Japan - Saitama Target Setting Emissions Trading System

General Information

ETS Description

Saitama Prefecture's ETS was launched in April 2011. It covers around 17% of the prefecture's 2021 emissions.

Saitama's system covers about 600 entities in the industrial and commercial buildings sectors. The cap is aggregated bottom-up from annual facility-level emissions limits ('baselines'). Covered entities must surrender compliance units for emissions that exceed the installation's annual emissions limit (baseline), and the annual emissions limit is based on absolute historical emissions and a compliance factor. The baselines are calculated using base-year emissions and a compliance factor, which is set for each period based on regulations established by the Governor of Saitama and expert consultation. The baseline also depends on factors such as expected energy efficiency gains and the extent to which they consume energy supplied by other facilities.

The ETS was instituted as part of the "Saitama Prefecture Global Warming Strategy Promotion Ordinance", with the aim of eventually establishing a common system with other prefectures in the metropolitan area. Saitama's ETS is linked to Tokyo's cap-and-trade program, with credits mutually exchangeable between the two.

ETS Status

in force

Jurisdictions

Saitama

Year in Review

In June, the Prefectural Government announced that in FY2022, the Saitama ETS achieved a 40% reduction in emissions below base-year levels (see 'Allowance Allocation' section for base-year calculation). Saitama's system has completed the final year of its third compliance period (FY2020 to FY2024), which required facilities to reduce emissions to 20% or 22% below base-year emissions, depending on their assigned category.

It was also announced that in FY2022 452 of the 571 covered facilities (79%) achieved their targets in the second compliance period.

In the fourth compliance period (FY2025 to FY2029), three major updates will apply for the Saitama ETS. First, the compliance factor will rise to 50% for office buildings and 48% for factories.

Second, off-site renewable energy, including self-consignment and PPA, will count as zero emissions to boost the use of renewables, and certificates derived from renewable energy can be deducted from energy-related CO_2 emissions. In addition, actual emission factors, instead of fixed emission factors, will be used to calculate emissions from electricity, heat, and city gas supplied by retailers, based on contracts at the facilities.

Third, a new system for excess emission reductions will limit credits to those achieved through energy efficiency or renewable energy; credits will no longer be awarded for certification improvements or emission factor adjustments. These updates take effect in April 2025.

Sectoral coverage

Buildings

Industry

Emissions & Targets

Overall GHG Emissions excl. LULUCF (MtCO2e)

38.8 $MtCO_2e$ (FY2021)

GHG reduction targets

By 2030: 46% reduction from FY2013 levels (“Saitama Prefecture Global Warming Countermeasures Action Plan Second Phase”)

Current Allowance Price (per t/CO2e)

Average price (second compliance period, 2015 to 2019): JPY 144 (USD 0.95)

Size & Phases

Covered emissions (2021)

16.00%

Verified ETS Emissions

6.30$MtCO_2e$

GHGs covered

CO2

Phases

PHASE 1: 1 April 2011 to 30 September 2016

PHASE 2: 1 April 2015 to 31 January 2022

PHASE 3: 1 April 2020 to 30 September 2026

PHASE 4: 1 April 2025 to 30 September 2031

The Saitama ETS has both phases and compliance periods (see ‘Compliance’ section). A phase is defined as the compliance period plus an additional 18-month adjustment period, during which facilities may continue to trade credits in order to reach their targets for the corresponding compliance period.

By exception, an additional four months to the usual 18-month adjustment period applied for the second phase due to impacts of the COVID-19 pandemic.

Cap or total emissions limit

The total emissions limit under the scheme is the sum of the bottom-up installation-level baselines for all individual covered entities. These baselines are calculated using base-year emissions and a compliance factor (see ‘Allowance Allocation’ section).

The bottom-up emissions limit for the first compliance period was 33.3 $MtCO_2$. For the second compliance period, it was 52.4 $MtCO_2$. The figure for the third compliance period is not known yet.

Sectors and thresholds

SECTORS: Consumption of fuels, heat, and electricity in commercial and industrial buildings.

INCLUSION THRESHOLDS: Facilities that consume the energy equivalent of at least 1,500kL of crude oil for three consecutive years.

Point of regulation

Downstream (industry, buildings)

Type of entities

Facilities

Number of entities

571 facilities (FY2022):

- Offices/commercial buildings: 171
- Factories: 400

Allowance Allocation & Revenue

Allowance allocation

All allowances in the Saitama ETS are allocated for free.

Under the Saitama 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: *Base-year emissions* x (1-*compliance factor*) x *compliance period* (five years). The compliance factor for each period is based on regulations established by the Governor of Saitama Prefecture.

Base-year emissions are the average emissions of any three consecutive years between FY2002 and FY2007, as chosen by each entity.

Baselines for new entrants are based on past emissions (average annual emissions for three consecutive fiscal years of the four fiscal years immediately preceding the compliance period) or on emissions intensity standards provided by the government.

At the beginning of each new compliance period, with the exception of those reserved for new entrants, all allowances (in Saitama also known as "credits") are allocated for free to covered entities for the full period. Facilities with emissions below their baseline at the end of the compliance period may keep or trade their excess allowances; those that exceed their baseline must purchase and surrender credits from elsewhere to meet their compliance obligation.

COMPLIANCE FACTOR:

First compliance period: 8% or 6% reduction below base-year emissions.

Second compliance period: 15% or 13% reduction below base-year emissions.

Third compliance period: 22% or 20% reduction below base-year emissions.

Fourth compliance period: 50% or 48% reduction below base-year emissions.

The higher compliance factor applies to commercial buildings, as well as to district heating and cooling (DHC) plants. The lower compliance factor applies to other facilities, such as commercial buildings, that use DHC for more than 20% of the entire energy consumption, and factories.

In the fourth compliance period, for large facilities owned by small and medium-sized enterprises, the compliance factor is reduced to three-quarters of the 50% or 48%, depending on the categories described in the previous paragraph. Similarly, in medical facilities where electricity is vital to preserve life and health, the compliance factor is two percentage points lower.

EMISSIONS REDUCTION METHODS:

- Renewable energy: When covered facilities generate electricity from renewable sources for their own use, they can deduct this from the total energy usage to be reported.
- Low-carbon electricity: In order to evaluate energy efficiency efforts of the covered facilities, CO_2 emissions factors of electricity suppliers are fixed during each compliance period. When covered facilities procure electricity from suppliers with lower emissions factors, from the third compliance period, they can deduct the difference between these emission factors from their reported emissions accordingly, to reflect this lower emissions factor of energy purchased.

Facilities demonstrating outstanding performance in reducing emissions, 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, for a period of five years. The certification standards represent the best available energy efficiency measures, covering more than 200 different energy-saving measures.

Flexibility & Linking

Offset credits

The use of offset credits is allowed.

QUALITATIVE LIMITS: Five types of offset credits are allowed to complement the emissions reduction credits issued to facilities covered by the Saitama ETS when their emissions fall below their baseline:

- Small and mid-size facility credits: Emissions reductions from non-covered small and medium-sized facilities in Saitama Prefecture.
- Outside Saitama credits: Emission reductions achieved from large facilities outside of Saitama Prefecture. Large facilities are those with an energy consumption of 1,500kL of crude oil equivalent or more in a base year, and with base-year emissions of 150,000 tonnes or less.
- Renewable energy credits: Renewable energy credits generated under the Saitama 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 1,000 kW) electricity production for use under the Saitama 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 one-to-one basis. Credits from biomass (biomass rate of 95% or more, black liquor is excluded) are also converted with a factor of one.
- Tokyo credits (via link): These encompass (1) Excess credits: Emissions reductions from facilities with base-year emissions of 150,000 tonnes or less; and (2) Small and mid-size facility credits issued by Tokyo Metropolitan Government.
- Forest absorption credits: Credits from forests inside Saitama Prefecture are counted at 1.5 times the value of regular credits. Others are converted with a factor of one.

QUANTITATIVE LIMITS: Quantitative limits apply only for Outside Saitama credits: these 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 offices' reduction obligations. Factories can use up to 50%.

All offset credits must be verified by a verification agency.

1,009 tCO_2e of offset credits were issued over FY2020 to FY2023.

Banking and borrowing

Banking is allowed, but only between two consecutive compliance periods.

Borrowing is not allowed.

Links with other Systems

Since its launch in 2011, the Saitama ETS has been linked with the Tokyo Cap-and-Trade Program. Tokyo and Saitama credits are fungible in the two jurisdictions. About 60 credit transfers have taken place so far between them.

Other carbon pricing instruments in the jurisdiction

Carbon tax: Japan national carbon tax

Compliance

Compliance mechanism

Covered entities must surrender one compliance unit per tCO_2that exceeds the facility's annual emissions limit (baseline).

Compliance Period

Four or five years.

COMPLIANCE PERIOD 1: FY2011 to FY2014

COMPLIANCE PERIOD 2: FY2015 to FY2019

COMPLIANCE PERIOD 3: FY2020 to FY2024

COMPLIANCE PERIOD 4: FY2025 to FY2029

Covered facilities must submit a global warming countermeasures plan report and implementation status report by the end of July of the first year of the compliance period. Every year thereafter, operators must submit a new global warming countermeasure plan and emissions report by the end of July.

Compliance units must be surrendered by the end of the 18-month adjustment period, i.e., by the end of September of the second fiscal year after the end of the compliance period (see 'Phases' section above).

Monitoring, Reporting, Verification (MRV)

MONITORING AND REPORTING: Annual emissions reporting, including emission reduction plans. Seven GHGs must be monitored and reported: CO_2, CH_4, N_2O, PFCs, HFCs, SF_6, and NF_3.

VERIFICATION: These reports require third-party verification by the end of the adjustment period.

FRAMEWORK: These are based on "Saitama Monitoring/Reporting Guidelines" and "Saitama Verification Guidelines".

Penalties and enforcement

Every year, global warming countermeasures plans and implementation status reports for all covered facilities are published on Saitama Prefecture's website. If a facility does not achieve its reduction target, its name is made public, and the insufficient reduction amount is added to its target for the following compliance period.

Market Regulation

Market Design

MARKET PARTICIPATION: Compliance entities, i.e., those above the inclusion threshold (see 'Sectors and Thresholds' section). Entities can earn credits only after achieving emission reductions, and only emitting facilities can participate in trading.

MARKET TYPES:

Primary: All allowances are allocated for free.

Secondary: Covered facilities trade over the counter. Businesses wishing to buy or sell credits can go through a private intermediary to find a buyer and negotiate the price.

LEGAL STATUS OF ALLOWANCES: Allowances are not considered financial instruments.

Other Information

Institutions involved

Saitama Prefectural Government: Oversees the Target Setting Emissions Trading System in Saitama.

Regulatory Framework

Saitama Prefecture Global Warming Strategy Promotion Ordinance

Regulation on Saitama Prefecture Global Warming Strategy Promotion Ordinance

Evaluation / ETS review

Official status and evaluation reports are published on an annual basis.

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