

## Japan - Tokyo Cap-and-Trade Program

### General Information

<p>Summary</p>	<p><b>Status:</b> ETS in force</p> <p><b>Jurisdictions:</b> Tokyo Metropolis</p> <p>Launched in April 2010, the Cap-and-Trade Program of the Tokyo Metropolitan Government (TMG) is Japan's first mandatory ETS and is linked to the Saitama ETS. Under the Tokyo ETS, large buildings, factories, heat suppliers, and other facilities that consume large quantities of fossil fuels are required to reduce emissions below a facility-specific baseline.</p> <p>Entities covered under the program are assigned a higher or lower target, depending on factors such as expected energy efficiency gains and the extent to which they consume energy supplied by other facilities.</p>												
<p>Year in Review</p>	<p>In March 2020, the TMG released emission data for fiscal year 2018 indicating that, on aggregate, emissions were reduced by 27% overall among covered entities during the second compliance period (FY2015-FY2019) compared to base-year emissions, overachieving the 15-17% target set for the period. The introduction of high-efficiency heat sources, light fittings, and other equipment has been key to reducing emissions in the buildings sector. Buildings have continued to decrease emissions despite an increase in gross floor space, indicating a decrease in emissions intensity in the sector.</p> <p>In April 2020, the Tokyo ETS began its third compliance period (FY2020-FY2024), which requires facilities to reduce emissions by 25% or 27% below base-year emissions, depending on their category. The third compliance period also aims to expand the use and production of low-carbon and renewable energy through additional incentives for covered entities to reduce their compliance obligations by switching to cleaner electricity. Most facilities thus far have achieved their targets via their own energy efficiency measures.</p> <p>Due to the COVID-19 pandemic, the Tokyo ETS postponed the deadline for the submission of annual reports by two months. MRV rules were also reformed via the establishment of an online verification process.</p>												
<p>Overall GHG emissions (excluding LULUCF)</p>	<p><b>Emissions:</b> 63.9 MtCO<sub>2</sub>e MtCO<sub>2</sub>e (2018*)</p> <p>*The overall emissions figure for Tokyo is higher than the total of the emissions by sector because the former includes all GHGs in Tokyo, whereas the emissions by sector only measures CO<sub>2</sub> emissions.</p>												
<p>Overall GHG emissions by sector (in MtCO<sub>2</sub>)</p>	<table border="1"> <thead> <tr> <th>Sector Name</th> <th>MtCO<sub>2</sub>e</th> </tr> </thead> <tbody> <tr> <td>Commercial (25.3)</td> <td>25.3</td> </tr> <tr> <td>Residential (16.5)</td> <td>16.5</td> </tr> <tr> <td>Transport (9.6)</td> <td>9.6</td> </tr> <tr> <td>Industrial Processes (4.2)</td> <td>4.2</td> </tr> <tr> <td>Waste (1.8)</td> <td>1.8</td> </tr> </tbody> </table>	Sector Name	MtCO <sub>2</sub> e	Commercial (25.3)	25.3	Residential (16.5)	16.5	Transport (9.6)	9.6	Industrial Processes (4.2)	4.2	Waste (1.8)	1.8
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<p>GHG reduction target</p>	<p><b>BY 2030:</b> 30% reduction from 2000 GHG levels (Zero Emission Tokyo Strategy)</p>												

**BY 2050:** Net zero CO2 emissions (Zero Emission Tokyo Strategy)

Carbon Price	<i>Current Allowance Price (per t/CO2e):</i> ~JPY 540 (USD 5.06) (estimated standard transaction price in 2020 provided by TMG)
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## ETS Size

Covered emissions	0.20
GHGs covered	CO2
Sectors and thresholds	<p>Consumption of fuels, heat, and electricity in commercial and industrial buildings.</p> <p>Building owners are subject to surrender obligations, but large tenants (floor space above 5,000m<sup>2</sup> or over six million kWh electricity usage per year) can assume obligations jointly or in place of building owners.</p> <p><b>INCLUSION THRESHOLDS:</b> Facilities that consume the energy equivalent to at least 1,500kL of crude oil per year.</p>
Point of regulation	Downstream
Number of entities	<p>~1,200 facilities:</p> <ul style="list-style-type: none"> <li>• Office/commercial buildings: ~1000</li> <li>• Factories: ~200</li> </ul>
Cap	A Tokyo-wide cap is aggregated from the bottom up from facility-level “baselines,” which are calculated using base-year emissions and a compliance factor (see “Allocation” section).

## Phases & Allocation

Trading periods	<p><b>FIRST TRADING PERIOD:</b> 1 April 2011 to 30 September 2016  <b>SECOND TRADING PERIOD:</b> 1 April 2015 to 30 September 2021  <b>THIRD TRADING PERIOD:</b> 1 April 2020 to 30 September 2026</p> <p>The Tokyo ETS has trading periods as well as compliance periods (see “Compliance” section). The trading period is defined as the compliance period plus an additional 18-month adjustment period, during which time entities may continue to trade credits in order to reach their targets for the corresponding compliance period.</p>
Allocation	<p>Under the Tokyo ETS, each facility has its own cap, which serves as the “baseline” from which it must achieve its reduction target. Baselines for facilities are set according to the following formula: <i>Base-year emissions x (1 - compliance factor) x compliance period (5 years)</i>. The compliance factor for each period is determined based on regulations established by the Governor of Tokyo. Prior to the start of each new compliance period, TMG holds consultation meetings to garner experts’ opinions for determining the compliance factors.</p> <p>Base-year emissions are based on the average emissions of any three consecutive years between FY2002 and FY2007, as chosen by each entity. Credits are issued to facilities whose emissions fall below their baselines. Additional emissions reductions may be issued through use of renewable electricity (see also “Offsets and Credits” section).</p> <p>Baselines for new entrants are based on past emissions or on emissions intensity standards.</p> <p><b>COMPLIANCE FACTOR:</b>  <b>First period (FY2010-FY2014):</b> 8% or 6% reduction below base-year emissions  <b>Second period (FY2015-FY2019):</b> 17% or 15% reduction below base-year emissions</p>

**Third period (FY2020-FY2024):** 27% or 25% reduction below base-year emissions

The higher compliance factor applies to office buildings, as well as to district heating and cooling (DHC) plants (excluding facilities that use a large amount of DHC). The lower compliance factor applies to factories and office buildings that use DHC for more than 20% of their entire energy consumption.

For new entrant facilities from the third compliance period onward, the 17% and 15% compliance factors from the second period are applied (transitional measures are introduced).

In the third compliance period, in medical facilities where electricity is vital to preserve life and health, the compliance factor is two percentage points lower than the 27% or 25% category to which they would otherwise belong.

Facilities demonstrating outstanding performance in emissions reductions, as well as in the introduction, use, and management of energy equipment, are certified as top-level facilities that receive 50% or 75% lower compliance factors according to their rate of progress. The certification standards represent the highest-level energy efficiency measures currently feasible, stipulating more than 200 different energy-saving measures.

## Flexibility

Banking and borrowing	<p>Banking is allowed only between consecutive compliance periods.</p> <p>Borrowing is not allowed.</p>
Offsets and credits	<p>Credits from four offset types are permitted, to complement emissions reduction credits issued to facilities covered by the Tokyo ETS whose emissions fall below their baseline.</p> <p><b>SMALL AND MID-SIZE FACILITY CREDITS:</b> Emissions reductions from non-covered small and medium-sized facilities in Tokyo.</p> <p><b>Quantitative limits:</b> None.</p> <p><b>OUTSIDE TOKYO CREDITS:</b> Emissions reductions achieved from large facilities outside of the Tokyo area. Large facilities are those with an energy consumption equivalent to at least 1,500kL of crude oil in a base year and with base-year emissions of 150,000 tonnes or less.</p> <p><b>Quantitative limits:</b> Credits are issued only for the reduction amount that exceeds the compliance factor. These credits can be used for compliance for up to one-third of facilities' reduction obligations.</p> <p><b>RENEWABLE ENERGY CREDITS:</b> Renewable energy credits generated under the Tokyo ETS encompass the following types: Environmental Value Equivalent, Renewable Energy Certificates, and New Energy Electricity, generated under the Renewable Portfolio Standard Law. Credits from solar (heat, electricity), wind, geothermal, or hydro (under 1,000kW) electricity production for use under the Tokyo ETS were converted to 1.5 times the value of regular credits until the end of the second compliance period. From the third compliance period, they are converted on a 1 to 1 basis. Credits from biomass (biomass rate of 95% or more, black liquor excluded) are also converted with factor 1.</p> <p><b>Quantitative limits:</b> None.</p> <p><b>SAITAMA CREDITS (VIA LINK):</b></p> <ul style="list-style-type: none"> <li>· Excess Credits: Emissions reductions from facilities in Saitama with base-year emissions of 150,000 tonnes or less. Issuance of credits from FY2015.</li> <li>· Small and Mid-Size Facility Credits issued by Saitama Prefecture. Issuance of credits from FY2012.</li> </ul> <p><b>Quantitative limits:</b> None.</p>

	<p>All offsets must be verified by verification agencies.</p> <p><b>QUALIFYING FOR ADDITIONAL EMISSIONS REDUCTIONS THROUGH USE OF RENEWABLE ELECTRICITY</b></p> <p>(1) Low Carbon Electricity: In order to evaluate the energy efficiency efforts of the covered facilities, CO<sub>2</sub> emission factors of the supply side (electricity and others) are fixed during each compliance period. If covered facilities procure electricity from TMG-certified suppliers with lower emission factors (0.37 [t-CO<sub>2</sub>/1,000 kWh] or less), they can reduce the difference between these emission factors from their emissions to be reported to the TMG.</p> <p>(2) If covered facilities generate electricity from renewable sources for their own use, they can deduct this amount of electricity from the total energy usage of the facility to be reported to the TMG.</p> <p>(3) During the third compliance period, covered facilities can deduct emissions to be reported to the TMG if electricity with a higher renewable energy source rate (30% or higher) is procured (additional grant).</p>
Market Stability Provisions	<p>In general, covered facilities trade over the counter and the TMG does not control carbon prices. However, as a discretionary mechanism, the TMG sells its own offset credits for trading in case of excessive price development.</p>

## Compliance

Compliance Period	<p>Entities must submit a GHG Emissions Reduction Plan and implementation status report by 30 November every year.*</p> <p>Compliance instruments must be submitted, and the predetermined target achieved by the end of the 18-month adjustment period, 30 September of the second fiscal year after the end of the compliance period.</p> <p>The next compliance period coincides, then, with the adjustment period for 18 months and begins immediately after the preceding period.</p> <p><b>FIRST COMPLIANCE PERIOD:</b> FY2010-FY2014  <b>SECOND COMPLIANCE PERIOD:</b> FY2015-FY2019  <b>THIRD COMPLIANCE PERIOD:</b> FY2020-FY2024</p> <p>* Due to the COVID-19 pandemic, the deadline for 2020 only was postponed to 1 February 2021.</p>
Monitoring, Reporting, Verification (MRV)	<p><b>REPORTING FREQUENCY:</b> Annual emissions reporting, including emission reduction plans. All seven GHGs must be monitored and reported: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFCs, HFCs, SF<sub>6</sub>, and NF<sub>3</sub>. Large tenants, i.e., those with a floor space above 5,000m<sup>2</sup> or over six million kWh electricity use per year, are required to submit their own emissions reduction plans to the TMG in collaboration with building owners.</p> <p><b>VERIFICATION:</b> These annual reports require third-party verification.</p> <p><b>FRAMEWORK:</b> These are based on 'TMG Monitoring/Reporting Guidelines' and 'TMG Verification Guidelines.' These are based on 'TMG Monitoring/Reporting Guidelines' and 'TMG Verification Guidelines.'</p>
Enforcement	<p>In the case of noncompliance, the following measures may be taken:</p> <p><b>FIRST STAGE:</b> The governor orders the facility to reduce emissions by the amount of the reduction shortfall multiplied by 1.3.</p> <p><b>SECOND STAGE:</b> Any facility that fails to carry out the order will be publicly named and subject to penalties (up to JPY 500,000 [USD 4,683]) and surcharges (1.3 times the shortfall).</p>

## Linking

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Links with other systems

Linking with the Saitama Prefecture ETS started in April 2011 when the Saitama program was launched. Tokyo and Saitama credits are officially eligible for trade between the two jurisdictions. During the first compliance period, 15 credit transfers took place between the Saitama Prefecture and Tokyo (nine cases from Tokyo to Saitama, six cases from Saitama to Tokyo).

## Other Information

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Institutions involved	Tokyo Metropolitan Government
Evaluation / ETS review	The TMG established a committee of experts to analyze the structure of the Tokyo Cap-and-Trade Program post-2020. In FY2020, the program entered a new stage to achieve the 2030 target and transition to a net zero-carbon society, promoting continued energy savings and expanding the utilization of low-carbon (renewable) energy.
Revenue	No information available yet.
Implementing Legislation	<a href="#">The Tokyo Metropolitan Security Ordinance and Regulation for the Enforcement of the Tokyo Metropolitan Environmental Security Ordinance</a> <a href="#">Detailed documents</a> on the Tokyo ETS can be found on the TMG website <a href="#">TMG Zero Emissions Strategy</a>

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