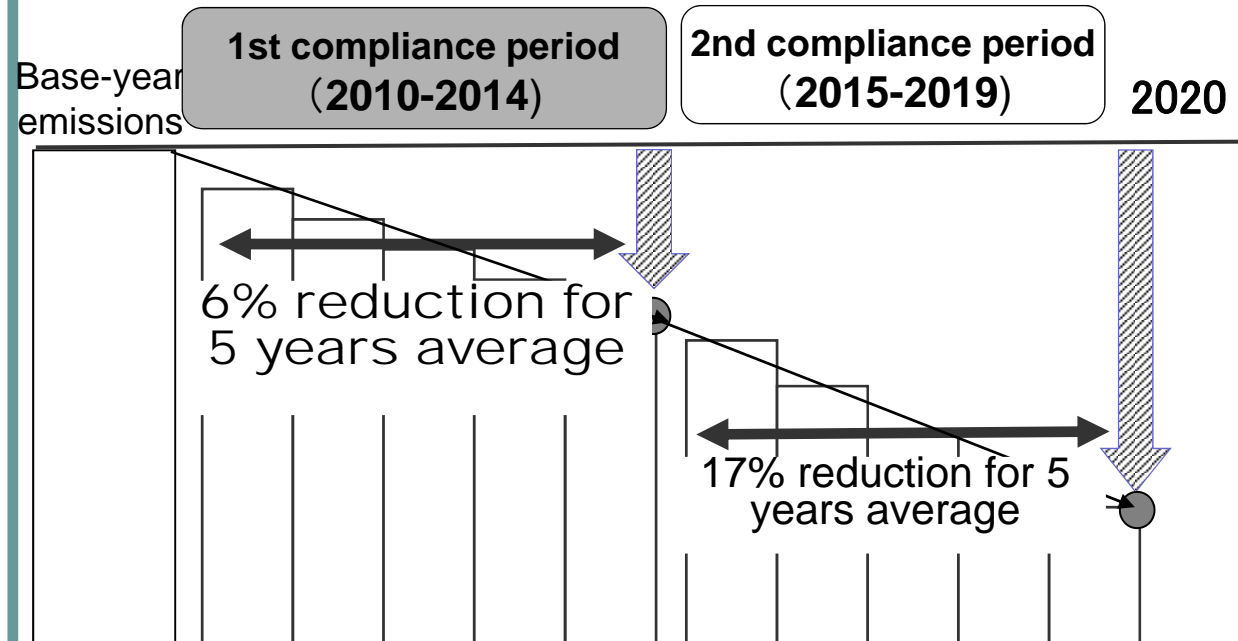
Tokyo-ETS(1)

Coverage	Large installations, such as office buildings and factories. --Consumption of fuels, heat and electricity is 1,500 kiloliters or larger per year (crude oil equivalent)
Persons subject to total reduction obligations	The owner of the installations subject to the obligations; however, another person may assume the obligations in place of or jointly with the owner, if notification is made. *A tenant who is the owner of businesses of a certain scale or larger may also assume the obligations.
Compliance period	5 years --1 st compliance period : from FY2010 through FY2014 --2 nd compliance period :from FY2015 through FY2019 Monitoring and Reporting: every year
Gas covered	Energy-related CO ₂

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CAP setting

■ **TMG's target of GHG emission reductions (25% reduction levels by 2020 from the 2000 emission) * 17% reduction level is required for commercial sector**



*The cap for the first compliance period has been set at a level of 6% below base year emission

*The cap for the second compliance period will need to be set at a level of approximately 17% below base year emission

(cf.) EU-ETS -5.7%(2008-2012) -21%(2013-2020)
 RGGI ±0%(2009-2014) -10%(2015-2018)

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Compliance factor	<p>1st Compliance Period: 6% or 8%</p> <ul style="list-style-type: none">* 6% for factories (and buildings receiving energy from district heating and cooling plants)* 8% for rest of the buildings <p>2nd Compliance Period: 17% (planned)</p> <p>— Installations that have made outstanding progress with regard to measures against global warming are recognized as top-level installations whose compliance factor is reduced to 1/2 or 2/3</p>
Allowance allocation	<p>Grandfathering</p> <p>Allowances: Base year emission × Compliance factor × Compliance period (5years)</p> <p>*Base year emission: Average emission of past 3 years</p>
Compliance assessment	<p>Compliance assessment will take place after completion of each phase (i.e. after 5 years)</p>

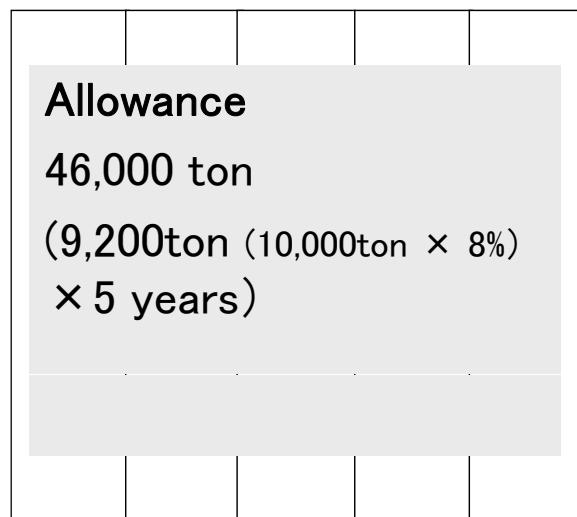
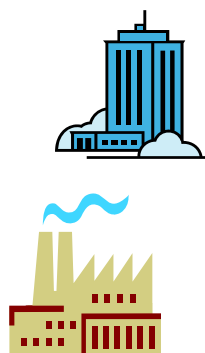
Tokyo-ETS(4) Allowance Allocation

Base year emission × Compliance factor × Compliance period (5years)

*Base year emission: Average emission of past 3 years

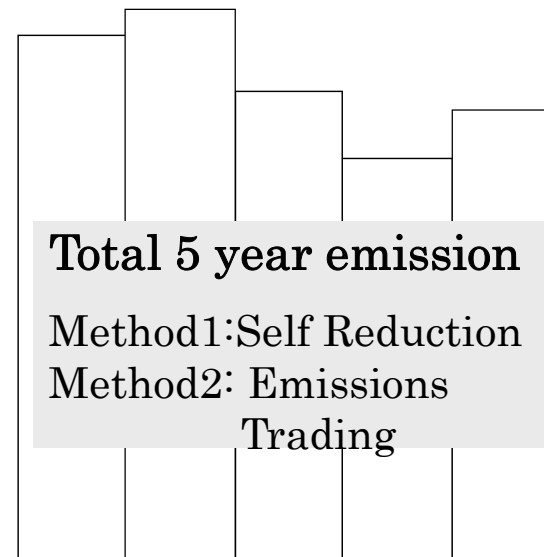
For Example, ● Base year emission : 10,000 ton

● Compliance factor for 1st compliance period : ▲ 8% reduction



2010 '11 '12 '13 '14 Year
(Reduction Period : 5 years)

IV
Reduction



2010 '11 '12 '13 '14 Year

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Certification as Top-Level Installation

- Installations that have made outstanding progress in the implementation of measures against global warming
 - ⇒ Certified as top-level installations (the compliance factor is reduced to 1/2)
- Installations that have made excellent progress in the implementation of measures against global warming
 - ⇒ Certified as near-top-level installations (compliance factor is reduced to 3/4)

Countermeasures (examples)		
General administrative items	Energy management organization	Organization within installation, hosting of energy conservation conferences, etc.
	Measurement of energy consumption	Installation of measurement gauges at appropriate locations, and analysis
	Commissioning	Setting and adjusting performance verification items
Items related to building and facility performance	Energy conservation performance of the building	Level of heat insulation, etc.
	Energy conservation performance of the facilities	Energy conservation performance of the facilities
	Energy conservation performance of control systems	Introduction of control devices for the facilities and setting appropriate control values, etc.
	Use of renewable energy	Direct use, installation of facilities, etc.
Items related to the operation of offices and facilities	Operations management	Level of measures at mid-term
	Maintenance and management	Maintenance and inspection items for major facilities

Scoring standard: scores are set so that the total for essential items and general items is 100. Extra points are added if additional items are applicable.

- Total score of 80 or more: level for certification as a top-level installation
- Total score of 70 or more: level for certification as a near-top-level installation

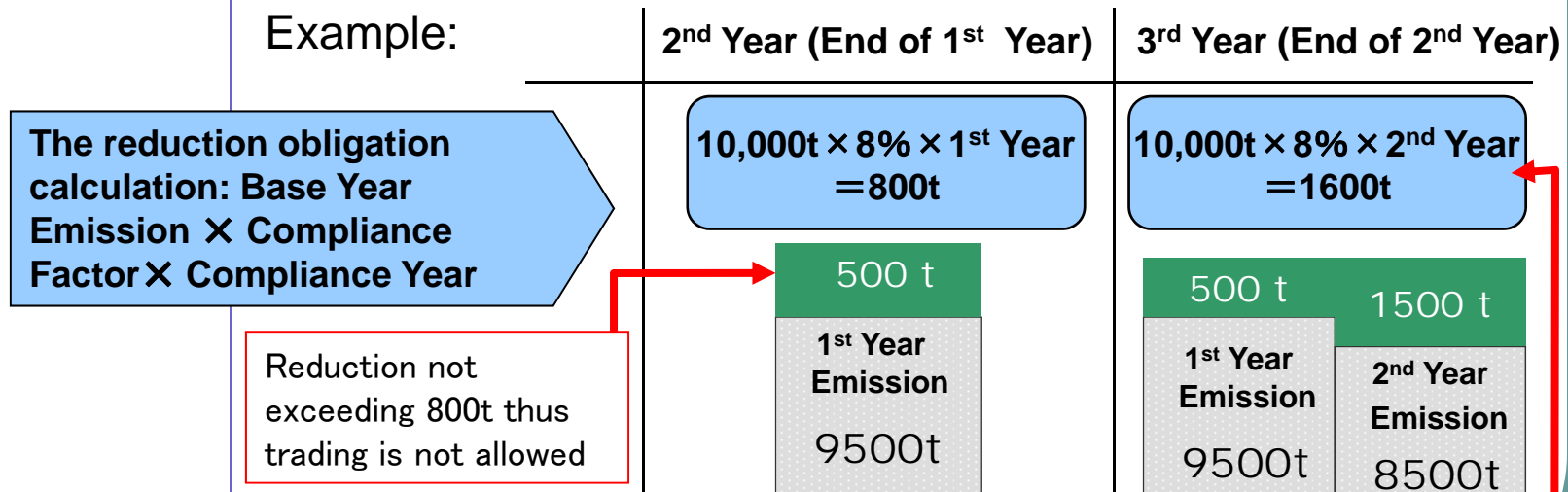
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Emissions trading mechanism

Trading Amount: Reduction exceeding the obligation
Emission reduction exceeding the yearly obligation may be traded from the 2nd year.

System allowing installations that took excessive reduction measures to sell the reduction amount before the end of the compliance period

Example:



Out of 2000t total reduction, 400t (which is exceeding the 1600t reduction obligation) is allowed to be traded in the 3rd year.

Tokyo-ETS(7) Offsets

Offsets

1. Emission reductions from small and midsize installations within the Tokyo area

- * Emission reduction by energy-saving measures
- * Buyer can buy necessary amount without limit

2. Renewable Energy Certificates

- * Solar (heat and light) energy, wind energy, geothermal energy, hydropower energy (under 1000kW), biomass energy (biomass rate 95% or above)

3. Emission reductions outside the Tokyo area

- * Coverage: large installations with less than 150 thousand ton base year emission
- * Large installations will be assumed to be covered under the Tokyo Cap-and-Trade Program, and reduction exceeding the reduction obligation would be counted as offset credit
- * Buyer can only buy up to 1/3 of base year emission

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Duty of tenants

- All tenants have the obligation to check their CO₂ emission and to implement emission deterrent measures
- All tenants have the obligation to cooperate with the emission reduction measures taken by building owners
- Specified tenants* are required to submit their own emissions reduction plan to TMG via building owners

*Specified tenants: Tenants with over 5000m² floor area usage, or over 6 million kWh electricity usage per year

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<p>Monitoring, Reporting, Verification</p>	<p>Participants are required to report their verified emissions to TMG annually based on “TMG Monitoring / Reporting Guideline” and “TMG Verification Guideline”</p> <ul style="list-style-type: none"> * Verification by a verification agency certified by the Governor is necessary for monitoring and reporting emissions. * The Measurement Act of Japan mandates energy suppliers to use measurement gauges examined and certified pursuant to laws. The Guidelines for Monitoring Greenhouse Gases stipulate that the energy consumption shall be monitored and verified based on a consumption certificate that indicates the consumption measured by such measurement gauges, as well as bills and receipts. * A primary list of registered verification agencies will be publicized at the end of August.
<p>Banking/borrowing</p>	<p>Banking is allowed. Borrowing is not allowed</p>
<p>Penalty for non-compliance</p>	<p>Required to reduce 1.3 times the shortage</p> <p>Violation to the order: Monetary fine will be imposed (About 500 thousand yen), fact of violation will be released to the public, and the Governor will buy the allowance credit for shortage with payment cost charged to the violating installation.</p>

Progress Toward Introduction of Tokyo-ETS

FY 2009

End of June – early July	Briefing for installations coming under the cap (around 4,600 individuals participated)
End of July – early August	<ul style="list-style-type: none"> ▪ Briefing for organizations wishing to serve as verification agencies (around 230 organizations participated) ▪ Briefing on monitoring and verification guidelines (around 2,000 individuals participated)
Mid July	Seminar for chief verification personnel (around 660 individuals participated)
From August 3	Consultation desk (help desk) available
End of August	Primary list of registered verification agencies published
End of October	Installations that are likely to come under the cap submit energy consumption data for the previous year

FY 2010

End of September	Deadline for applications on base-year emissions
End of November	Deadline for submitting Plan on Measures against Global Warming (to be submitted by the end of November each year)

End of FY 2015 : Status of performance of total reduction obligations is confirmed

International Relations

● **ICAP*** (International Carbon Action Partnership)

*Open forum comprised of public authorities and governments that have established or are actively pursuing carbon markets through mandatory cap and trade systems with absolute caps

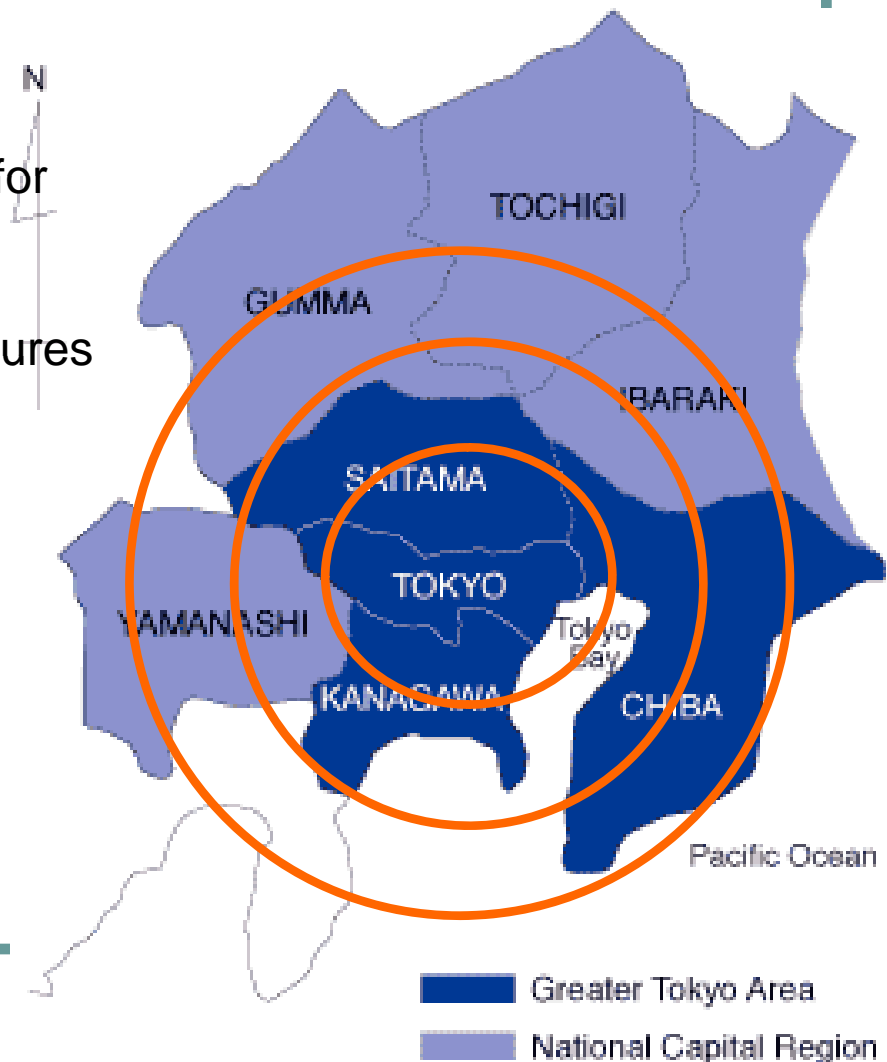
- TMG became the formal member of ICAP in May, 2009
- First to join from Asia
- Introduce Tokyo Cap-and-Trade Program as an urban city model to establish low carbon societies around the world

Other ICAP Members (29 Countries and States)

Europe	EC, United Kingdom, France, Germany, Denmark, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Norway
Oceania	New Zealand, Australia
USA States	California, New York, Maine, Maryland, Massachusetts, New Jersey, Arizona, New Mexico, Oregon, Washington
Canadian States	British Columbia, Ontario, Quebec, Manitoba
Asia	Tokyo Metropolitan Government

Expansion of the Tokyo-ETS

- Enhance collaborative action within national capital region
 - Fifty-one local governments, accounting for 80% of the local (prefectural • ordinance-designated city) governments of Japan, participated in the seminar on policy measures organized by TMG.





Tokyo Climate Change Strategy

Toward a Sustainable City

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