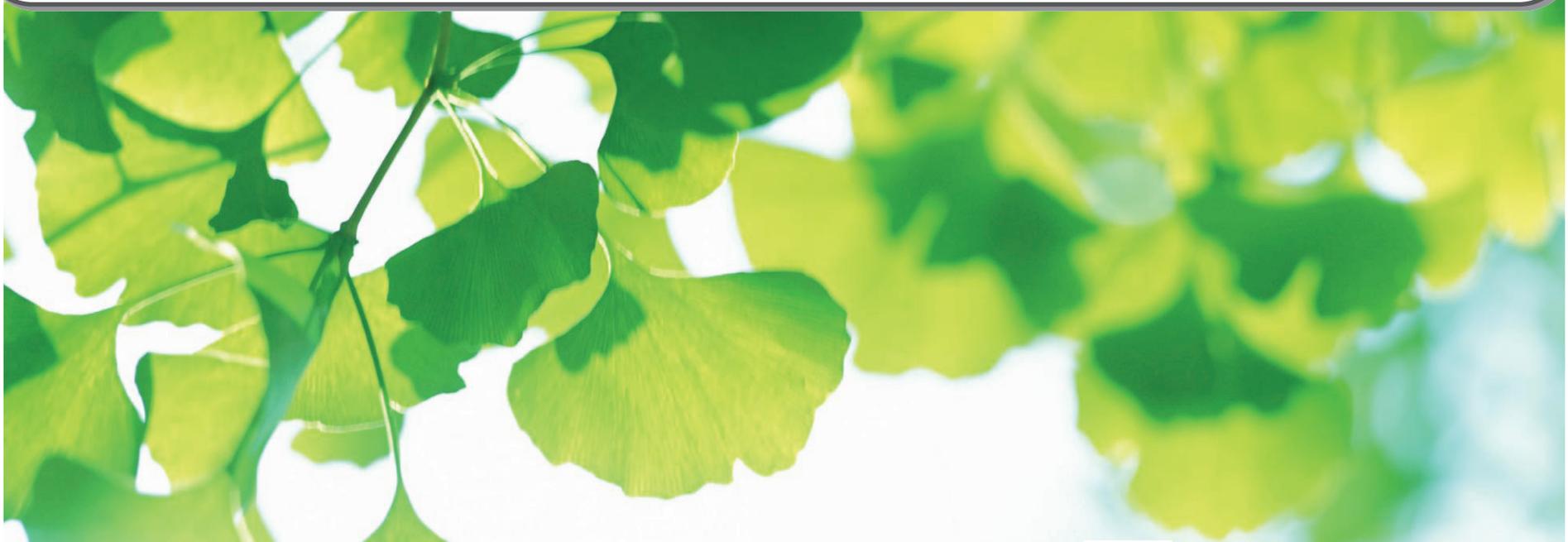


The Tokyo Metropolitan Environmental Security Ordinance

As of May, 2015

**“Tokyo Cap-and-Trade Program”**  
**for Large Facilities**  
**[Detailed Documents]**



Bureau of Environment  
Tokyo Metropolitan Government

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# 1 (1) Background for the Introduction of the Tokyo Cap-and-Trade Program

## 1. Importance and urgency of climate change strategy

Climate change or global warming threatens basis of people's life by frequent abnormal weather, difficulty in food production, depletion of drinking water and loss of habitat due to sea level rise, and is the most critical environmental crisis that mankind have ever faced.



This decade determines whether our generation can leave the global environment to the next generation.

⇒ Immediate actions toward drastic reduction of greenhouse gas (GHG) emissions are necessary.

※Responding to the scientific findings of the 4<sup>th</sup> assessment report of IPCC, the AWG to discuss further reduction from developed countries for the period from 2013 reached an agreement at the COP13 (December 2007) and stated:

(i) to make total global emissions to peak in 10-15 years, (ii) to decrease the emissions “well below half” of 2000s level by 2050, and (iii) to decrease developed country emissions to 25-40% below the 1990 levels by 2020.

## 2. The purposes of action against climate change

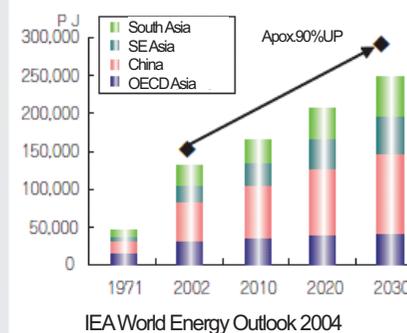
- I. To protect life, property and health of its citizen from the threats posed by climate change and to allow sustainable development of Tokyo itself
- II. To promptly realize low carbon society which allows affluent and comfortable urban life with the use of minimum energy consumption in Tokyo, and to transmit a new city model to other metropolises in the world and cities in the emerging and developing countries
- III. To realize a pioneering initiative by the cooperation among the citizens of the capital Tokyo, NPOs, businesses and the Tokyo Metropolitan Government (TMG), and thereby to contribute to the enhancement of climate change strategy of Japan as a whole.

※ Energy saving measures are important also from the aspect of risk management based on the finite nature of energy resources.

Urban activity of Tokyo is dependent on huge amount of resources supplied domestically and from abroad.

⇒ Global scale climatic crisis is a threat to the basis of socioeconomic activity in Tokyo itself.

Table 1 Energy Demand Outlook In Asia (for 2030)



Considering that urbanizing areas in developing countries will be oriented toward resource and energy consumption of developed country levels, there is no guarantee that cities can secure energy supply in the current scale in the future, e.g., 50 years later.

## 1(2) Progresses toward the Amendment of the Tokyo Carbon Reduction Reporting Program

- With the implementation of the Tokyo Carbon Reduction Reporting Program, the emissions in FY2006 (emissions from large facilities that submitted the report in FY2005) was lower than the base-fiscal year by 3.5%.

Some facilities including 16 AAA-rated facilities started to take aggressive measures.

- On the other hand, around 80% of the facilities remained to take only average level measures.

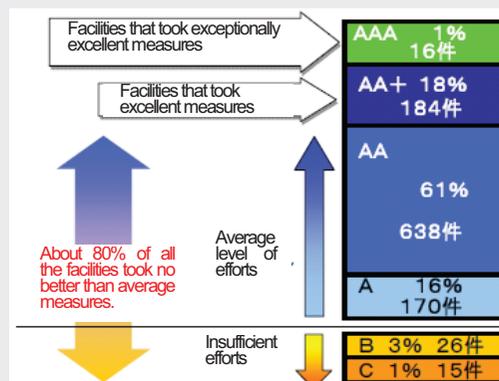


Need to reinforce the program

- Approach for program reinforcement

1. Eliminate the unfairness that arises from overlooking of facilities not taking aggressive measures to reduce emissions.
2. Make the issue of energy saving and CO<sub>2</sub> emissions reduction a matter of top management that should be seriously considered by the executives, rather than remaining as the matter of site staff effort.
3. The cost of emissions reduction needs to be taken into account as the definite management cost to ensure emissions reduction.
  - Develop a business environment in which investment in energy conservation does not lead to disadvantage in competitiveness
4. The climate change crisis cannot be averted without an absolute cap on CO<sub>2</sub> emissions
  - Reduction measures based on intensity targets alone are not enough

To ensure emissions reduction, the “mandatory reporting (voluntary reduction)” program was reinforced to the “mandatory reduction” program.



### ■ Progresses in measures for large facilities taken by TMG

Dec. 2000 Announcement of Tokyo Metropolitan Environmental Security Ordinance (replacing the Tokyo Metropolitan Pollution Prevention Ordinance)

☆ Establishment of “Tokyo Carbon Reduction Reporting Program”  
Apr. 2000 Implementation of Carbon Reduction Reporting Program (Phase 1)

- Mandatory reporting of emissions and emissions reduction plan
- Emissions reduction is voluntary

Mar. 2005 Amendment of Tokyo Metropolitan Environmental Security Ordinance

☆ Reinforcement of “Tokyo Carbon Reduction Reporting Program”  
Apr. 2005 Implementation of Carbon Reduction Reporting Program (Phase 2)

- Introducing a mechanism to provide guidance and advice to the reduction plan
- Evaluating the plan and awarding outstanding facilities
- Publicizing reduction plans ( by TMG and individual facilities)

### ■ Introduction of the Tokyo Cap-and-Trade Program

Jun. 2007 Announcement of the Tokyo Climate Change Strategy  
☆ Introduction of a mandatory emissions reduction program for large facilities was proposed

May 2007 – Mar. 08 Deliberation at the Environmental council

Jul. 2007- Jan. 08 Stakeholder Meetings

☆ Discussions to introduce the Tokyo Cap-and-Trade Program  
Jun. 2008 Passage of a bill to amend the Tokyo Metropolitan Environmental Security Ordinance

Apr. 2009 Enactment of the amended ordinance and regulations

Apr. 2010 Launch of the mandatory reduction program

☆ Tokyo Cap-and-Trade Program was introduced

•TMG welcomed the actions of the national government to introduce a Cap-and-Trade program, and announced a proposal in November 2009 in order to actively cooperate to realize a truly effective program.

## ■Four perspectives on designing the program

### 1. Highly effective program to ensure emissions reduction

- (1) Requires an absolute cap, in addition to intensity targets
- (2) Requires mandatory reduction rather than voluntary action
- (3) Introduces measures for the violation (e.g., penalty and fines) in order to ensure the effectiveness of the program

### 2. Program that leads the nation to a low economy, while allowing sustainable development

- (1) Promotes planned investment into energy-saving technology and renewable energy by setting high medium- to long-term reduction targets, which leads to a low carbon society.
- (2) Enhances emissions reduction on both of the supply and demand sides of energy and resources by covering not only industrial and energy conversion sectors but also commercial sectors.
- (3) Introduces appropriate considerate measures for energy-intensive industries that are exposed to international competition

### 3. Program that has accordance with the international standards and takes into account the pioneering approaches in Japan

- (1) Has international commonality in view of future link with international carbon markets.
- (2) Is based on pioneering approach that has been taken in Japan so far.

### 4. Program in which both the national and regional governments play active roles

- (1) Shares responsibility between the national and regional governments so that characteristics of the region is best reflected
- (2) Prevents authority centralization and bloating of the central government, and is compatible to streamlining of regional offices of the national government.

## ■Basic framework of national Cap-and-Trade Program

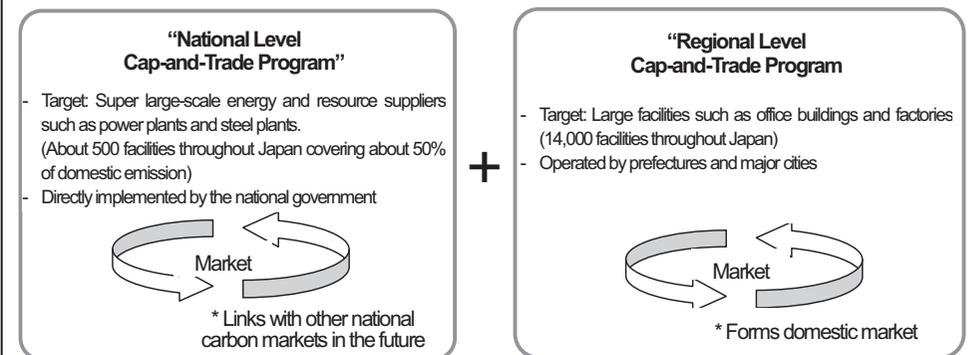
- Consists of two sub-programs of “National Level Cap-and-Trade Program” and “Regional Level Cap-and-Trade Program”

### [Feature 1] Cooperation between the national and regional governments (both play active roles)

- The national government sets the absolute cap and trading rules based on laws, while regional discretion is allowed including enforcement of more stringent ordinances.
- By dividing the responsibility between the national and regional governments, authority centralization and bloating of the central government is prevented, and the program is made compatible to streamlining of regional offices of the national government.

### [Feature 2] Both of the supply and demand sides of energy and resources are covered

- At least 60% of total domestic CO<sub>2</sub> emissions from “supply and demand sides of energy and resources” as well as “industrial and commercial sectors” are covered.



## [Objectives]

This document was publicized to identify milestones reached since the adoption of the Tokyo Climate Change Strategy (June, 2007), to show future prospects for TMG policies and measures, and to propose how to strengthen national measures.

### I. Tokyo Climate Change Strategy: Five Achievements

- 1) Implementing innovative programs such as Cap-and-Trade (3<sup>rd</sup> in the world, 1<sup>st</sup> in Asia)
- 2) Starting new era of green buildings (dramatically higher standards such as buildings with half the typical CO<sub>2</sub> emissions are seen)
- 3) Creating and promoting new low carbon business models (Quintupled the rate of installation of photovoltaic systems)
- 4) Enhancing programs to promote the Tokyo Climate Change Strategy (budgeted total 95.9 billion yen over three fiscal years)
- 5) Sharing Innovative Policies with the world (EU, the World Bank, international media, etc.)

### II. International Climate Change Responses

Civic governments and sub-national governments (state/provincial/prefectural, etc.) are becoming new actors in climate change strategies.

- Emissions trading system is introduced at a state/province level in North America, prior to the federal governments. Regional Greenhouse Gas Initiative (RGGI) started on January 2009. Western Climate Initiative (WCI) started on January 2012.
- Club of 20 Regions (R20), a network of sub-national governments, was established in September 2010.

### III. Commitment to Climate Change Strategies in Each Sector

- Implementation of the Tokyo Cap-and-Trade Program
  - 1,332 facilities are covered by the program
  - Conducting projects to support smooth compliance of the mandatory emission reductions.
    - 1) Energy efficiency advice based on standards for certifying top-level facilities

Starting in the summer of 2010, energy conservation specialists are conducting visits to relevant facilities to provide advice based on the Standards for Certifying Top-Level Facilities.
    - 2) Practical seminars on fine-tuning energy conservation measures.

There are many examples of emission reductions achieved through the fine-tuning of energy conservation measures, such as through recalibrating heating and other equipment and by optimizing operational processes to match the individualized circumstances of each facility. Seminars on the fine-tuning of energy conservation measures, including the participation of leading experts in this field and operators of facilities that have achieved reductions, are held in order to share experiences and know-how.

### 3) Seminar for Tenant-Occupied Buildings

In order to promote greater energy conservation measures on the part of tenant businesses, a seminar for tenants to share experiences and know-how are held.

### 4) Seminar on the Greening of Data Centers

While data centers are required to reduce emissions, efforts are still needed to support the efforts of data center operators; for this reason, a seminar addressing energy conservation measures of data centers are held, bringing together businesses, facility operators and information technology professionals.

### 5) Seminar for Supporting Projects to Create Small and Midsize Facility Credits

To promote projects to create emission credits for small and midsize facilities within the Tokyo area, seminars are held to bringing together representatives of facilities required to reduce emissions, small and midsize businesses, energy conservation contractors and financial institutions, in order to familiarize participants with projects that can qualify for offset credits as well as with important considerations for setting up related projects.

- Implementation of “Tokyo CO<sub>2</sub> Emission Reporting Program for Small and Medium-sized Facilities” and “Project to Promote Energy Conservation and Create Emission Credits for Small and Medium-Sized Facilities”
- Interregional cooperation agreement to promote renewable energy – TMG with Hokkaido and four prefectures in Tohoku Region.

### IV. Ways to Enhance Japan’s Climate Change Strategies

- 1) Introduce effective cap-and-trade program to ensure emissions reduction
- 2) Promote low-carbon buildings
- 3) Introduce fuel efficiency regulations to reduce total GHG emissions from motor vehicles
- 4) Dramatically increasing the use of renewable energy
- 5) New system to promote reduction of CO<sub>2</sub> emissions from plastics

### V. Further Expanding Tokyo Climate Change Efforts

- 1) Achieving growth in Tokyo through climate change strategies – Coordination with industrial policy
- 2) Proceeding to a low-carbon city – Coordination with urban planning, urban transportation policy, housing policy, etc

# 1 (5) Ordinances, Regulations and Guidelines

## The Tokyo Metropolitan Environmental Security Ordinance

**Amended to strengthen the climate change strategy (June 25, 2008)**  
Introduction of the Tokyo Cap-and-Trade Program

## Regulation for the enforcement of the Tokyo Metropolitan Environmental Security Ordinance

### Details of the amended ordinance

Stipulates the threshold of covered facilities, the compliance factor, covered gases, document submission schedules, etc.

## Other programs relevant to Tokyo Climate Change Strategy

- Tokyo Carbon Reduction Reporting Program for Small and Medium-sized Facilities
- Program on Effective Use of Local Energy (for designated developers)
- Tokyo Green Building Program (for building owners of new or extended buildings with the total floor area of no less than 5,000 m<sup>2</sup>)
- Energy Environment Program (for power suppliers)

## Guidelines

### Stipulates detailed rules including calculation method of emissions and credit certification method

<For Covered Facilities (Concerning "Reduction by Own Efforts")>

- Guideline for Monitoring and Reporting Energy Related CO<sub>2</sub> Emissions
- Guideline for Verifying Energy Related CO<sub>2</sub> Emissions
- Guideline for Monitoring and Reporting GHG Emissions Other than Energy Related CO<sub>2</sub>
- Guideline for Monitoring and Reporting/Verifying GHG Emissions Reductions Other than Energy Related CO<sub>2</sub>
- Guideline for Certifying/Verifying Operation Management in Facilities
- Guideline for Relaxation of the Compliance Factor in Connection with Article 27 of the Electricity Business Act
- Guideline for the Facility Owned by Small and Medium-sized Enterprises

<For Covered Facilities (Concerning "Emissions Trading")>

- Guideline for Monitoring and Reporting/Verifying Small and Midsize Facility Credits
- Guideline for Monitoring and Reporting/Verifying Renewable Energy Credits
- Guideline for Monitoring and Reporting/Verifying Outside Tokyo Credits
- Guideline for Emissions Trading (How to use the Registry)
- Basic Approach on Accounting

<For Covered Facilities who wish to apply as the Top-Level Facility>

- Certification Standards for Top-Level Facilities (for Category I facilities/ for Category II facilities)
- Guideline for Certifying Top-Level Facilities
- Guideline for Verifying Top-Level Facilities

<For Verification Facilities>

- Guideline for Application to Register as a Verification Agency

## Tokyo Climate Change Strategy

### Stipulates the direction of CO<sub>2</sub> emissions reduction measures taken by facilities and content of the measures, such as;

- Developing systems to promote GHG emissions reduction
- Monitoring GHG emissions
- Planning and implementing GHG emissions reduction measures
- Preparation of GHG Emissions Reduction Report
- Promotion of CO<sub>2</sub> emissions reduction by tenants

"Check List"

"Best Practice"

## Documents

### Forms necessary to be submitted to TMG

- Forms for covered facilities
- Forms for verification agencies
- Forms for specified tenants
- Forms related to emissions trading

## 2 (1) Focus of the Tokyo Cap-and-Trade Program

### ■ Major modifications made to the program for large facilities

		Tokyo Carbon Reduction Reporting Program (Previous Program)	Tokyo Cap-and-Trade Program (New Program)
●Reduction of GHG emissions		Obligation to implement reduction measures	Obligation to reduce emissions
●Preparation, submission and publication of the GHG Reduction Plan		Submission and publication of “GHG Emissions Reduction Plan”, “Carbon Reduction Report”, “Interim Report”, and “Performance Report” (Different format each year)	Submission and publication of GHG emissions reduction plan and the GHG emissions status as “GHG Emissions Reduction Plan” (Documents to be submitted every year are standardized to the same format)
●Verification of GHG emissions (annual)		Not required	Verification by a registered verification agency is required
●Organizational development	●Appointment of technical advisors who provide technical advice on reduction measures	Obligation to make sincere effort to appoint a technical advisor	Obligation to appoint a technical manager
	●Tenants of a scale over a certain level (Compliance Tenants)	Obligation to make a sincere effort to cooperate with the reduction measures taken by building owners.	In addition to the left, submission of emissions reduction plan is required for “compliance tenants” <sup>*1</sup> *1 Conditions for “compliance tenants”, • Over 5000 m <sup>2</sup> floor area usage • Over 6 million kWh electricity usage per year
●Penalties for non-compliance		Recommendation and publication of the fact of violation	Ordered to take measures to reduce 1.3 times the shortage Violation to the order results in publication of the fact of violation, purchase of the allowance credit for the shortage by the Governor with payment cost charged to the violating facility, and monetary fine.
●Penalties for the failure to take prescribed procedures		Recommendation and publication of the fact of violation	Monetary fine in addition to recommendation and publication of the fact of violation

### ■ Related Program for Small and Medium-sized Facilities

	Covered facilities	Description
Carbon Reduction Reporting Program for Small and Medium-sized Facilities	Corporation with combined total annual energy consumption of 3,000 kiloliters in crude oil equivalent or more at multiple facilities located in Tokyo <sup>※2</sup>	<ul style="list-style-type: none"> <li>• Submission of “Carbon Reduction Report”</li> <li>• Promotion of energy saving measures by the facilities</li> </ul>

※2 Facilities with an energy consumption of 1,500 kiloliters crude oil equivalent (COE) or more, those with an energy consumption of less than 30 kiloliters, and compliance tenants are excluded .

## 2(2) Enhancement of the Promotional System

- The business must appoint the resources to the following positions for each facility in scope (**Obligation of Appointment**).

### (1) General Manager

(Role) Know the status of implementation of the measures at the facility, guide/supervise the employees, and advise the management.

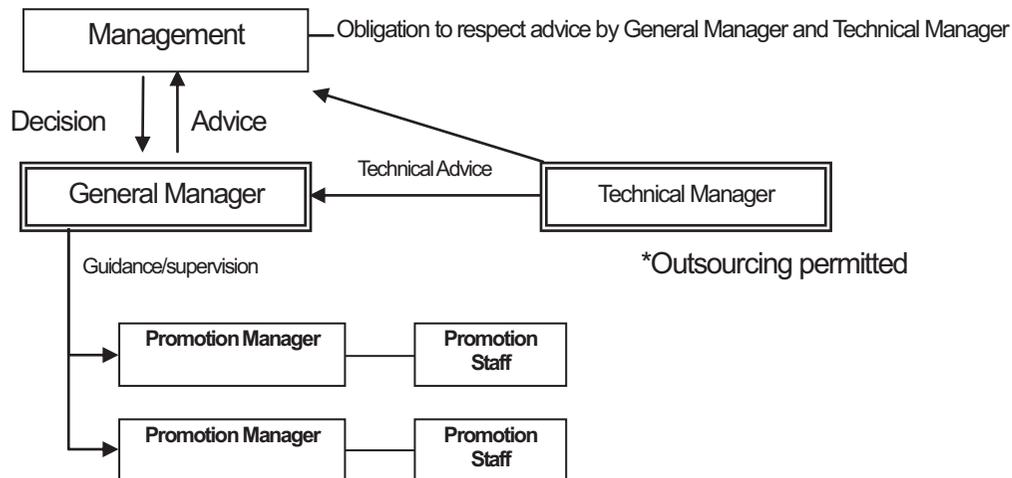
### (2) Technical Manager

(Role) Advise the management and General Manager on technical matters. (**Outsourcing of this position is allowed.**)

\* One person may be appointed as the Technical Manager of up to five facilities.

- Promotion Manager and Promotion Staff must be appointed according to the size of the facility.

### ■ Promotional System



#### General Manager Requirements

- (1) Must belong to a section that oversees duties concerning global-warming measures of the facility with GHG reporting obligations, and have the authority and responsibility to make decisions concerning implementation of its global-warming measures.
- (2) Must complete the training as specified by TMG\*.

#### Technical Manager Requirements

- (1) Must have one of the qualifications listed below:  
 Certified Energy Manager, Registered First Class Architect, First Class Architectural Work Manager, First Class Electrical Work Manager, First Class Plumbing Work Manager, Building Mechanical and Electrical Engineer (BMEE), or Consulting Engineer (construction, electrical and electronic, mechanical, sanitary engineering, environmental, total technology management (construction, electrical and electronic, mechanical, sanitary engineering, environmental))
- (2) Must have the skills to perform an energy conservation diagnosis.
- (3) Must complete the training course as specified by TMG.

#### Change from the 2nd compliance period

\* If a facility became a reporting facility in the second compliance period onward and if a person who has no experience of serving as a general manager is assigned to such position, participation in the training course is mandatory. In all other cases, participation in the training course is optional. (When choosing not to participate, facilities must endeavor to understand the system of the Program.) (The training courses as specified by TMG are planned to be held twice of every year.)

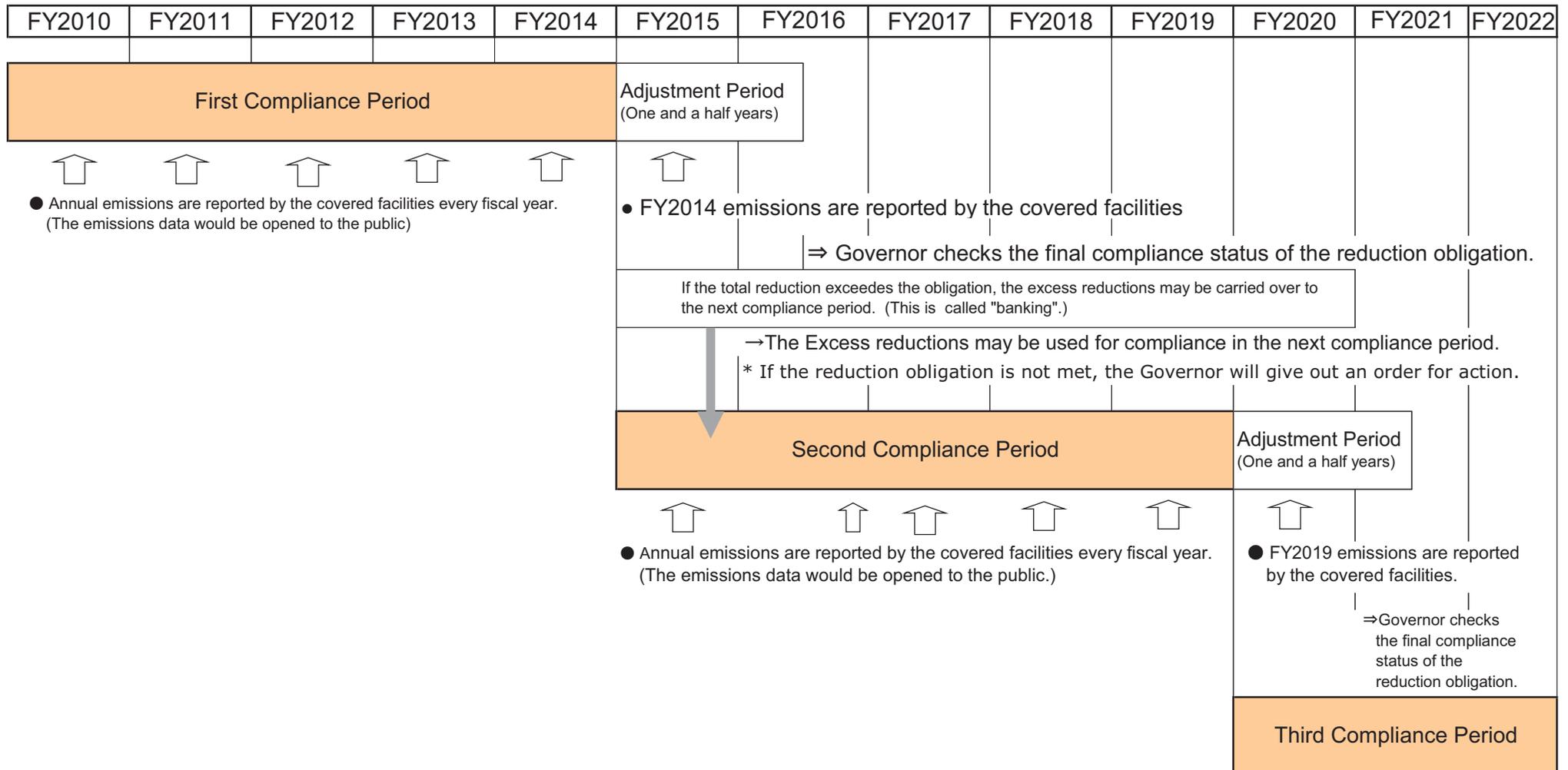
## 2(3) Compliance Period

● Compliance Period: 5 years (Example) 1st Compliance Period: FY 2010 to 2014, 2nd Compliance Period: FY2015 to 2019

● The fulfillment of the reduction obligation will be confirmed in the 7th fiscal year (after the end of the adjustment period).

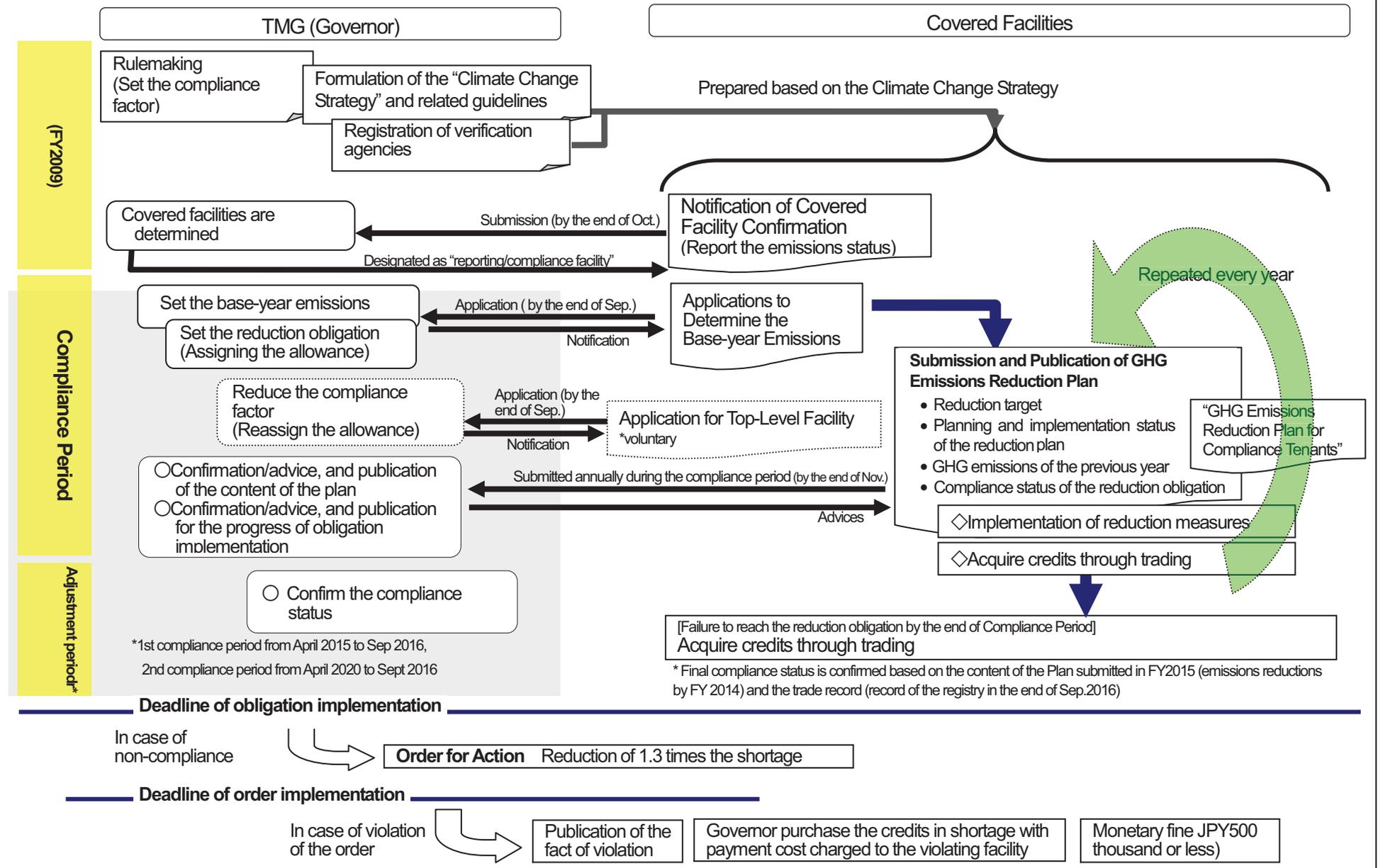
● During the compliance period, covered facilities must report the annual GHG emissions every fiscal year to TMG.

\* "Verification report" issued by the registered verification agency must be attached to the emissions data report.



## 2 (4) Flow of the Tokyo Cap-and-Trade Program

Compliance period: 5 years (1<sup>st</sup> compliance period from FY2010 to FY2014, 2<sup>nd</sup> compliance period from FY2015 to FY2019)



## 2 (5) Major Changes for the Second Compliance Period

		First compliance period (2010-2014)	Second compliance period (2015-2019)
Enhancement of the Promotional System	General Manager Technical Manager	<ul style="list-style-type: none"> <li>○Obligation to attend a seminar required by TMG</li> <li>• All general managers, etc. must attend the seminar</li> </ul>	<ul style="list-style-type: none"> <li>○Obligation to attend a seminar required by TMG</li> <li>• If a facility became a reporting facility in the second compliance period onward and if a person who has no experience of serving as a general manager is assigned to such position, participation in the seminar is mandatory. In all other cases, participation in the seminar is optional.</li> </ul>
Scope of the Program	Covered facilities	<ul style="list-style-type: none"> <li>○Classification of the covered facilities</li> <li>• Reporting facilities and compliance facilities</li> </ul>	<ul style="list-style-type: none"> <li>○Classification of covered facilities</li> <li>• Among those listed in the left column, facilities of which SMEs, etc., hold more than 50% ownership are classified as a “facility owned by SMEs with GHG reporting obligations(SMEs facilities)*.”</li> <li>*SMEs facilities are exempted from the reduction obligation. Submission and publication of plans are required.</li> </ul>
	Extent of facility	<ul style="list-style-type: none"> <li>○Changes to facility extent</li> <li>• No regulations</li> </ul>	<ul style="list-style-type: none"> <li>○Changes to facilities extent</li> <li>• If the number of buildings, etc. of a facility is increased/decreased after designation as a covered facility, the extent of the facility can be changed (excluding the case of an increase in buildings, etc. that are not designated as a covered facility) (application is optional).</li> </ul>
	Revocation of designation	<ul style="list-style-type: none"> <li>○Requirements for revocation of designation</li> <li>• (1) Operation of the facility is ceased or fully suspended. (2) Energy consumption of the previous fiscal year was less than 1,000 kL in crude oil equivalent. (3) Energy consumption was less than 1,500 kL in crude oil equivalent for the past three consecutive years.</li> </ul>	<ul style="list-style-type: none"> <li>○Requirements for revocation of designation</li> <li>• Other than the requirements (1) to (3) in the left column, the following requirements are also applied: (4) SMEs held more than 50% ownership in the previous fiscal year; (5) the extent of the facility has been changed.</li> </ul>
	Covered gases	<ul style="list-style-type: none"> <li>○Other gases</li> <li>• 6 types of gases (non-energy related CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFC, HFC, and SF<sub>6</sub>)</li> </ul>	<ul style="list-style-type: none"> <li>○Other gases</li> <li>• 7 types of gases, with NF<sub>3</sub>* added to the 6 types of gases in the left column.</li> <li>*The amount of NF<sub>3</sub> is to be calculated from FY2015 and reported from FY2016.</li> </ul>
	Emission factor	<ul style="list-style-type: none"> <li>○Emission factor</li> <li>• The emission factor is set before the beginning of the compliance period, and is fixed throughout the compliance period.</li> <li>(Example) Electricity: 0.382t-CO<sub>2</sub>/1,000 kWh</li> </ul>	<ul style="list-style-type: none"> <li>○Emission factor</li> <li>• The emission factor is set in a way that reflects recent data, and will be fixed throughout the compliance period.</li> <li>(Example) Electricity: 0.489t-CO<sub>2</sub>/1,000 kWh</li> </ul>
Reduction obligation	Base-year emission	<ul style="list-style-type: none"> <li>○Calculation of base-year emissions</li> <li>• Calculated based on the emission factor and emission intensity standards for the first compliance period.</li> </ul>	<ul style="list-style-type: none"> <li>○Calculation of base-year emissions</li> <li>• Calculated based on the emission factor and emission intensity standards for the second compliance period.*</li> <li>*Base-year emissions for the first compliance period will be recalculated.</li> <li>• In addition, base-year emissions are recalculated in line with changes to the facility extent.</li> </ul>
		<ul style="list-style-type: none"> <li>○Year with atypical emissions</li> <li>• Facilities can choose the average of the two years excluding a year with atypical emissions.</li> </ul>	<ul style="list-style-type: none"> <li>○Year with atypical emissions</li> <li>• Facilities can exclude up to two years with atypical emissions and choose from the average of two years or the emission of a single year.</li> </ul>
		<ul style="list-style-type: none"> <li>○Emission intensity standards</li> <li>• Emission intensity standards are set based on the data on covered facilities (FY2005-2007) from the previous program (Tokyo Carbon Reduction Reporting Program).</li> </ul>	<ul style="list-style-type: none"> <li>○Emission intensity standards</li> <li>• Emission intensity standards are set in a way that reflects the influence of the change to the emission factor.</li> <li>• A part of the classification of use will be divided more specifically.</li> </ul>

## 2 (5) Major Changes for the Second Compliance Period (Continued)

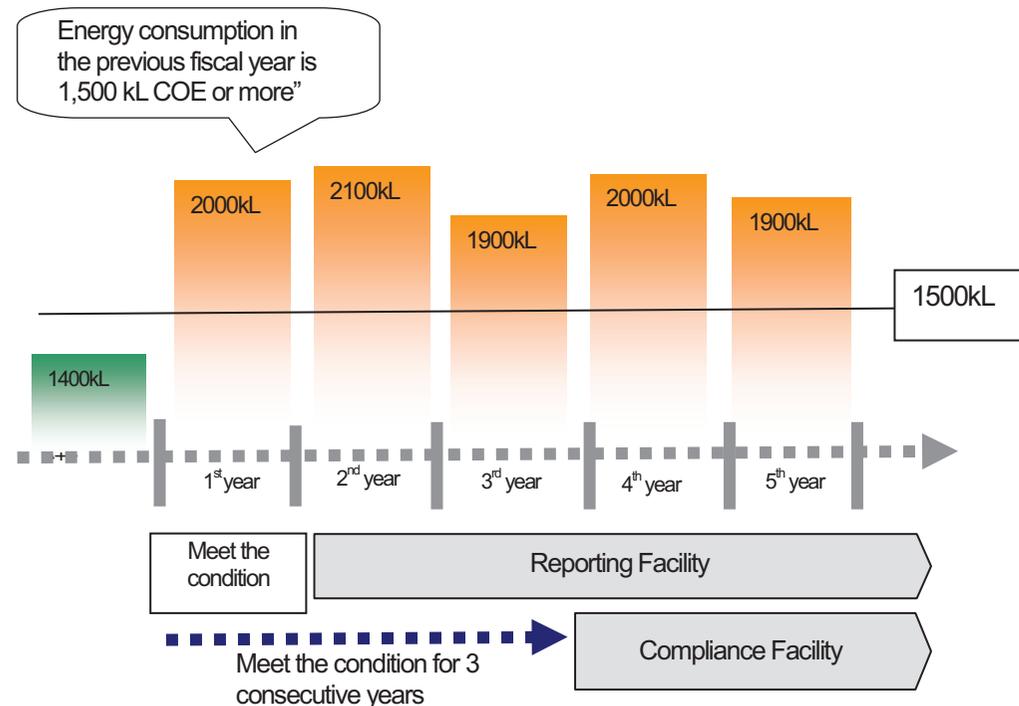
		First compliance period (2010-2014)	Second compliance period (2015-2019)
Reduction obligation	Base-year emissions	<ul style="list-style-type: none"> <li>○Requirements for changing base-year emissions at heat supply businesses</li> <li>• The floor area of the receivers of heat is increased/decreased by more than 6%.</li> </ul>	<ul style="list-style-type: none"> <li>○Requirements for changing base-year emissions at heat supply businesses</li> <li>• The total floor area of the receivers for each type of heat is increased/decreased by more than 6%.</li> </ul>
Reduction obligation	Compliance factor	<ul style="list-style-type: none"> <li>○Compliance factor</li> <li>• Group I-1: 8%; Group I-2: 6%; Group II: 6%</li> </ul>	<ul style="list-style-type: none"> <li>○Compliance factor</li> <li>• Group I-1: 17%; Group I-2: 15%; Group II: 15%</li> <li>• The compliance factor is relaxed for facilities newly designated as a compliance facility.</li> <li>• The compliance factor for the facilities related to Article 27 of the Electricity Business Act is relaxed.</li> <li>• Those certified as a top-level facility within the first compliance period will see a relaxed compliance factor for five years after the certification.</li> <li>• In addition, the compliance factor and the groups applicable for such factor will be revised in line with changes to the facilities extent.</li> </ul>
	Top-level facilities	<ul style="list-style-type: none"> <li>○Certification standards</li> <li>• Standards for facilities that have made outstanding progress in the implementation of measures against global warming.</li> </ul>	<ul style="list-style-type: none"> <li>○Certification standards</li> <li>• Certification standards is raised in two phases (FY2015 and FY2017) in line with the development of energy-saving technologies.</li> </ul>
Means to perform the obligation	Means to perform the obligation	<ul style="list-style-type: none"> <li>○Self reduction</li> <li>• Upgrading energy consumption equipment and devices to more efficient ones, promoting measures for operational improvement, etc.</li> <li>○Emissions trading</li> <li>• Facilities can also use environmental values derived from renewable energy, such as transmission of green energy through electricity companies' grids (supply of fresh green power), for fulfilling their reduction obligation.</li> </ul>	<ul style="list-style-type: none"> <li>○Self reduction</li> <li>• In addition to the left, a framework to promote the selection of low-carbon electricity/heat and a framework to evaluate the receipt from high-efficiency cogeneration* is introduced.</li> <li>*Correction of emissions, which was conducted in the first compliance period, isn't conducted.</li> <li>○Emissions trading</li> <li>• Supply of fresh green power shifts to a framework to promote the selection of low-carbon electricity.</li> <li>○Banked reductions from the first compliance period</li> <li>• Excess reductions and credits from the first compliance period can be used for performing the reduction obligation in the second compliance period.*</li> <li>*If the emission factor is larger in the second compliance period than the first compliance period, a factor provided by TMG is applied to the banked amount.</li> </ul>
Others	Low-intensity buildings	<ul style="list-style-type: none"> <li>○Low-emission-intensity buildings</li> <li>• Small-sized buildings used for a business other than the main business, whose CO<sub>2</sub> emission intensity is less than a certain value, are also included in the calculation of the base-year emissions and annual emissions.</li> </ul>	<ul style="list-style-type: none"> <li>○Low-emission-intensity buildings</li> <li>• If the facility contains small-sized buildings used for a business other than the main business, and their CO<sub>2</sub> emission intensity is less than a certain value, such buildings can be excluded from the calculation of the base-year emissions and annual emissions.</li> </ul>
	Specified measuring instrument	<ul style="list-style-type: none"> <li>○Use of specified measuring instrument</li> <li>• If fuel consumption cannot be determined by a purchase slip, etc., facilities may measure it with measuring instruments authorized for use in trading and verification procedures. Moreover, as a relaxation measure for the period until the end of FY2014, measurement with an instrument not authorized for use in trading and verification is also permitted.</li> </ul>	<ul style="list-style-type: none"> <li>○Use of specified measuring instrument</li> <li>• If fuel consumption cannot be determined by a purchase slip, etc., facilities are only allowed to measure it with measuring instruments authorized for use in trading and verification procedures. However, if a facility wishes to measure fuel consumption with an instrument not authorized for use in trading and verification, a conservative calculation method will be adopted to ensure fairness.</li> </ul>

## 2 (5) Major Changes for the Second Compliance Period (Continued)

		First compliance period (2010-2014)	Second compliance period (2015-2019)
Others	Compliance tenants	<ul style="list-style-type: none"> <li>○Requirements                             <ul style="list-style-type: none"> <li>• 1) The tenant occupies a total floor area of 5,000m<sup>2</sup> or more. 2) The tenant consumed 6 million kWh or more of electricity in the one year from June 1 the previous year, regardless of the total floor area.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○Requirements                             <ul style="list-style-type: none"> <li>• 1) The tenant occupies a total floor area of 5,000m<sup>2</sup> or more. 2) The tenant consumed 6 million kWh or more of electricity in the one year from April 1 the previous year, regardless of the total floor area.</li> </ul> </li> </ul>
	Documents to submit	<ul style="list-style-type: none"> <li>○Deadlines for submission                             <ul style="list-style-type: none"> <li>• Notification on the Revocation of Designation Abolishment of business: Within 30 days. Size reduction: By the end of November.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>○Documents to submit                             <ul style="list-style-type: none"> <li>• Application to Change Facility Extent, Notifications concerning Facilities Equivalent to Reporting Facility, etc., are added.</li> </ul> </li> <li>○Deadlines for submission                             <ul style="list-style-type: none"> <li>• Notification on the Revocation of Designation Abolishment of business: Within 30 days. Size reduction and designation as a facility equivalent to reporting facility: By the end of September.</li> </ul> </li> </ul>

## 3(1) Conditions for Covered Facilities

- **Covered facilities:** Consumption of fuels, heat and electricity in the previous fiscal year is 1,500 kL or more in crude oil equivalent (COE)
- **Owners of facilities that meet this condition have to “notify” the Governor**  
Required to report the emission status to TMG with verification.  
⇒ **The Governor designates the facilities as “Facilities with GHG Reporting Obligations” (Reporting Facilities)**
- **Facilities that meet the above condition for three consecutive years (except for the fiscal year when it started using energy)**  
⇒ **The Governor designates the facilities as “Facilities with CO2 Reduction Obligations” (Compliance Facilities)**
- **People with reduction obligations: The owner of the facilities (in principle)**  
Other people eligible under the regulation may take the responsibility of reduction obligation upon notification



### Major obligations

#### Reporting Facilities

- Submission of the GHG Emissions Reduction Plan every year,
- Improving organizational structure,
- Setting ambitious reduction target,
- Appointing general manager and technical manager, and etc.

#### Compliance Facilities

In addition to the above obligations of Reporting Facilities;

- Obligation to reduce CO<sub>2</sub> emissions

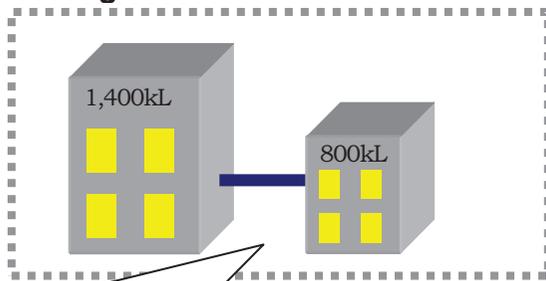
※ Covered facilities under the previous program with energy consumption of 1,500 kL COE or more for 3 consecutive years from FY2006 to FY2008 are designated as “Compliance Facilities” from the beginning of this program (FY2010).

## 3(2) How to Determine Facility Extent

- In principle, the facility extent is decided according to the area of the building or facility. (Except for those served as residents.)
- In the case where multiple facilities are regarded as a single facility
  - (1) Multiple facilities with integrated energy management are regarded as a single facility as a whole.
  - (2) Close or adjacent facilities owned by a common owner are regarded as a single facility. (For buildings, this applies only if the major users of the buildings are identical.)

Refer to the "Guideline for Monitoring and Reporting Energy Related CO2Emissions" for details.

### (1) Facilities with integrated energy management

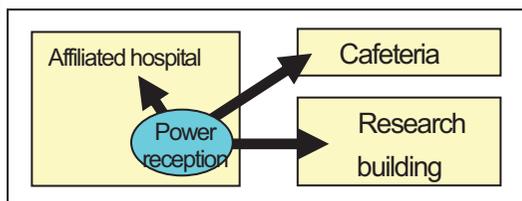


Regarded as a reporting facility if their total energy consumption is 1,500 kL COE or more. (The two buildings are considered as a single facility.)

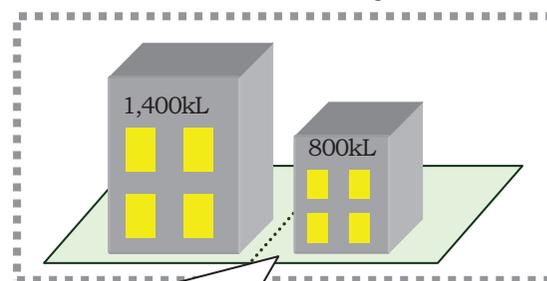
#### Integrated energy management

- 1) Having an identical point to receive energy supply from energy suppliers, such as power receiving point.
- 2) When heat supply facilities have an interconnected duct.

[Example]



### (2)-1 Neighboring buildings owned by a common owner, located adjacent to each



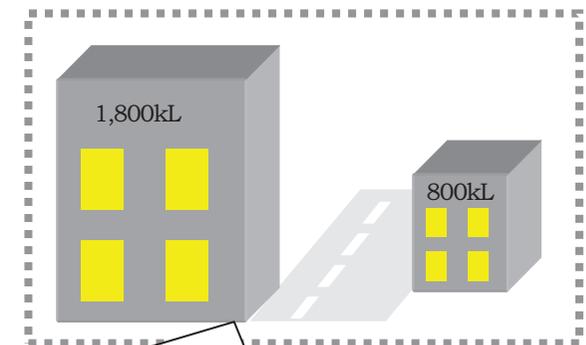
Regarded as a reporting facility if their total energy consumption is 1,500 kL COE or more. (The two buildings are considered as a single facility.)

#### \*The difference between being "adjacent" and "close"

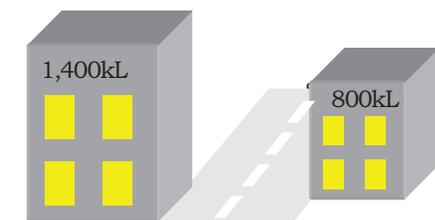
If the buildings and their surrounding land are next to each other without any objects in between, such as other buildings, roads, water channels or railways, they are described as being "adjacent." If there are any of said objects between the two buildings, they are described as being "close."

Refer to the "Guideline for Monitoring and Reporting Energy Related CO2Emissions" for details.

### (2)-2 Neighboring facilities owned by a common owner, located close to each



Regarded as a reporting facility since there is a core building with energy consumption of 1,500 kL COE or more. (The two buildings are considered as a single facility.)

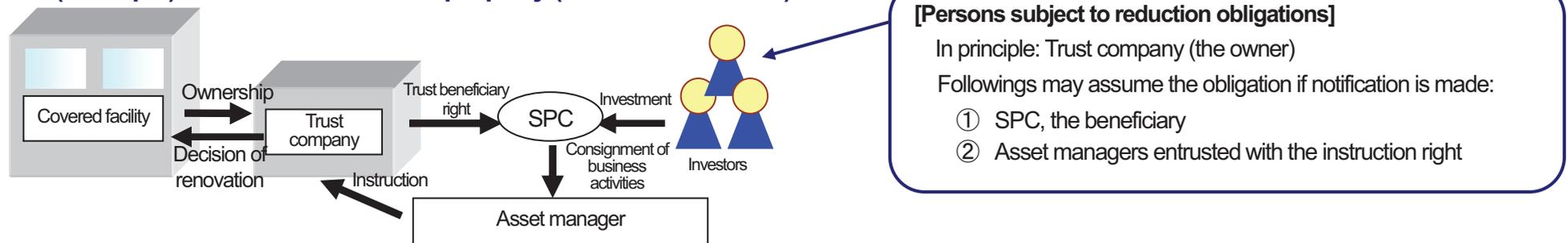


Not regarded as a reporting facility since there is no core building with energy consumption of 1,500 kL COE or more.

### 3 (3) People Subject to Reduction Obligations

- In principle, the owner of the facilities is subject to the reduction obligations.
- With notification to the TMG, the following persons may be responsible for the reduction obligations in place of or jointly with the owner;
  - Incorporated homeowner association of condominium
  - Beneficiaries of trust
  - Asset managers in case the facilities are securitized and directly owned by SPC
  - Asset managers in case the facilities are securitized and entrusted
  - SPCs in organized PFI projects
  - Major tenants<sup>※1</sup> ※1 Subject to the reduction obligation jointly with the owner
    - (① compliance tenants, ② tenants that emit over 50% of the total emissions of the facility, or ③ multiple tenants that emit over 50% of the total emissions of the facility)
  - Persons who have the authority of facility replacement and others based on contracts

#### ● (Example) In case of securitized property (when trust is used)



#### ■ Paperwork for a covered facility with multiple reduction obligators (owner and others)

A representative who is entrusted by the multiple reduction obligators for the paperwork such as submission of various documents can implement the following submission work. (There is no need for multiple reduction obligators to seal on each document.)

Document to prove “the delegation of paperwork” has to be submitted to TMG in order to use this procedure.

“Delegation of paperwork” is an entrustment of paperwork, not an entrustment of the reduction obligation.

## 3(4) Change in Ownership of the Covered Facilities

Notification is required for the following changes;

### 1) Change in ownership of covered facilities\*<sup>1</sup>

⇒ New owner: Submit "Notification of Ownership Change in Covered Facilities" (No later than 30 days from the day of the change)

Submit "Request for the Emissions Report of the Previous Owner" (Voluntary\*<sup>2</sup>) (No later than 60 days from the day of the change)

⇒ Previous owner: Submit "Emissions Report" (Upon request from the new owner) (No later than 90 days from the day of the request)

(The owners of covered facilities at the end of the adjustment period (from April 2020 to the end of September 2021 for the second compliance period) are responsible for the reduction obligation of the five years.)

### 2) Change in the name/address of covered facilities, or the name/the representative/address of the covered entities

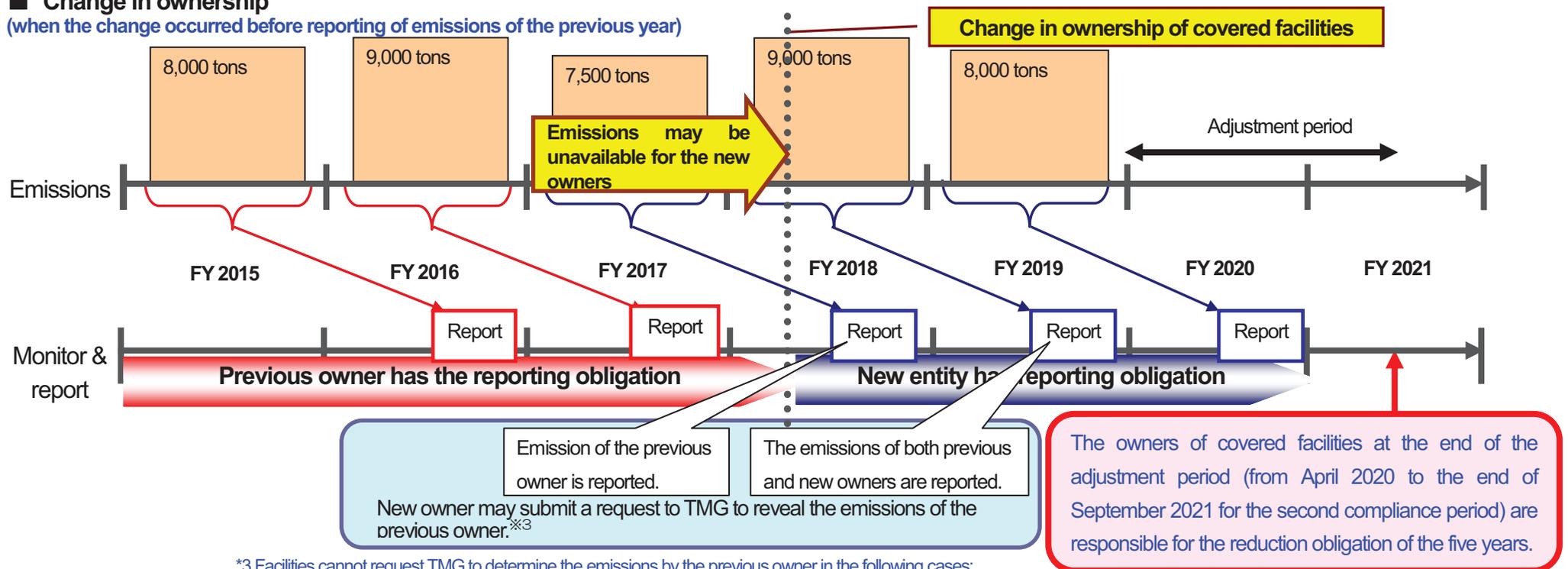
⇒ Submit "Notification of Change" (No later than 30 days from the date of the change)

\*1 An application can be made only when emissions of the previous owner is unavailable to the new owner.

\*2 This application can be made only when it is impossible to determine the emissions of the previous owner.

### ■ Change in ownership

(when the change occurred before reporting of emissions of the previous year)



\*3 Facilities cannot request TMG to determine the emissions by the previous owner in the following cases:

(1) when the new owner has already concluded a contract concerning electricity, etc. from before the change in ownership; and (2) when the change in ownership is due to integration or division of the facility and thus it is not supposed to impose any obstacles for the determination of power consumption.

### 3 (5) Revocation of Designation

- Designation as a covered facility is revoked when the facility meets the requirements in the table below.
- Reduction obligation after revocation of designation as a compliance facility:
  - If the designation is revoked, the compliance period will be reduced as indicated in the table below. (Facilities must comply with the obligation for the reduced compliance period.)
  - Designation as a reporting (compliance) facility will be revoked as soon as compliance with the reduction obligation is confirmed.
- The deadline for compliance with the obligation will be changed to the day on which 180 days have elapsed since the day following the day on which the Governor's approval is given.

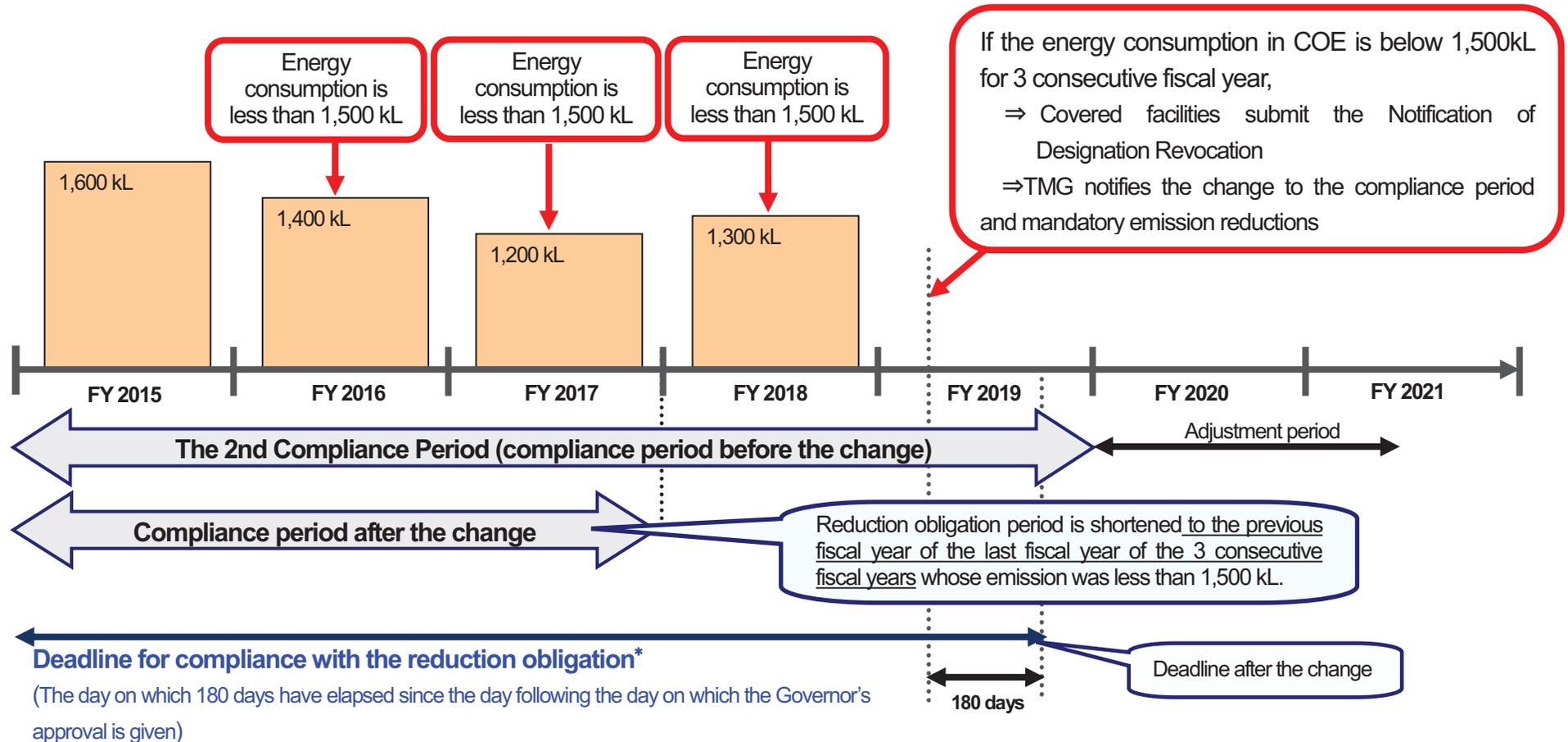
The day on which the Governor's approval is given: "Notification of Change in Compliance Period and Allowance" is issued.

Requirements		Documents to submit and submission deadlines	Compliance period
(1)	<b>Cessation or full suspension of facility operation</b>	Notification on the Revocation of Designation must be submitted within 30 days from cessation or suspension. (Example) Ceased on May 1, 2015 ⇒Submit the notification by June 1, 2015	Shortened to the fiscal year before the fiscal year in which operation was ceased or suspended ⇒The compliance period ends in FY2014.
(2)	<b>Energy consumption for the previous fiscal year was less than 1,000 kL in crude oil equivalent</b>	Notification on the Revocation of Designation must be submitted by the end of September of the year in which the facility met the requirements. (Example) Energy consumption was less than 1,000 kL in FY2014 ⇒Submit the notification by the end of September, 2015	Shortened to the fiscal year before the year in which the energy consumption was less than 1,000 kL in crude oil equivalent  (Example) Energy consumption was less than 1,000 kL in FY 2014 ⇒The compliance period ends in FY2013.
(3)	<b>Energy consumption was less than 1,500 kL in crude oil equivalent for the past three consecutive years</b>	Notification on the Revocation of Designation must be submitted by the end of September of the year in which the facility met the requirements. (Example) Energy consumption was less than 1,500 kL from 2012 to 2014. ⇒Submit the notification by the end of September, 2015	Shortened to the fiscal year before the last fiscal year of the compliance period in which energy consumption was less than 1,500 kL in crude oil equivalent for the past three consecutive years. (Example) Energy consumption was less than 1,500 kL from 2012 to 2014.  ⇒The compliance period ends in FY2013.
(4)	<b>SMEs held more than 50 % ownership</b>  <div style="border: 1px solid black; padding: 2px; display: inline-block;">Applied in the 2<sup>nd</sup> compliance period</div>	Notification on the Revocation of Designation must be submitted by the end of September of the year in which the facility met the requirements. (Example) SMEs held more than 50% ownership of the facility in FY2015 ⇒Submit the notification by the end of September, 2016	Shortened to the fiscal year before the year SMEs held more than 50% ownership of the facility.  (Example) SMEs held more than 50% ownership of the facility in FY2015 ⇒The compliance period ends in FY2014.
(5)	<b>Changes to facility extent</b>  <div style="border: 1px solid black; padding: 2px; display: inline-block;">Applied in the 2<sup>nd</sup> compliance period</div>	Application to change Facility Extent can be submitted by the end of September in any year after the year in which the change occurred to the facility extent. (Application is optional.) (Example) Changes occurred to the facility extent in FY2014 ⇒Submit the application by the end of September in any year after FY2015.	Shortened to the fiscal year before the year the application was made.  (Example) Application was made on September 1, 2015 ⇒The compliance period ends in FY2014.

### 3 (5) Revocation of Designation (Continued)

■ Revocation of designation:

Example (when the energy consumption was less than 1,500 kL in crude oil equivalent for the past three consecutive years)



**\*Deadline for compliance with the reduction obligation**

When the compliance period is shortened due to size reduction or cessation of facility operation, etc., the deadline for compliance with the reduction obligation is changed to the day on which 180 days have elapsed since the day following the day on which the Governor's approval is given (not to the end of September of two years after the last fiscal year of the original compliance period).

### 3(6) Facilities of Which SMEs Hold More Than 50% Ownership (Overview)

[Second compliance period]

- As a special provision for the period to establish and promote more significant CO2 reduction, large facilities are exempt from the reduction obligations if SMEs, etc. hold at least 50% of their ownership.
- Nevertheless, the facility called “SMEs Facility: Facility owned by SMEs with GHG reporting obligations” submission and publication of the GHG emissions reduction plan are required as before.
- The procedure is planned to be started in FY2016 for existing facilities that are classified as SMEs as of the initial fiscal year of the second compliance period (FY2015).

#### ■Definition of SMEs

SMEs that are exempt from the reduction obligations are business facilities falling under any of the following from (1) to (6) (judged from the situation as of the end of every fiscal year):

(1) Small and medium-sized enterprise operators provided in the Small and Medium-sized Enterprise Basic Act

An SME operator provided in the Small and Medium-sized Enterprise Basic Act is defined as an operator whose capital or the number of employees is lower than the value provided for each industry in the table below. (Industries are according to the revised version of the 10th Japan Standard Industry Classification.)

Industry	Capital or total amount of investment	Number of workers regularly employed
Manufacturing and others	300 million yen or less	300 employees or less
Wholesale	100 million yen or less	100 employees or less
Retail	50 million yen or less	50 employees or less
Service	50 million yen or less	100 employees or less

However, the following cases from (a) to (e) are excluded.

- (a) When it is a holding company and its affiliate company is a large enterprise.
- (b) When over half of the capital is contributed by a large company or a company that falls under (a), or by a board member of such a company
- (c) When over two thirds of the capital is contributed by multiple large companies or companies that fall under (a), or by board members of such companies
- (d) When over half of all board members of the operator are jointly assumed by board members or employees of a large company or of a company that falls under (a)
- (e) When the governor recognizes that the management is practically under the control of a large company.

[Note] The national government, local governments, and corporations established under the laws other than the Companies Act (such as medical corporations, incorporated educational institutions, religious corporations, and specific purpose companies) are not included in the SME operators category.

- (2) Joint cooperatives, commercial and industrial cooperatives, and federations of commercial and industrial cooperatives provided in the Act on the Organization of Small and Medium-sized Enterprise Association
- (3) Business cooperatives, minor business cooperatives, credit cooperatives, federation of cooperatives, or joint enterprises provided in the Small and Medium-Sized Enterprise Cooperatives Act
- (4) Shopping district promotion cooperatives and federations of shopping district promotion cooperatives provided in the Shopping District Promotion Association Act
- (5) Environmental health industry associates, minor environmental health industry associates, or federations of environmental health industry associates provided in the Act on Coordination and Improvement of Environmental Health Industry
- (6) Individuals

#### ■Determining the holding of at least 50% ownership of a facility

Note 1: The ownership of a facility is determined by looking at the owner of the facility, not the individual(s) notified as a person(s) subject to the reduction obligation.

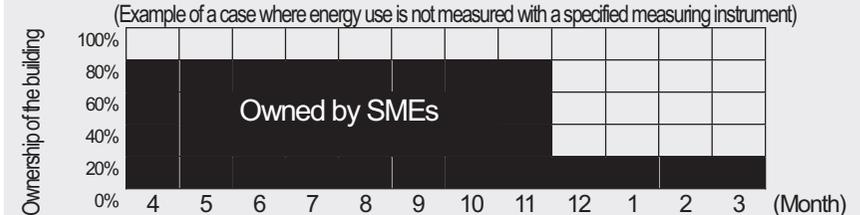
Note 2: If 50% or more ownership of the facility is determined to be held by SMEs, the whole facility is exempted from the reduction obligation.

(i) Determination of ownership by energy use (crude oil equivalent)

TMG will determine if 50% or more ownership of the facility is held by SMEs by looking at the energy (in crude oil equivalent) spent on the parts owned by SMEs in that year, in the cases when such energy use is measured with a specified measuring instrument.

(ii) Determination by ownership of the building

If the energy use is not measured with a specified measuring instrument, TMG will determine SMEs' ownership of the facility by looking at the portion of the building owned by SMEs.



In the above example, the ownership of the facility held by SMEs is deemed to exceed 50%.

#### ●Submission and publication of the GHG emissions reduction plan

The GHG emissions reduction plan needs to continue to be submitted and publicized by the end of November every year (verification is not needed, however). Publication by TMG will continue unchanged.

Although the compliance factor is not set, the facility is required to make efforts for 17% (or 15%) emissions reduction in the second compliance period as it is a facility with large-scale CO2 emissions.

Compliance tenants that occupy the facilities of which SMEs hold at least 50% ownership must submit a compliance tenant plan as ever.

### 3 (7) Changes to Facility Extent (Overview)

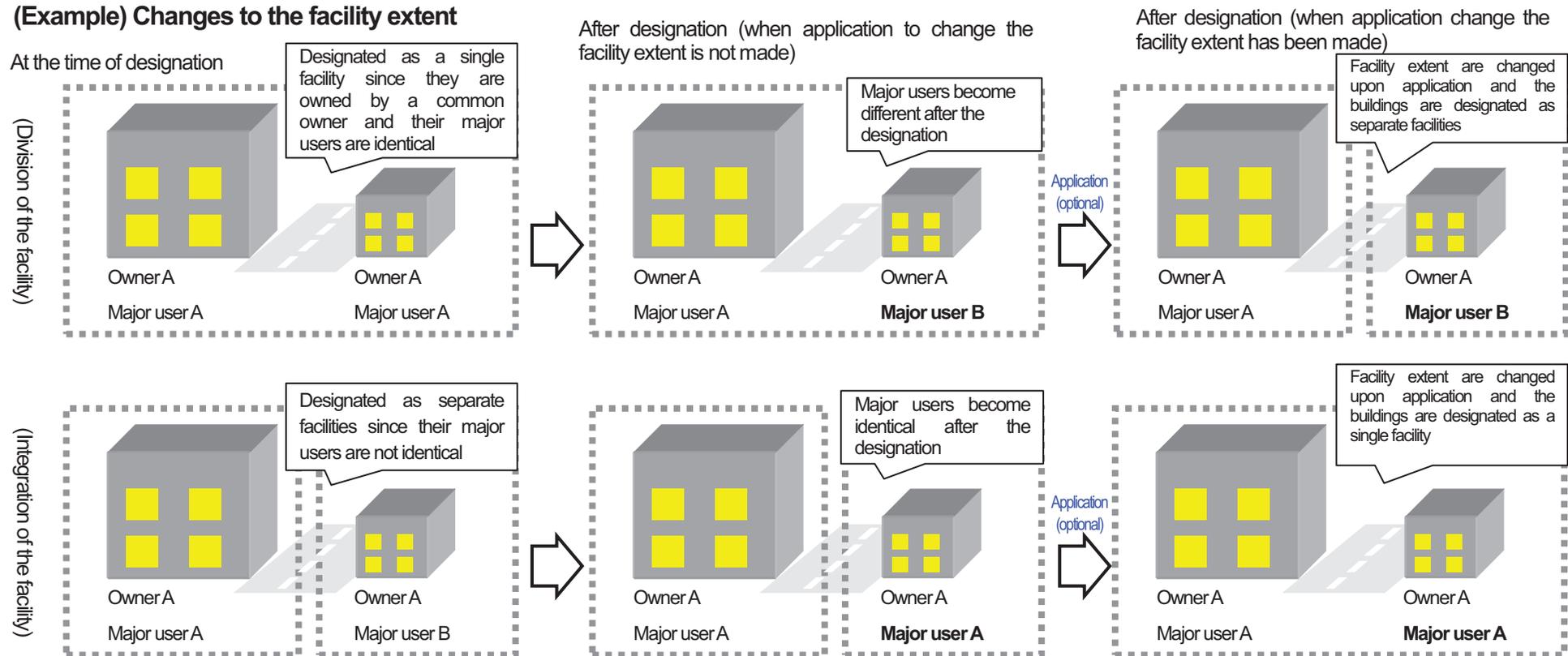
[Second compliance period]

- Multiple buildings are regarded as a single facility when they fulfill requirements.\* After the designation as a reporting facility, the facility extent set at the time of designation will be continuously used.
- From the second compliance period, the facility extent can be changed when the facility is partially transferred or when the facility acquires a neighboring covered facility, so that it can take more effective and efficient reduction measures according to the actual situation of the management of the facility.
- If the number of buildings is increased/decreased due to the integration of energy management or changes to the state of ownership after designation as a reporting facility, facilities can make an application to change the facility extent (excluding cases where the increased or decreased building is not designated as a reporting facility).

\*Requirements for regarding multiple buildings as a single facility (See 3 (2) for details.)

- When there are buildings under integrated energy management
- When buildings or facilities owned by a common owner are adjacent or close to each other (as for buildings, the major users of these buildings must be identical).  
However, parts used for housing purposes are excluded.

#### (Example) Changes to the facility extent



### 3 (8) Changes to Facility Extent (Designation and Revocation)

[Second compliance period]

- When it is confirmed, based on application, that there is a change to the facility extent, the facility extent is to be changed from the fiscal year in which the application is made.
  - Designation of the covered facility before the change (old designated facility) is revoked and the covered facility after the change (new designated facility) receives designation.
  - The compliance period for the old designated facility is shortened to the fiscal year before the fiscal year of application (reduction obligation for the reduced compliance period must be fulfilled).
- The old designated facility is exempted from the scope of the reporting (compliance) facility as soon as compliance with the obligation is confirmed.
- The extent of the new designated facility is decided based on factors such as the integrity of energy management and neighboring buildings.
- The facility is designated as a reporting or compliance facility according to the new facility extent.

#### ■ Designation for previous reporting facilities

All facilities included after the change to the facility extent are designated as reporting facilities. (Examples 1 to 4)

However, facilities in the facility extent after the change that fulfill either of the following conditions are excluded (exempted from covered facilities): (1) energy consumption of the previous fiscal year of application was less than 1,000 kL; or (2) the floor area was less than 5,000 m<sup>2</sup> as of the end of the previous fiscal year of application.

#### ■ Designation for previous compliance facilities

If the new facility extent includes a facility that was previously designated as a compliance facility, the facility will be designated as compliance facilities. (Examples 1 and 3)

#### ■ Designation as a compliance facility for new designated facilities (excluding compliance facilities)

Other than above, the facilities that are newly designated as reporting facilities will be re-designated as compliance facilities if their energy consumption exceeds 1,500 kL in crude oil equivalent for three consecutive years, including the years before the change of facility extent. (Examples 2 and 4)

#### ■ (Example) When the application is made in FY2017

CF: Compliance facility  
RF: Reporting facility

		FY2015	FY2016	FY2017	FY2018	FY2019
				Application		
1. Facility (A) (CF)→ Facility (a) (CF), Facility (b) (CF)						
Old designated facility	Facility (A)	CF	CF	⇒Designation is revoked after confirmation of compliance with reduction obligation.		
New designated facility	Facility (a)	Newly designated⇒		CF	CF	CF
	Facility (b)	Newly designated⇒		CF	CF	CF
Facility (A) (RF)→ Facility (a) (RF), Facility (b) (RF)						
Old designated facility	Facility (A)		RF <sup>(1st year)</sup>	⇒Revocation of designation		
New designated facility	Facility (a)	Newly designated⇒		RF <sup>(2nd year)</sup>	RF <sup>(3rd year)</sup>	CF
	Facility (b)	Newly designated⇒		RF	RF	RF
Facility (A) (CF), Facility (B) (RF)→ Facility (a) (CF)						
Old designated facility	Facility (A)	CF	CF	⇒Designation is revoked after confirmation of compliance with reduction obligation.		
	Facility (B)	RF	RF	⇒Revocation of designation		
New designated facility	Facility (a)	Newly designated⇒		CF	CF	CF
Facility (A) (RF), Facility (b) (RF)→ Facility (a) (RF)						
Old designated facility	Facility (A)		RF <sup>(1st year)</sup>	⇒Revocation of designation		
	Facility (B)	RF <sup>(1st year)</sup>	RF <sup>(2nd year)</sup>	⇒Revocation of designation		
New designated facility	Facility (a)	Newly designated⇒		RF <sup>(3rd year)</sup>	CF	CF

\*Example for a case where energy consumption is more than 1,500 kL per year in crude oil equivalent. The number in the brackets indicate the counting of fiscal years for designation as a compliance facility.

### 3 (9) Changes to the Facility Extent (Procedures, etc.)

[Second compliance period]

- Application to change facility extent can be made in any year from the following year of the year in which the change occurred to the facility extent.
- Application to Change Facility Extent must be submitted between April 1 and the end of September of the fiscal year in which the facility wishes to receive designation as a covered facility or revocation of designation.
- Application to change facility extent must be made under the joint names of the compliance entities of the old designated facility and new designated facility.
- An application to determine the base-year emissions is also made in line with the application to change facility extent.

#### ■ Application to change facility extent

- Applicant: Compliance entity of the old designated facility  
Compliance entity of the new designated facility
- Application deadline: End of September every year
- Documents to submit:

#### (1) Application to Change Facility Extent

#### (2) Confirmation Sheet Concerning Changes to the Facility Extent

(For all facilities included after the change in the facility extent)

#### (3) Energy-related CO<sub>2</sub> Emissions Monitoring Report (for the previous fiscal year)

#### (4) Report of Verification Results (Results of the verification of item (3) above)

#### (5) Notification of Owner, etc. (only when there is a change to the compliance entity)

#### (6) Letter of proxy (only when the procedures are commissioned to a third party)

#### ■ Application to determine the base-year emissions

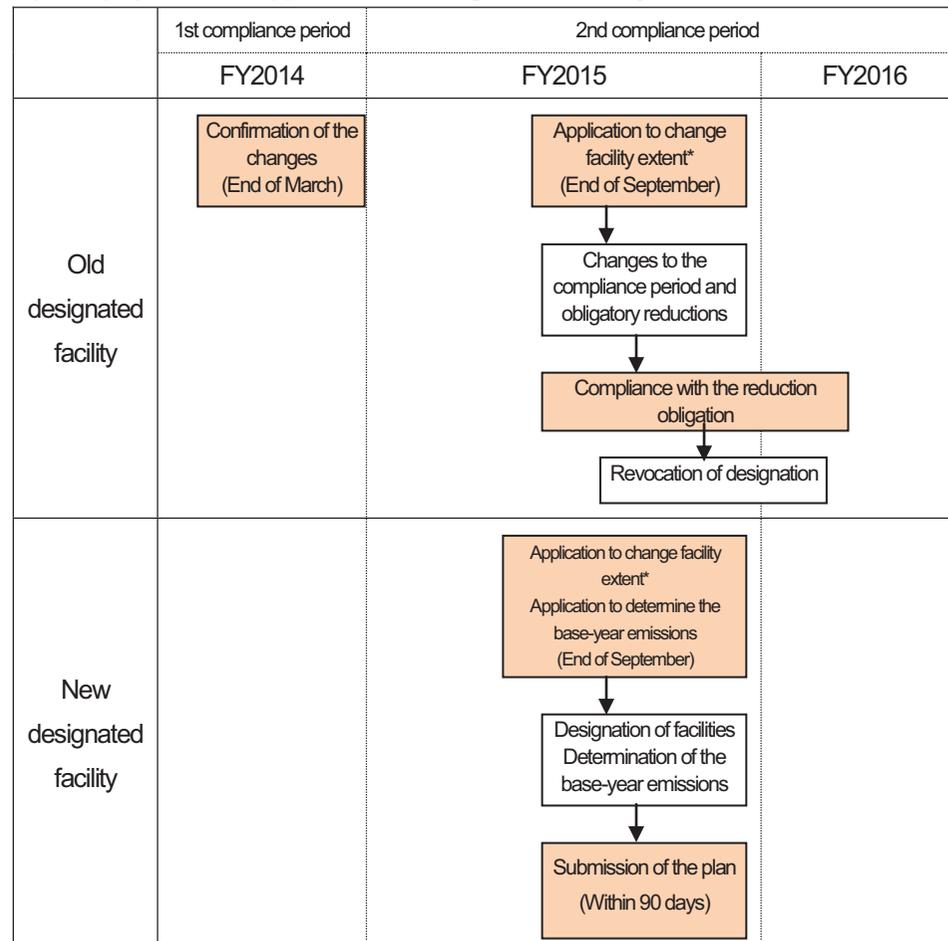
- Applicant: The compliance entity of the new designated facility
- Application: Same as the application to change facility extent

#### ■ Submission of the GHG Emissions Reduction Report

- Submitter: The compliance entity of the new designated facility
- Deadline: Either of the following, whichever comes later: end of November, or 90 days later from the day of designation as a new designated facility

• Note: The Energy-related CO<sub>2</sub> Emissions Monitoring Report (for the previous fiscal year) and Report of Verification Results are not required.

#### ■ (Example) When an application for changes to the facility area is made in FY2015



\*The same application

### 3 (10) Covered Gases

● "GHGs subject to reduction": "CO<sub>2</sub> emitted by the use of fuels, heat and electricity (energy related CO<sub>2</sub>)"

Excluding those used for residential purposes

⇒Monitoring and reporting is required every year to confirm the compliance status

Verified emissions must be reported to TMG

● "GHGs subject to monitoring and reporting every year": 7 gases (non-energy related CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFC, HFC, SF<sub>6</sub> and NF<sub>3</sub>)

Verified reduction amounts of reporting 7 gases can be used for compliance (Cannot be traded to other facilities)

#### Covered Gases



 <b>Energy-related CO<sub>2</sub></b>	<ul style="list-style-type: none"> <li>• use of electricity</li> <li>• Use of city gas</li> <li>• Use of heavy oil</li> <li>• Use of heat supplied by heat supply businesses</li> <li>• Use of other energy</li> </ul>	<b>To be reported as GHG emissions</b>	<b>Subject to reduction</b>	<p><b>GHGs subject to reduction</b> CO<sub>2</sub> emitted associated with the use of fuels, heat and electricity</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <ul style="list-style-type: none"> <li>• Has to be reported every year for the confirmation of the implementation status of</li> </ul> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 10px;">                     Attachment of "verification reports" issued by a registered verification agency is required                 </div> </div>	
	•Use of water, discharge into sewage and others				<p><b>Other gases</b> Monitoring and reporting of emission is required every fiscal year. Verification is required only if it is used for the compliance; otherwise not required.)</p>
	<b>Gases other than CO<sub>2</sub></b> <ul style="list-style-type: none"> <li>• Methane, N<sub>2</sub>O and others produced associated with the combustion of fuels including heavy oil for boilers</li> </ul>				

#### Emissions from vehicles

Place of operation	Kind of vehicle	User or concerned parties	Monitoring and reporting of emission	Reduction obligation	Implementation of measures
Limited on the premises of the facility	Forklift and others in the factory, etc.	The company	Required	Included	As much as required for the compliance
		Tenants and others in the facility	Required	Included	
Including outside the premises	The company's vehicle for business use, etc.	The company	Not required*	Not included	Sincere effort is required
	Tenant's vehicle for business use, etc.	Tenants and others in the facility	Not required	Not included	Not required (voluntary)
	Vehicle of transport businesses to be used to carry in cargoes	The company	Voluntary (as far as possible)	Not included	Sincere effort is required
		Tenants and others in the facility	Voluntary (as far as possible)	Not included	Sincere effort is required

If a business entity uses 30 or more vehicles in Tokyo, it is required to report the emissions under the "Vehicle Environment Management Program (Tokyo Metropolitan Environmental Security Ordinance)" separately.

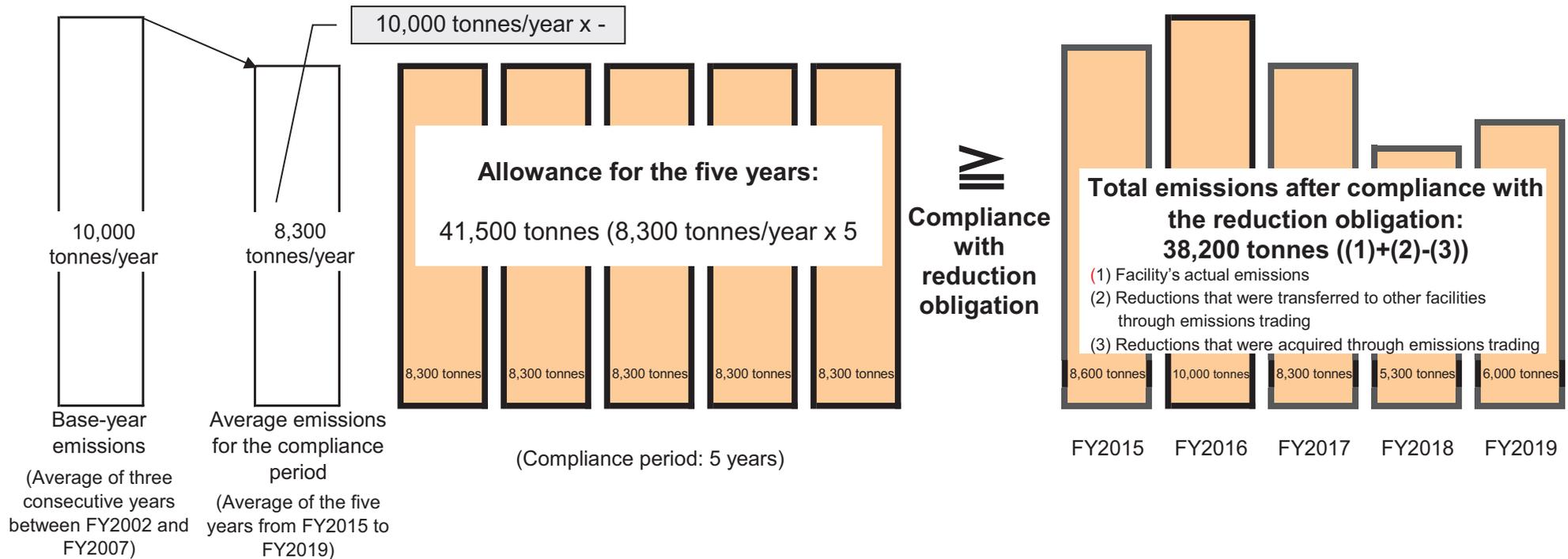
### 3 (11) Mandatory Emission Reductions

- **Mandatory emission reductions:** The total amount of GHG emissions that must be reduced from the base-year emissions within a compliance period. It is a total of the values obtained by multiplying the base-year emissions for each fiscal year in the compliance period by the compliance factor.
- **Allowance:** The upper limit on emissions for a compliance period. It is calculated by subtracting the mandatory emissions reduction from the total of the base-year emissions of individual years of the compliance period.

When the facility is subject to the compliance factor of -17% for the second compliance period

[Example]

- **Base-year emissions:** 10,000 tonnes/year  
(Calculated based on any three consecutive years between FY2002 and FY2007)
- **Compliance factor for the second compliance period:** 17% reduction



## 3(12) Calculation of Base-year Emissions

### • Base-year emissions: Emissions that are used as a basis for calculation of mandatory emission reductions

The base-year emissions are calculated based on CO<sub>2</sub> emissions (GHG) accompanying the consumption of fuels, heat and electricity that are subject to the reduction obligation. Gases other than CO<sub>2</sub>, such as methane, are not included.

#### • Calculation method for existing facilities<sup>\*1</sup>

<sup>\*1</sup> Facilities that have been designated as compliance facilities since the beginning of the Program.

**Base-year emissions are calculated as the average of three consecutive years between FY2002 and FY2007**

#### • Calculation method for new entrants<sup>\*2</sup>

<sup>\*2</sup> Facilities that were designated as compliance facilities after April 1, 2010 onward.

**The method based on past emissions<sup>\*3</sup> or method based on emission intensity standards**

<sup>\*3</sup> Facilities promoting climate change measures above a certain level can select this method. (The method based on emission intensity standards can also be chosen.)

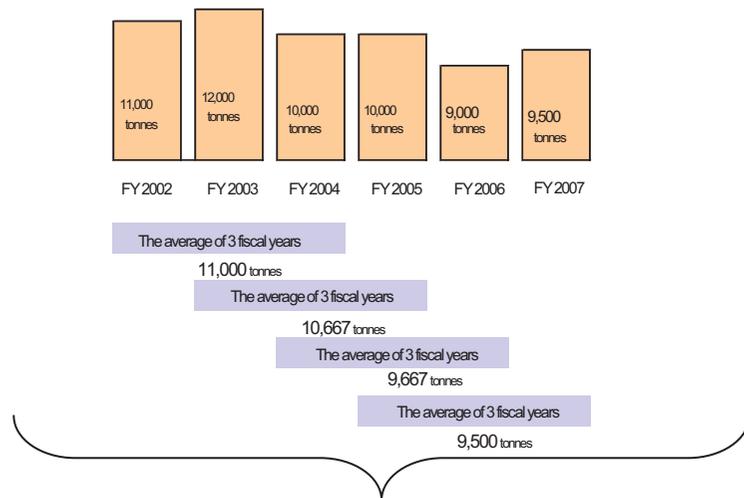
### Existing facilities

#### Method: Calculating as the average of three consecutive years between FY2002 and FY2007

If the facility has already made any reductions in the past, it can choose years from not only FY2005-FY2007 but also other past fiscal years for the calculation of the three-year average.

• Covered facilities can choose any consecutive three years for the calculation (a verification result report must be attached).

[Example of the calculation of base-year emissions]



Covered facility can select any 3 consecutive fiscal years

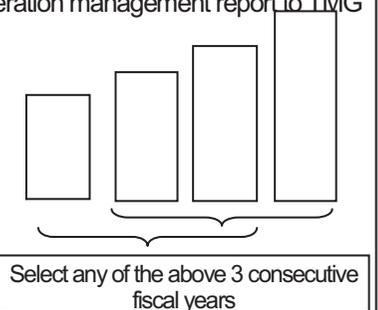
### New Entrants

#### Method 1 [Method based on past emissions]

This method can be selected only when the level of promotion of climate change measures of the facility meets the Guideline for Certification of Operation Management in Facilities<sup>\*4</sup>.

- The base-year emissions are calculated as the average of annual emissions of three consecutive years between four fiscal years before the beginning of the compliance period and the previous year.
- Facilities are required to meet the conditions of all items in operation management standards based on the relevant category (commercial or industrial) separately in all relevant fiscal years.
- New entities should implement self-check and submit operation management report to TMG with verification report.

<sup>\*4</sup> "Method based on past emission performance" is approved only when the level of promotion of climate change measures meets the standard for new entities ⇒ Since potential entrants have a chance to intentionally increase the base-year emissions without taking adequate measures.



#### Method 2 [Method based on emission intensity standards] Emission activity index (floor area) x emission intensity standard<sup>\*5</sup>

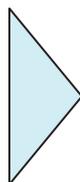
<sup>\*5</sup> As for emission intensity standards, see 3 (18) Base-Year Emissions (iii) Emission Intensity Standards. As for emission intensity standards by use of facility (classification of use under the Building Standards Act), see the Guideline.

### 3 (13) Base-Year Emissions (Calculation in special cases)

- The requirements of “irregular fiscal years” are the same as the first compliance period.
- Facilities can exclude up to two irregular fiscal years from the three fiscal years defined as a principle, and choose from the base-year emissions from the two-year average emissions or single-year emissions.
- The facilities which chose the base-year emissions of the two-year emissions in the first compliance period can also choose single-year emissions when recalculating the base-year emissions of the second compliance period.

[Choosing a method based on the past emissions]  
 Choosing three consecutive fiscal years\*

\*This option is available only when the status of the promotion of global warming countermeasures conforms to the Guidelines to Certify the Compliance with the Operation Management Standard for Selecting the Actual Emission Approach in the Determination of Base-year Emissions.  
 (Same as the first compliance period)



[When there are particular irregular years certified by the governor]

• In terms of the calculation of base-year emissions, the governor certifies that the energy-related CO2 emissions of a particular year were irregular if the fiscal year meets both of the requirements laid in I and II below.

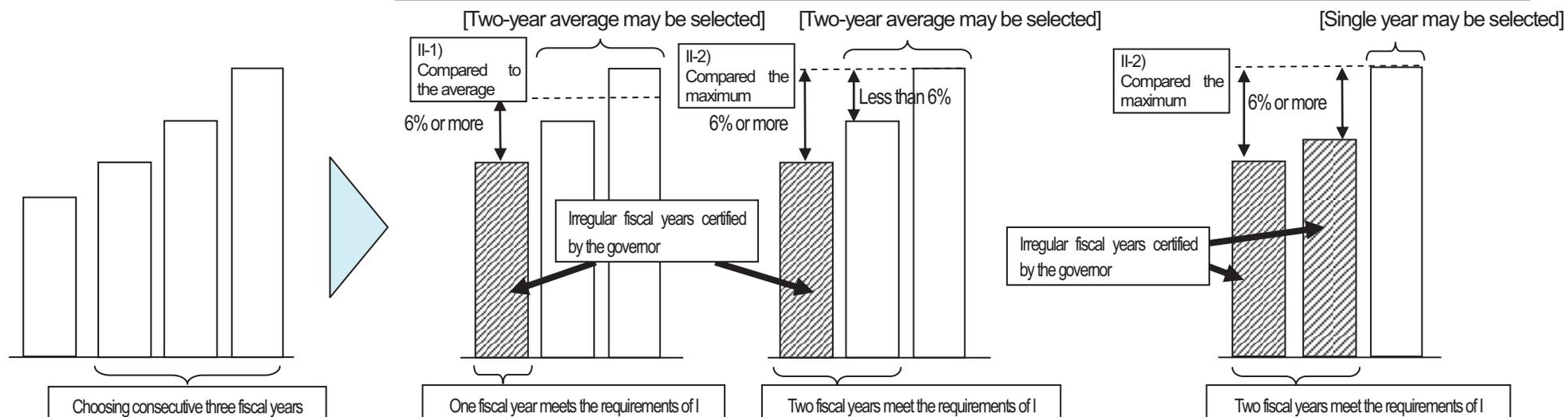
I. Facilities must meet one of the following conditions:

- 1) Considerable part of the facility has not been used for a long period due to renovation
- 2) The facility operation has recently started and its emissions are still extremely low. (Ex. Newly built buildings and started-up data centers)
- 3) Emissions reduction of a particular year was due to the reduction measures implemented from the start of the facility operation to the 4th fiscal year. (Limited to the cases where the past three consecutive years are selected from the first four fiscal years.)
- 4) As a result of an increase in floor area or equipment in a particular fiscal year or in the later year of the three fiscal years, the emission of the particular year was lower than the later fiscal years.
- 5) Other similar situations certified by TMG

II. When either of the conditions I. 1)-5) listed above is met, emissions of the particular fiscal year must meet one of the following conditions;

- 1) When one of the conditions provided in I above applies to just one year: The emissions are less than 6% when compared with the average emissions of the remaining two years.
- 2) When one of the conditions provided in I above applies to two or more years: The emissions are less than 6% when compared with the most emitted fiscal year among the selected past three fiscal years (Only when two or more fiscal years meet the conditions listed in I.)

\*For the comparison of energy-related CO2 emissions described in requirement II, we use emissions calculated by the method adopted in the compliance period that includes the year in which reduction obligation of the facility started.



### 3 (14) Base-Year Emissions (Emission Intensity Standards)

- The emission intensity standards for the first compliance period as shown in the table below are used for the calculation of base-year emissions for facilities that were newly designated as compliance facilities between FY2010 and FY2014, and for the recalculation of base-year emissions for facilities that fulfilled the requirements for changing the base-year emissions by FY2014.
- The emission intensity standards for the second compliance period as shown in the table below are used for the calculation of base-year emissions for facilities that were newly designated as compliance facilities between FY2015 and FY2019, and for the recalculation of base-year emissions for the facilities that fulfilled the requirements for changing the base-year emissions between FY2015 and FY2019.
- As for the emission intensity standards for the second compliance period, if the use of the facility falls under “information-communication,” “commercial,” “education” or “distribution” and the facility is used as a data center, food-related facility, science university, etc., or refrigerated warehouse, etc., the emission intensity standards specified for those categories can be used. If such emissions intensity standards are used, they must be used also when changing the base-year emissions of that area.

Classification of use	Emission activity index [unit]	Emission intensity standards		
		1st compliance period	2nd compliance period	[Unit]
Office	Floor area [m <sup>2</sup> ]	85	100	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Office (public office buildings)	Floor area [m <sup>2</sup> ]	60	75	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Information-communication	Floor area [m <sup>2</sup> ]	320	380 (Data center* <sup>1</sup> 610)	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Broadcasting station	Floor area [m <sup>2</sup> ]	215	260	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Commercial	Floor area [m <sup>2</sup> ]	130	160 (Food-related facility* <sup>2</sup> 225)	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Accommodation	Floor area [m <sup>2</sup> ]	150	180	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Education	Floor area [m <sup>2</sup> ]	50	60 (Science university, etc.* <sup>3</sup> 95)	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Medical	Floor area [m <sup>2</sup> ]	150	185	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Cultural	Floor area [m <sup>2</sup> ]	75	90	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Distribution	Floor area [m <sup>2</sup> ]	50	55 (Refrigerated warehouse * <sup>4</sup> 90)	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Parking lot	Floor area [m <sup>2</sup> ]	20	25	[kg-CO <sub>2</sub> /m <sup>2</sup> year]
Factory and others* <sup>5</sup>	Floor area [m <sup>2</sup> ]	95% of past emissions		

\*1 Areas that are not always attended by staff in facilities that have equipment equivalent to those prescribed in the Act on Temporary Measures concerning Telecommunication Infrastructure Improvement (Act No. 27 of 1991)

\*2 Areas authorized for business operations under the Food Sanitation Act (Act No. 233 of 1947) or Tokyo Prefectural Ordinance on the Regulation of Food Manufacturing Business (Prefectural Ordinance No. 111 of 1953)

\*3 Areas for the faculties in the list of faculties for the Grants-in-Aid for Scientific Research Program of the Japan Society for the Promotion of Science (faculty no. 400 to 600s) that are determined to be science courses

\*4 Areas equivalent to Public Notice No. 2 (e) of the relaxation of compliance factors in relation to Article 27 of the Electricity Business Act

\*5 The emission intensity standards for “factory and others” are used only for the determination of the base-year emissions.

### 3(15) Base-Year Emissions (Changing Base-Year Emissions)

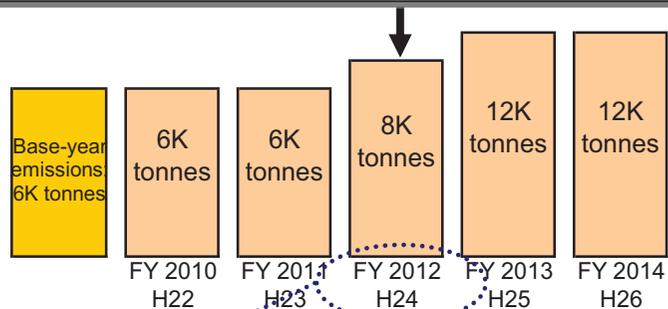
● **Changing base-year emissions: business facilities are required to apply to TMG for base-year emissions change if any of the following happens:**

■ **Companies (not including heating suppliers): Fluctuation in emissions is equal to or more than 6% of the base-year emissions as a result of** 1) change in floor space, 2) change in purpose of use, or 3) change in the amount of equipment (due to a change in business volume or type of business)

■ **Heating suppliers: First compliance period** - The floor areas of the receivers of heat is increased or decreased by 6% or more compared to that of the base year.  
**Second Compliance Period** - The total floor area of the receivers by heat category is increased or decreased by 6% or more compared to that of the base year.

#### ● Example of base-year emissions change (Non-heating supply companies)

Causes of base-year emissions change:  
 Fluctuation in emissions is equal to or more than 6% of the base-year emissions due to any of the following reasons:  
 1) change in floor space  
 2) change in purpose of use (different usage than emission activity index specifies)  
 3) change in the amount of equipment (due to change in business volume or type of business)  
 \*Changes in weather conditions, business hours, and production volume are excluded from causes of base-year emissions change



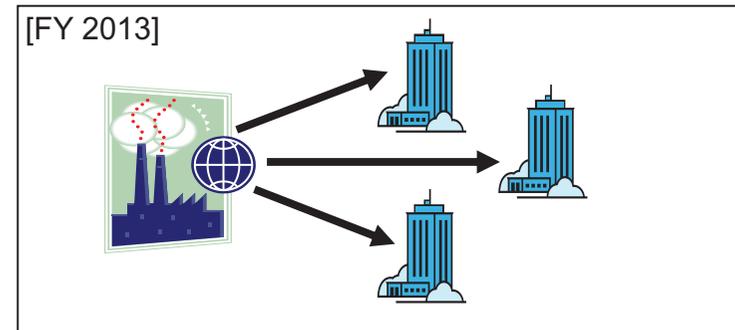
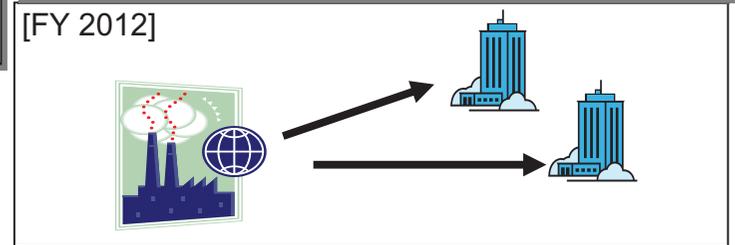
The baseline of the fiscal year when change occurs is calculated by the month

Date change	Effect on baseline of the fiscal year when change occurs
in April	Emissions for 11 months are altered
...	...
in February	Emissions for 1 month are altered
in March	No alteration. (Emissions for 12 months of the next fiscal year will be altered)

#### ● Example of base-year emission change (Heating suppliers)

■ **Requirements for changing base-year emissions \*1st compliance period**

The floor areas of the receivers of the heat is increased or decreased by 6% or more compared to that of the base year.



■ **Methods for calculating new base-year emissions** \*Facilities can choose one from the following methods:  
 1) calculate based on past emissions, 2) calculate based on basic emission intensity standard, 3) calculate based on actual emissions of all changed parts, or 4) calculate based on actual emissions of a part of changed parts. \* 3) and 4) can be used only when the facility's operational measures meet the standards provided in the Guideline for Certification of Operation Management in Facilities.

### 3 (16) Base-Year Emissions (Calculation Methods for Changing)

- Business facilities must ascertain whether they are subject to base-year emissions changes when any of the following happens; (1) change in floor space, (2) change in purpose of use, or (3) change in the amount of equipment.
- If applicable, those business facilities must request TMG to change the base-year emissions by submitting newly calculated base-year emissions.

#### 1. How to check the conditions whether base-year emission changes are needed

People in charge of facilities under this program must ascertain whether new conditions are subject to base-year emissions changes when any of the following occurs; (1) change in floor space, (2) change in purpose of use, or (3) change in the amount of equipment. (Changes in emissions calculated at this stage may be different from the final values issued after the base-year emissions has changed.)

#### <Examples of how to ascertain>

##### (1) Change in floor space

Change in amount of emissions

CO2 standard intensity target by use × increase or decrease in amount of floor space

Office (intensity target: 85)

30,000 m<sup>2</sup>

Base-year emissions : 3,000t

3,000 m<sup>2</sup>

increase

$85\text{kg-CO}_2/\text{m}^2 \times 3,000 \text{ m}^2 = 255\text{t-CO}_2$  increase

8.5% increase

##### (2) Change in purpose of use

Change in amount of emissions

Difference between before and after change of CO2 standard intensity target by use × floor space allocated for different use

(Old use)

Office: 30,000 m<sup>2</sup>

Intensity target: 85

→

(New use)

Accommodation: 30,000 m<sup>2</sup>

Intensity target: 150

$(150-85) \times 30,000 \text{ m}^2 = 1,950\text{t-CO}_2$  increased

65% increase

##### (3) Change in the amount of equipment

Change in amount of emissions: calculate emissions using following clues

Power capacity after changes in the amount of equipment, actual energy consumption, change in the amount of contractual power supply, etc.

DC: 30,000 m<sup>2</sup>

Server

→

DC: 30,000 m<sup>2</sup>

Server Server

Emissions are calculated based on power capacity of additional equipment.

#### 2. Calculation methods to determine base-year emissions after a change occurs (Sample calculations in the case of a change in floor space)

##### ① By using past emissions of the facility in question

Office

30,000 m<sup>2</sup>

Base-year emissions: 3,000t

3,000 m<sup>2</sup>

increase

300t-CO<sub>2</sub>

increase

Emission intensity target based on past emissions: 0.1t/m<sup>2</sup>

##### ② By using the CO2 basic intensity target

Office

30,000 m<sup>2</sup>

Base-year emissions: 3,000t

3,000 m<sup>2</sup>

increase

255t-CO<sub>2</sub>

increase

CO2 basic intensity target by use: 85kg(0.085t)/m<sup>2</sup>

##### ③ By using all or a part of actual emissions\*

Office

30,000 m<sup>2</sup>

Base-year emissions: 3,000t

3,000 m<sup>2</sup>

increase

200t-CO<sub>2</sub>

increase

Actual emissions for increased floor space: 200t

\*This method may be used when the situation follows the Guidelines to Certify the Compliance with the Operation Management Standard for Selecting the Actual Emission Approach in the Determination of Base-year Emissions.

### 3 (17) Base-Year Emissions (Calculation of the Base-Year Emissions Due to Changes to Facility Extent)

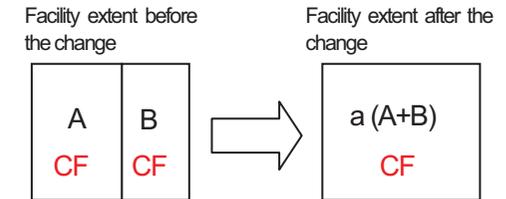
[Second compliance period]

● When facilities are designated as compliance facilities in line with a change in facility extent, the base-year emissions are determined by totaling the values calculated based on the designation status and extent of the facilities that were included before the change.

- (1) When the new facility extent includes all areas within the extent of the facility which was designated as a compliance facility before the change

When Facility (A) and Facility (B), which were both a compliance facility, are integrated to Facility (a) due to the change of facility extent, the base-year emissions of Facility (a) are calculated by totaling the base-year emissions of Facility (A) and (B).

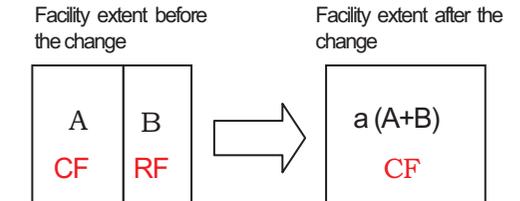
$$\text{Base-year emissions of Facility (a)} = \text{Base-year emissions of Facility (A)} + \text{Base-year emissions of Facility (B)}$$



- (2) When the new facility extent includes all or part of the areas within the extent of the facility which was designated as a compliance facility before the change

When Facility (A), a compliance facility, and Facility (B), a reporting facility, are integrated to Facility (a) due to the change of facility extent, the base-year emissions are calculated by adding emissions of Facility (B) to the base-year emissions of Facility (A).

$$\text{Base-year emissions of Facility (a)} = \text{Base-year emissions of Facility (A)} + \text{Emissions of Facility (B)}^1$$



\*1 Emissions are calculated by either of (1) calculation using past emissions of the facility, (2) calculation using emission intensity standards or (3) calculation using all actual emissions. → See 3 (20) for calculation methods.

- (3) When the new facility extent includes a part of the areas in the extent of the facility which was designated as a compliance facility before the change

1. When Facility (A), a compliance facility, is divided into Facilities (a) and (b) due to the change of facility extent, the base-year emissions are calculated based on the base-year emissions of Facility (A).

Calculation method for the base-year emissions of Facility (A)	Past emissions		Emission intensity standards
Calculation method for the base-year emissions for Facilities (a) and (b)	Calculated as the average of emissions of the base year <sup>2</sup>	Calculated by prorating by the emissions ratios <sup>*1</sup> of individual facilities <sup>*3</sup>	Calculated with emission intensity standards

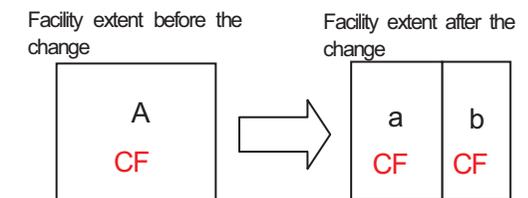
\*2 When it is possible to calculate annual energy-related CO<sub>2</sub> emissions of the base year from the extent of Facilities (A) and (B)

\*3 When it is impossible to calculate annual energy-related CO<sub>2</sub> emissions of the base year from the extent of Facilities (A) and (B)

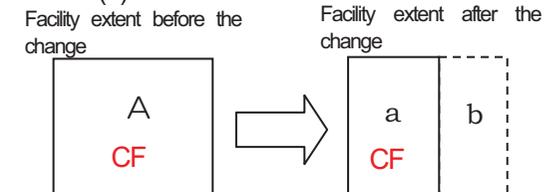
2. When Facility (A), a compliance facility, is divided into Facility (a) and Facility (b), which is not subject to designation, the base-year emissions of Facility (a) is calculated by subtracting emissions of Facility (b)<sup>\*1</sup> from the base-year emissions of Facility (A).

$$\text{Base-year emissions of Facility (a)} = \text{Base-year emissions of Facility (A)} - \text{Emissions of Facility (b)}^1$$

In case of (3)-1



In case of (3)-2



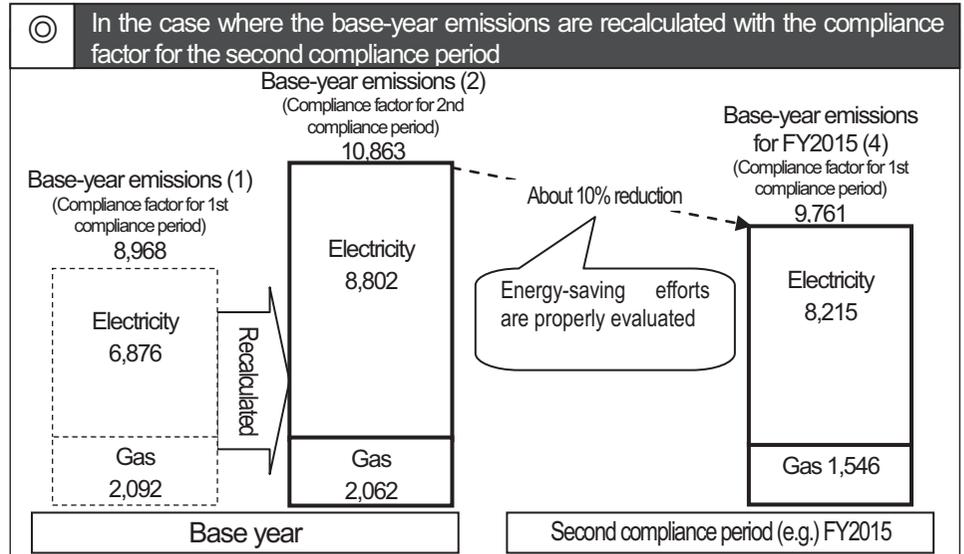
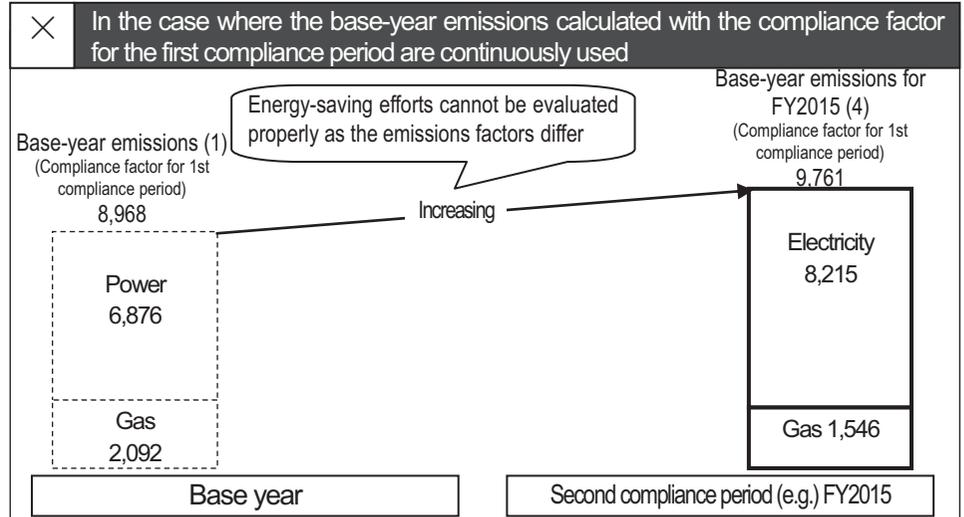
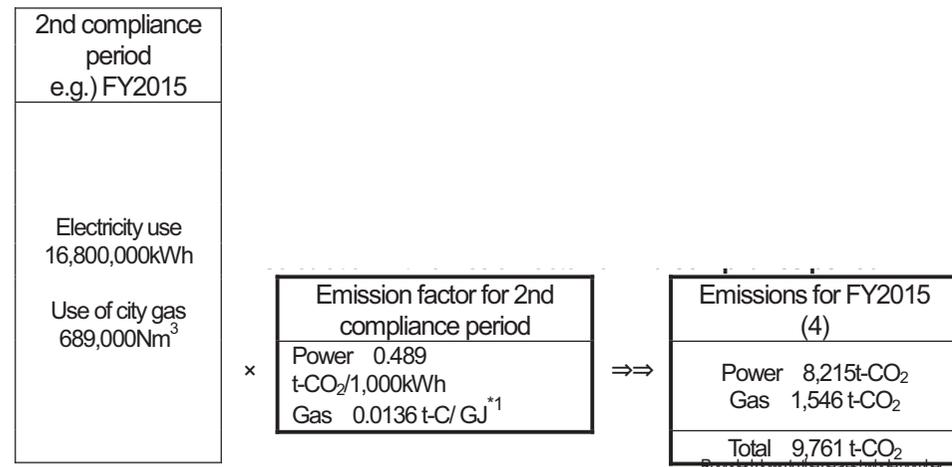
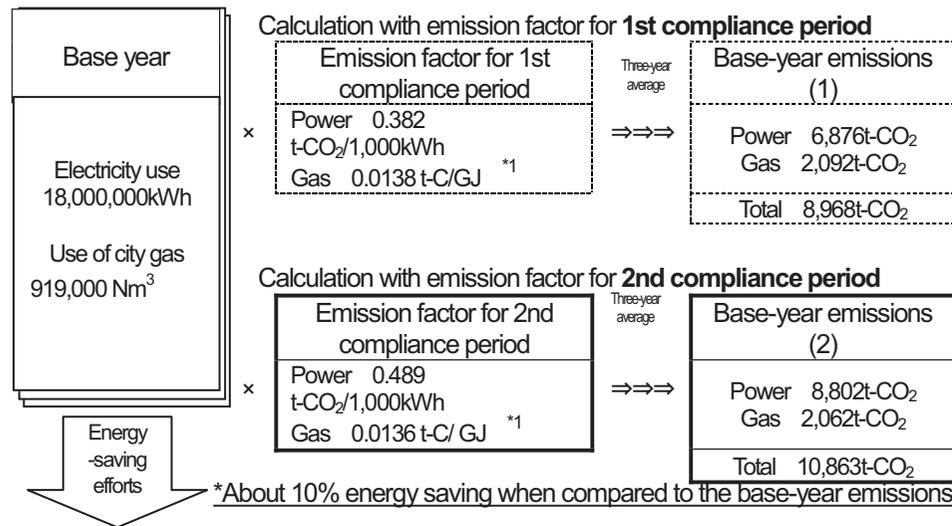
CF: Compliance facility RF: Reporting facility

# 3(18) Grounds for Recalculation of the Base-Year Emissions

[Second compliance period]

- The significant changes in the CO<sub>2</sub> emission factor for electricity due to application of the emission factor for the second compliance period should be reflected
- In order to evaluate energy-saving efforts by the subject facilities in a proper manner, not only annual emissions in the second compliance period but also the base-year emissions should be recalculated with the CO<sub>2</sub> emissions factor for the second compliance period.
- The method for recalculation of base-year emissions depends on the situation of the facility (See 3 (19) for details).

(Example) In the case where the facility started to address energy conservation from the base year



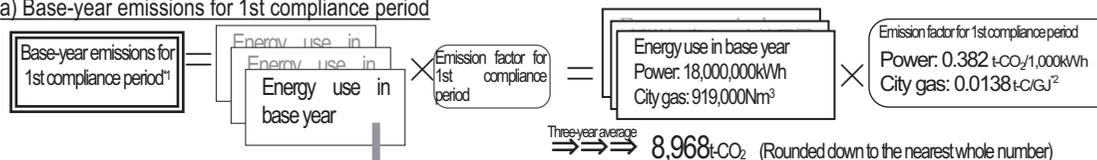
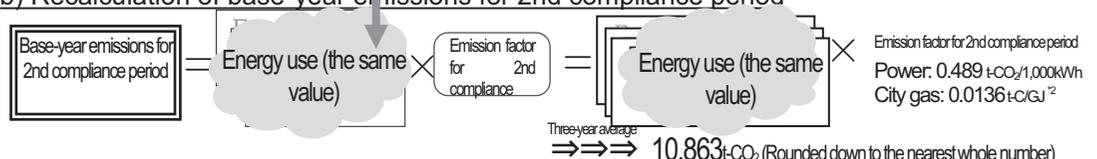
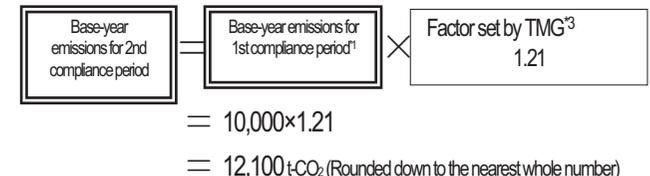
\*1: CO<sub>2</sub> emissions of city gas are calculated by multiplying the use (1,000Nm<sup>3</sup>) by unit calorific value, emission factor and 44/12. (Unit calorific value depends on the supplier and year. (See page 64 of the guidelines for monitoring, reporting and verification (MRV).))

### 3(19) Methods for Recalculation of the Base-Year Emissions

[Second compliance period]

#### ■ Recalculation of the base-year emissions

Primary method A or B will be applied, when setting the base-year emissions for the first compliance period, depending on whether the facility chose the method based on the past emissions or the method based on emission intensity standards. Facilities may also choose exceptional method C or D if the recalculated value would be more favorable for them in doing so.

	Base-year emissions for the 1st compliance period was set based on the <b>past emissions</b>	Base-year emissions for the 1st compliance period was set based on the <b>emission intensity standards</b>
<b>Primary method</b>	<p><b>Primary method A</b> Recalculated by multiplying the energy use that was used for calculating the base-year emissions for the 1st compliance period by the CO2 emissions factor for the second compliance period</p> <p>(e.g.) In the case where the values of energy use that were used for the calculation of base-year emissions for the 1st compliance period were 18,000,000kWh for electricity and 919,000Nm<sup>3</sup> for city gas</p> <p>a) Base-year emissions for 1st compliance period</p>  <p>b) Recalculation of base-year emissions for 2nd compliance period</p> 	<p><b>Primary method B</b> Recalculated by multiplying the base-year emissions for the 1st compliance period by the factor set by TMG<sup>3</sup> (1.21)</p> <p>(e.g.) In the case where the base-year emissions for the 1st compliance period<sup>*1</sup> was 10,000t-CO<sub>2</sub></p> <p>Recalculation of base-year emissions for 2nd compliance period</p> 
	<b>Exceptional method</b>	<p><b>Exceptional method C</b> When the calculation by an exceptional method is more advantageous for the facility, recalculated by multiplying by the factor based on the rate of use of power, heat and fuel in FY2013</p> <p>e.g.) In the case where the base-year emissions for the first compliance period<sup>*1</sup> is 8,968t-CO<sub>2</sub></p> <p>Using the compliance factor for the 1st compliance period, emissions in FY2013 are calculated to be 7,986t-CO<sub>2</sub></p> <p>Using the compliance factor for the 2nd compliance period, emissions in FY2013 are calculated to be 9,761t-CO<sub>2</sub></p> 

#### ■ In the case where the base-year emissions were changed during the first compliance period

Recalculating the initial base-year emissions for the first compliance period and multiplying base-year emissions for the second compliance period by the rate of change<sup>\*4</sup> (=base-year emissions for the first compliance period after the change<sup>\*5</sup> / initial base-year emissions for the first compliance period).

e.g.) In the case where the base-year emissions for the second compliance period is 10,961t-CO<sub>2</sub>, base-year emissions for the first compliance period after the change, 12,000t-CO<sub>2</sub>, and initial base-year emissions for the first compliance period, 8,968t-CO<sub>2</sub>.

$$\text{Base-year emissions for the second compliance period after the change} = \text{Base-year emissions for the second compliance period recalculated by either of methods A-D} \times \frac{\text{Base-year emissions for the 1st compliance period after the change}}{\text{Initial base-year emissions for the first compliance period}} = 10,961\text{tCO}_2 \times \frac{12,000\text{tCO}_2}{8,968\text{tCO}_2} = 14,666\text{tCO}_2 \text{ (Rounded down to the nearest whole number)}$$

\*1: Here, base-year emissions for the first compliance period refer to the initial base-year emissions before the change.

\*2: CO<sub>2</sub> emissions of city gas are calculated by multiplying the use (1,000Nm<sup>3</sup>) by unit caloric value, emission factor and 44/12. (Unit caloric value depends on the supplier and year. (See page 64 of the guidelines for monitoring, reporting and verification (MRV).))

\*3: The factor set by TMG is the average of the rate of increase of base-year emissions of all facilities due to the revision of the CO<sub>2</sub> emission factor. \*4: The rate of change is not to be rounded off. \*5: If the base-year emissions were changed multiple times during the first compliance period, the value after the last change is used.

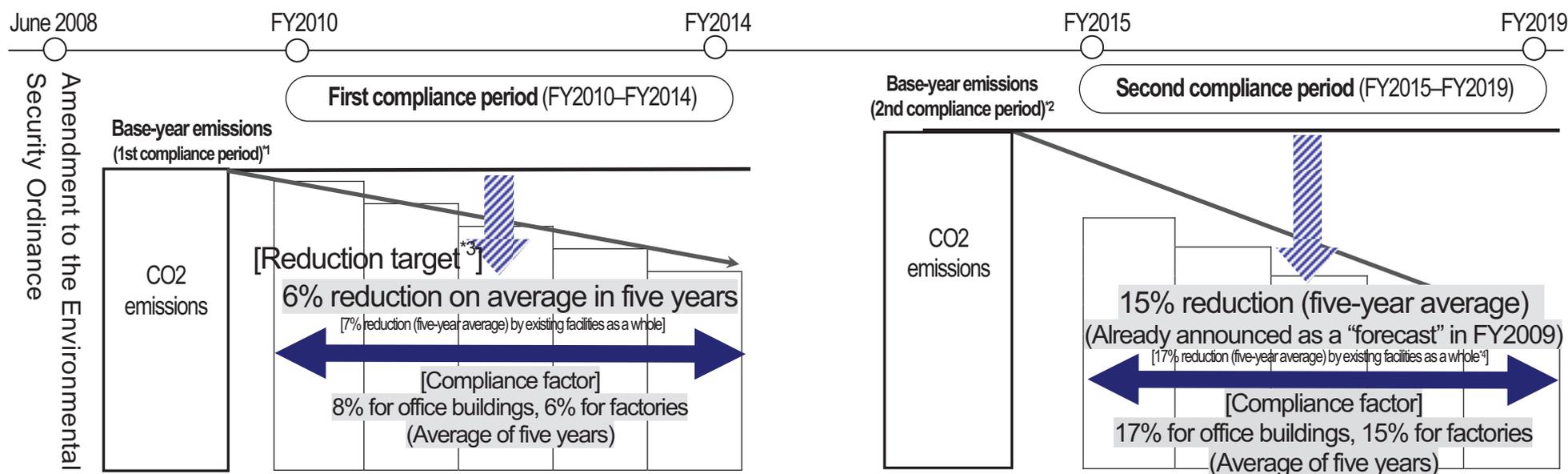
## 3(20) Compliance Factor (1) Overview

- **Total emission reduction target of TMG: 25% reduction compared to 2000 by 2020** (“Tokyo’s Big Change: the 10-Year Plan” and the “Environmental Master Plan”)
- **Reduction rate of 17% is required for the industrial and commercial sectors in order to achieve the goal of 25% reduction compared to 2000 by 2020.**  
 The compliance factor is set 8% or 6%, since the first compliance period (FY2010–FY2014) is positioned as a start-up period for the changes toward a significant emissions reduction.  
 The compliance factor will be set at 17% or 15%, since the second compliance period (FY2015–FY2019) will be positioned as the period to establish and promote further significant CO2 reduction.

In December 2006, TMG set the CO2 reduction target at “25% reduction compared to 2000 by 2020” in Tokyo’s Big Change: the 10-Year Plan. Aiming at leading the world’s large cities in establishing a low-carbon city model, TMG set this target based on the following perceptions:

- In order to avoid the impact of serious climate changes, global greenhouse gas (GHG) emissions need to be reduced by at least half by 2050.**
- Large cities in developed countries must lead the transition to a low-carbon, sustainable society which allows drastic CO2 reduction, as those cities have been consuming enormous amounts of energy to achieve convenient and affluent lifestyles.**
- Large cities in developed countries can demonstrate a picture of a city that rapidly growing Asian cities should follow, only when they are able to establish such a city model.**

In the “Action Program 2013 for Tokyo in 2020” formulated in January 2013, too, TMG indicates that “the whole Tokyo area takes carbon reduction measures aiming at 25% reduction compared to 2000 by 2020” as a part of the program.



\*1 In principle, it is set at the average of three consecutive years between FY2002 and FY2007. (The emission factor of electricity in the first period was set at 0.382t-CO<sub>2</sub>/1,000kWh, the average of the factors of TEPCO and PPS, which supplied power for Tokyo from FY2005–FY2007 (the value is fixed throughout a compliance period).)

\*2 The same calculation method as the first compliance period is applied. The value is recalculated using the emission factor of the second compliance period (to be provided by TMG within FY2014). (The emission factor of electricity in the second compliance period will be set at 0.489t-CO<sub>2</sub>, the average of the factors of TEPCO and PPS which supplied power for Tokyo from FY2011–FY2012 (the value is fixed throughout a compliance period).)

\*3 The reduction target for each compliance period includes emissions from the facilities that newly became a reporting facility in the compliance period.

\*4 Existing facilities refer to the reporting facilities as of the date on which the reduction target becomes applicable (April 1, 2010).

### 3 (21) Determination of Compliance Factors and Business Groups

- The compliance factor for the first compliance period (FY 2010 to FY 2014): 6% or 8% below the base-year emissions
- The scheduled compliance factor for the second compliance period (FY 2015 to FY 2019): Approximately 17%\* below the base-year emissions (on average) \*Actual rate will be set prior to the second compliance period.

#### ● Compliance factors

Group		Compliance factor (compared to base-year levels)	
		1st compliance period (FY2010–FY2014)	2nd compliance period (FY2015–FY2019)
I - 1	Office buildings, other facilities* <sup>1</sup> and district heating and cooling plants (except facilities falling under "Group I-2")	8%	17%
I - 2	Facilities* <sup>1</sup> belonging to "Group I", which use large amounts of district heating and cooling* <sup>2</sup>	6%	15%
II	Business facilities other than Group I-1 or I-2 (factories and others* <sup>3</sup> )	6%	15%

\*1: Office buildings (facilities under Group I): (a) offices (ones for testing, research, design and development are included) and sales offices, (b) government buildings, (c) department stores, restaurants and other shops, (d) inns, hotels and other lodging facilities, (e) schools and other educational facilities, (f) hospitals and other medical facilities, (g) social welfare facilities, (h) information and telecommunication facilities, (i) museums and libraries, (j) halls and conference rooms, (k) wedding halls and banquet halls, (l) movie theaters and performing arts facilities, (m) recreation halls, (n) gymnasiums, arenas, swimming pools and other fitness facilities, (o) public baths and spa and health facilities, (p) amusement parks, zoos, botanical gardens and aquariums, (q) athletic fields, bicycle racetracks, small-sized auto racing circuits and motor boat races, (r) warehouses (freezer and refrigeration storage included), (s) trucking terminals, (t) jails and detention centers, (u) funeral halls, (v) parking lots

\*2: District heating and cooling plants supply 20% or more of the entire energy consumption at the facility.

\*3: Facilities other than Group I-1 or Group I-2 include factories, water and sewage facilities and waste processing facilities.

#### ● When to determine or change groups for applicable compliance factor

(1) setting base-year emission, (2) prior to setting base-year emission due to applying for top-level facility certification and (3) changing base-year emissions.

#### ● Criteria for deciding group for business facilities with multiple usages.

- A business facility falls into Group I if the total GHG emissions from the usage under Group I make up 50% or more of the entire emissions of the whole facility in a base period.

\*A ratio of floor space by usage can be considered as a ratio of energy-related CO2 emissions.

- Base period mentioned above is defined as follows.

Determine or change emission baselines	Calculation method to determine emission baselines	Base period
Determine emission baselines	Average energy-related CO2 emissions in a fiscal year	Two or three fiscal years subject to calculation.
	Amount obtained by multiplying emission activity index value by basic emission intensity target	From three years prior to the emission reduction period to the previous fiscal year of the period.
Prior to determination of emission baselines	-	From three years prior to the emission reduction period to two fiscal years before the period.
Change emission baselines	-	One year after any change which is subject to emission baseline change occurs (In the case a facility needs to determine its group immediately, the base period may be reduced up to 6 months.)

#### ● Concerning the base year when setting utilization rate of district heating and cooling

- The period in the chart above applies when base-year emissions are set.
- When changing the base-year emissions, the compliance factor for the fiscal year that the change occurred will remain unchanged, while the compliance factor for the next fiscal year and beyond will be set based on the changed base-year emissions.
- Under the same base-year emission, if some change occurs in the use of heat supplied by other parties due to joining or withdrawing from a district heating and cooling system or increasing the use of such systems, a new compliance factor must be set following "change base-year emissions" in the chart above.

## 3(22) Compliance Factor for New Entrants

[Second compliance period]

- As a special provision for the second compliance period to establish and promote more significant CO<sub>2</sub> reduction, the compliance factor will be 8% or 6% for the facilities that will newly enter the scope of the reduction obligations as of the second compliance period.
- As for the facilities which entered the scope of the reduction obligation during the first compliance period, the compliance factor of the first compliance period will be applied for five years from when the facility became a compliance facility, which is a measure for the first compliance period only.  
(The compliance factor for the second compliance period will be applied for the rest of the second compliance period (as of the sixth year from the date when it became a compliance facility).)

### ■ Provisions for the facilities that will newly become a compliance facility (subject to the reduction obligation) from the second compliance period

- ✓ The same compliance factor as the first compliance period will be applied
  - Group I-1: 8% reduction compared to the base-year emissions
  - Group I-2, II: 6% reduction compared to the base-year emissions

### ■ Provisions for the first compliance period Provisions for the facilities which entered the scope of the reporting facilities (subject to the reduction obligation) during the first compliance period

- ✓ As for the facilities which entered the scope of the reduction obligation during the first compliance period, the compliance factor of the first compliance period will be applied for five years from when the facility became a compliance facility, which is a measure for the first compliance period only.
- ✓ The compliance factor for the second compliance period will be applied for the rest of the second compliance period (as of the sixth year from the date when it became a compliance facility).

#### <Overview>

Period	1st compliance period					2nd compliance period					
	Fiscal year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Existing facilities	8% or 6%	8% or 6%	8% or 6%	8% or 6%	8% or 6%	17% or 15%	17% or 15%	17% or 15%	17% or 15%	17% or 15%	17% or 15%
Facilities which became subject to the reduction obligation during the first compliance period	RF	8% or 6%	17% or 15%								
	RF	RF	8% or 6%	8% or 6%	8% or 6%	8% or 6%	8% or 6%	17% or 15%	17% or 15%	17% or 15%	17% or 15%
	RF	RF	RF	8% or 6%	8% or 6%	8% or 6%	8% or 6%	8% or 6%	17% or 15%	17% or 15%	17% or 15%
		RF	RF	RF	8% or 6%	8% or 6%	8% or 6%	8% or 6%	8% or 6%	8% or 6%	17% or 15%
Facilities which will newly enter the scope of the reduction obligation as of the second compliance period			RF	RF	RF	8% or 6%	8% or 6%	8% or 6%	8% or 6%	8% or 6%	8% or 6%
				RF	RF	RF	8% or 6%				
					RF	RF	RF	8% or 6%	8% or 6%	8% or 6%	8% or 6%
						RF	RF	RF	8% or 6%	8% or 6%	8% or 6%
							RF	RF	RF	RF	8% or 6%

\*“RF” in the table indicates that the facility is designated as a reporting facility although they are not subject to the reduction obligation yet.

### 3 (23) Relaxation of the Compliance Factor in Connection with Article 27 of the Electricity Business Act [Second compliance period]

- As a special provision for the second compliance period to establish and promote more significant CO<sub>2</sub> reduction, the facilities with the compliance factor of 17% or 15% will see a reduced compliance factor in the second compliance period if 50% or more of the facility's emissions consist of energy-related emissions from the demand facilities that fulfill the requirements for the relaxation measures (reduction rate of 0% or 5%) of the restriction on power use provided in Article 27 of the Electricity Business Act (there are exceptions).

\*Ministry of Economy, Trade and Industry Public Notice No. 126 of 2011

#### ■ Demand facilities subject to the reduction of compliance factor under the Tokyo Cap-and-Trade Program

Facilities subject to the easing of the restriction on use of electricity under Article 27 of the Electricity Business Act			Relaxation of compliance factor under the Tokyo C&T Program
Public notice no.	Items and details (abstract)	Reduction rate	
No. 1	a Medical facilities Manufacturing and retailing of medicines (manufacturing industry) Wholesale of medicines Manufacturing and retailing of medical equipment (manufacturing industry) Social welfare facilities, etc.	Reduction rate: 0%	-4%
	b Integrated facilities of a hospital and faculties of medicine or dentistry, or laboratories, established as a main facility		
No. 2	Demand facilities concerning information processing systems Demand facilities with a clean room or an electrolysis facility	Fluctuation: less than 10% Reduction rate: 0%	-4%
		Fluctuation: 10% or more and less than 15% Reduction rate: 5%	-2%
No. 1	d Water, sewage, water pump (excluding TMG facilities)	Reduction rate: 5%	-2%
	g Industrial waste disposal facilities		
No. 2	d Wholesaler of foods and beverage, constant temperature warehouse, storage tank, refrigerated storage with certain refrigerating rooms		
	e Central and local wholesale market (excluding TMG facilities)		
	f Air navigation facilities		
	g Airport terminal buildings		
	h Demand facilities concerning harbor transport		

#### ■ Demand facilities NOT subject to the reduction of compliance factor under the Tokyo Cap-and-Trade Program

- Demand facilities that fulfill the requirements for the reduction rate of 10% as a relaxation measure of the restriction on power use provided in Article 27 of the Electricity Business Act
- Among those who fulfill the requirements for the reduction rate of 5% as a relaxation measure of the restriction on power use provided in Article 27 of the Electricity Business Act, facilities owned by TMG, demand facilities with the time limitation on the relaxation of power use restriction, and demand facilities whose power use restriction is relaxed on the grounds of energy supply for power generation

#### ■ Major procedures

- TMG determines if the facility is subject to the reduction of compliance factor under the Tokyo Cap-and-Trade Program by considering the condition of the facility in the second compliance period, regardless of whether the facility submitted an application to the government in 2011 for the relaxation of the restriction on power use provided in Article 27 of the Electricity Business Act (verification is unnecessary).
- If the condition of the facility, in one of the years in the second compliance period, met the requirements for the reduction of compliance factor in connection with Article 27 of the Electricity Business Act and if the facility wishes to apply for the reduction of compliance factor, it must submit the Confirmation Sheet Concerning the Reduction of Compliance Factor in Relation to Article 27 of the Electricity Business Act and documentation when submitting a plan for the next fiscal year.
- After confirming that the facility fulfills the requirements, TMG notifies the facility of reduced compliance factor.
- The reduced compliance factor is only applicable for the preceding year of submission (the year that fulfills the requirement)
- Facilities are required to conduct the same procedures every year if they hope to receive the reduced compliance factor. (If the condition of the facility has not changed, the submission of documentation is not required, except for the demand facilities listed in No.2-a.)

<Example for a case where a facility fulfill the requirements in FY2015>

- The facility submits required documents along with the plan for FY2016.
- The compliance factor will be reduced if TMG confirms that the facility fulfills requirements.
- If the facility fulfills the requirements in FY2016 and onward as well, it conducts the same procedures in FY2017 and onwards.

<Overview>

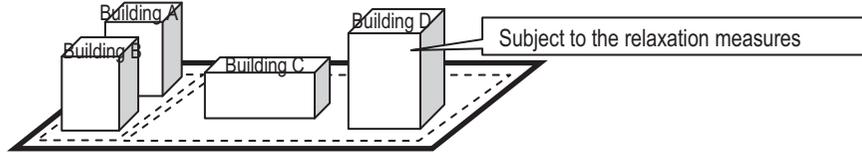
Fiscal year	Second compliance period				
	2015	2016	2017	2018	2019
Item	50% or more of the emissions of the facility is from the demand facilities subject to the relaxation of Article 27 of the Electricity Business Act	→ Submit documentary evidence with the plan	The same applies hereafter		

# 3 (24) Relaxation of the Compliance Factor in Connection with Article 27 of the Electricity Business Act (ii) Confirmation Method [Second compliance period]

- The procedures shown below are taken to determine if the demand facilities fulfill the requirements for the relaxation measures (reduction rate of 0% or 5%) of the restriction on power use provided in Article 27 of the Electricity Business Act (there are exemptions) and to determine if 50% or more of the emissions of the facility is from such demand facilities. If the demand facilities fulfill the requirements, the reduced compliance factor will be applied to the whole facility.

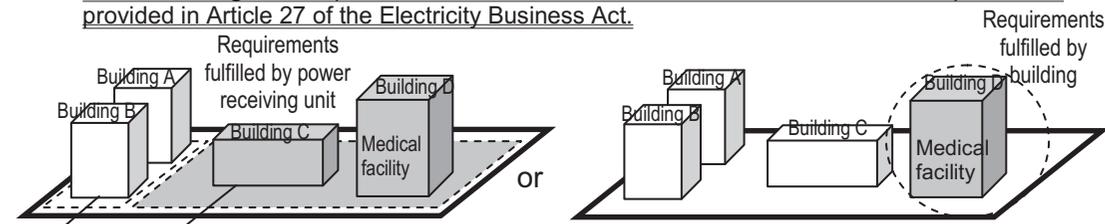
## ■ Method to determine demand facilities and emissions of 50% or more

**Step 1:** Confirming if there is any demand facilities that are subject to the relaxation measures of the restriction on power use provided in Article 27 of the Electricity Business Act

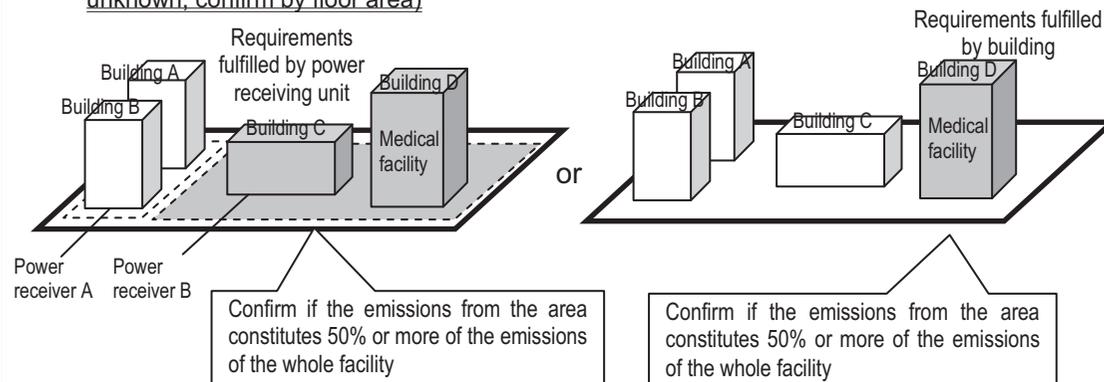


\*The solid lines and dotted lines indicate the area of the facilities and areas that receive power,

**Step 2:** Confirming if the demand facility (the main facility) fulfills: either as a power receiving unit or as a building\*, the requirements for the relaxation measures of the restriction on power use provided in Article 27 of the Electricity Business Act.



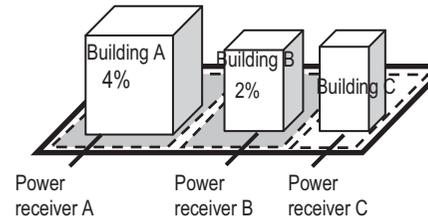
**Step 3:** Confirming if the emissions from the area that fulfills the requirements for demand facilities constitute 50% or more of the emissions of the whole facility (if the emissions are unknown, confirm by floor area)



\*As for the demand facilities listed in No.2-a, namely demand facilities concerning information processing systems and demand facilities with a clean room or an electrolysis facility, the requirements must be fulfilled by power receiving units.

## ■ Reduction of compliance factor under the Tokyo Cap-and-Trade Program

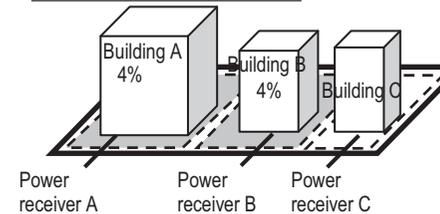
● In the case where emissions from an area of demand facility that fulfill the requirements constitute 50% or more of the emissions of all facilities as a whole.



If emissions from Building A solely constitute 50% or more of the emissions of all facilities as a whole, 4% reduction will be applied to the compliance factor of all facilities as a whole.

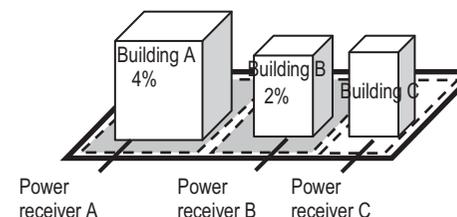
\*In the case where a demand facility Building A fulfills the requirements for 4% reduction of the compliance factor under the Tokyo Cap-and-Trade Program, and Building B, 2% reduction

● In the case where emissions from two areas of demand facilities that fulfill the requirements jointly constitute 50% or more of the emissions of all facilities as a whole.



(1) If emissions from Buildings A and B both fulfill the requirements for 4% reduction of compliance factor and jointly constitute 50% or more of the emissions of all facilities as a whole, the 4% reduction will be applied to the compliance factor of all facilities as a whole.

\*In the case where demand facilities, namely Buildings A and B, fulfill the requirements for 4% reduction of the compliance factor under the Tokyo Cap-and-Trade Program



(2) If emissions from Buildings A and B, whose reduction rates of compliance factor is different from each other, jointly constitute 50% or more of the emissions of all facilities as a whole, the 2% reduction will be applied to the compliance factor of all facilities as a whole.

\*In the case where demand facility Buildings A fulfills the requirements for 4% reduction of the compliance factor under the Tokyo Cap-and-Trade Program, and demand facility Building B fulfills the requirements for a 2% reduction

Those three examples above refer to the cases where the requirements are fulfilled by power receiving units. The same applies to the cases of buildings.

### 3 (25) Compliance Factor (vi) Changes to Facility Extent (Compliance Factor and Groups for Applicable Compliance Factor) [Second compliance period]

- Groups for applicable compliance factor are newly decided based on the use of the new designated facility, etc.
- If the extent of the new designated facility includes all or part of the old designated facilities that were compliance facilities, the compliance factor for the first compliance period is applied for five years from the time when they were first designated as a compliance facility. For the rest of the second compliance period, the compliance factor for the second compliance period will be applied.
- If the new designated facility becomes a compliance facility after the change of the facility extent, the same compliance factor as the first compliance period is applied.
- Even if the facility extent of the new designated facility includes all or part of old facilities that were top-level facilities, the top-level facility certification and relaxed compliance factor will not be carried over.

#### ■(Example) When the application is made in FY2017

		First compliance period					Second compliance period				
		FY2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017 ▽Application	FY 2018	FY 2019
(1) Facility (A) → Facility (a), Facility (b)											
Old designated facility	Facility (A)	8 or 6%	8 or 6%	8 or 6%	8 or 6%	8 or 6%	17 or 15%	17 or 15%	⇒Designation is revoked after confirmation of compliance with reduction obligation.		
New designated facility	Facility (a)							Newly designated⇒	17 or 15%	17 or 15%	17 or 15%
	Facility (b)							Newly designated⇒	17 or 15%	17 or 15%	17 or 15%
(2) Facility (A) → Facility (a), Facility (b)											
Old designated facility	Facility (A)		Designated	Designated	Designated	8 or 6%	8 or 6%	8 or 6%	⇒Designation is revoked after confirmation of compliance with reduction obligation.		
New designated facility	Facility (A)							Newly designated⇒	8 or 6%	8 or 6%	17 or 15%
	Facility (b)							Newly designated⇒	8 or 6%	8 or 6%	17 or 15%
(3) Facility (A), Facility (b) → Facility (a)											
Old designated facility	Facility (A)	8 or 6%	8 or 6%	8 or 6%	8 or 6%	8 or 6%	17 or 15%	17 or 15%	⇒Designation is revoked after confirmation of compliance with reduction obligation.		
	Facility (b)		Designated	Designated	Designated	8 or 6%	8 or 6%	8 or 6%	⇒Designation is revoked after confirmation of compliance with reduction obligation.		
New designated facility	Facility (a)							Newly designated⇒	17 or 15%	17 or 15%	17 or 15%
(4) Facility (A), Facility (B) → Facility (a)											
Old designated facility	Facility (A)							Designated	⇒Designated is revoked.		
	Facility (b)						Designated	Designated	⇒Designated is revoked.		
New designated facility	Facility (a)							Newly designated⇒	Designated	8 or 6%	8 or 6%

### 3 (26) Top-Level Facilities Part 1

● **Business facilities which make great progress against global warming and meet the standards established by the governor of Tokyo will be certified as Top-level facilities. These facilities will receive lower compliance factors according to their rate of progress.**

● **There are two categories for Top-level facilities:**

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

● **Facilities that are deemed to comply with the standards of the governor of Tokyo can apply to be certified as a top-level or near-top-level facility by the end of September. To apply, those facilities must submit compliance verification provided by a registered verification agency.**

■ **Evaluation items:** The chart below was created based on the results of the trial implementation conducted in various types of facilities, taking into consideration their different circumstances and characteristics.

■ **Evaluation categories:** Evaluation items are categorized based on the level of importance and difficulty to implement

1 Mandatory items: Items that all applicant facilities must implement.

2 General items: Items that all applicant facilities are required to implement on a priority basis.

3 Additional items: If applicant facilities work on these items, these facilities can receive additional points.

Evaluation items	Group (office, etc)			Group I(DHC)			Factory and others			Waterworks plant			Sewage treatment			Waste disposal plant		
	M	G	A	M	G	A	M	G	A	M	G	A	M	G	A	M	G	A
I. General	17	4	2	17	3	2	17	4	2	17	4	2	17	4	2	17	4	2
II. Energy performance of building and equipment	25	39	51	20	30	39	14	51	133	13	28	101	17	41	102	15	32	106
III. Energy Management	14	53	8	11	44	8	32	49	50	22	40	32	22	39	35	23	33	32
Subtotal	56	96	61	48	77	49	63	104	185	52	72	135	56	84	139	55	69	140
Total (mandatory + general + addition)	213			174			352			259			279			264		
Total (mandatory + general)	152			125			167			124			140			124		

\* M : Mandatory G : General A :

■ **Scoring standard**

The score of mandatory and general items is set to total 100.

Extra points (maximum of 20) are added if additional items are applicable.

- A total score of "mandatory," "general," and "additional" items is 80 points or higher\*1 ⇒ a level for certification as a top-level facility.
- A total score of "mandatory," "general," and "additional" items is 70 points or higher\*2 ⇒ a level for certification as a near-top-level facility.

\*1: No mandatory items may be scored 0.

\*2: Facilities completed after the fiscal year 2012 may not have 0 scores for mandatory items. Facilities completed prior to the fiscal year 2013 must have 6 or less 0 scores for mandatory items.

■ **Mandatory items**

- Top-level facilities must implement measures and supervise equipment to continually reduce emissions.
- Top-level facilities must be using energy efficient equipment designed for practical-use.

■ **Scoring each evaluation item**

- Evaluation item = evaluation points × weighted factor
- Evaluation points vary from 0 to 1 according to the implementation level

■ **How to set the weighted factor**

- Determined based on energy consumption volume of equipment
- Determined based on the result of energy conservation in measures that a facility implements.
- Determined based on "III-Items related to the operation of

■ **Registered verification agencies to verify top-level facilities (Requirements for verification specialists)**

Those who aim to be a verification specialist must have the qualifications mentioned below, and have a minimum three-years experience in evaluation, consulting, or commissioning on energy conservation and CO2 reduction for business facilities under the respective sectors.

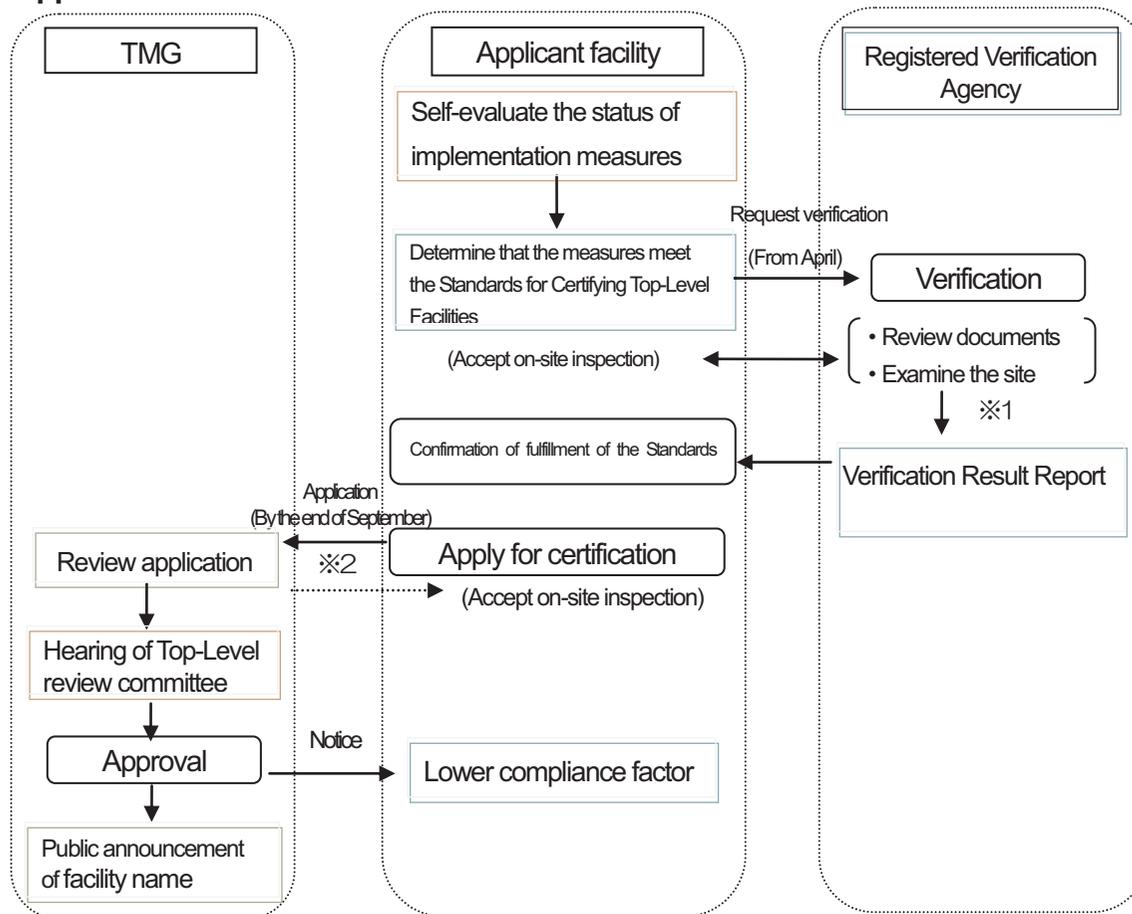
Qualified Energy Manager, MEP Design 1st-class kenchikushi, Building Mechanical and Electrical Engineer or Professional Engineer in the following fields; Electrical and Electronics Engineering, Mechanical Engineering, or Public Health Engineering)

## 3 (27) Top-Level Facilities Part 2

### <Application process for certification>

- A covered facility whose installation measures comply with the Standards for Certifying Top-Level Facilities makes a self-assessment and applies to TMG with a verification results by a registered verification agency
- TMG will examine the details and decide on certification based on the advice of the Top-Level review committee.
- From the 2<sup>nd</sup> fiscal year (the fiscal year following facility approval), a certified facility is required to submit a report on the status of its measures to TMG by the end of June (verification is not necessary).

### <Application flow>



### <The evaluation period of the application for certification>

- A business facility with a self assessment score that meets a certification level can apply to TMG for a lower compliance factor by submitting a reduction application form accompanied by their evaluation sheet and other necessary documents.
- Evaluation of "I-General management" and "III-Operations" must be based on actual achievements of the previous fiscal year. Evaluation of "II-Energy Performance" must be based on the conditions at the end of the previous fiscal year.

※1: If corrections are made on the applicant's evaluation sheet after the verification, the applicant must reapply for verification.

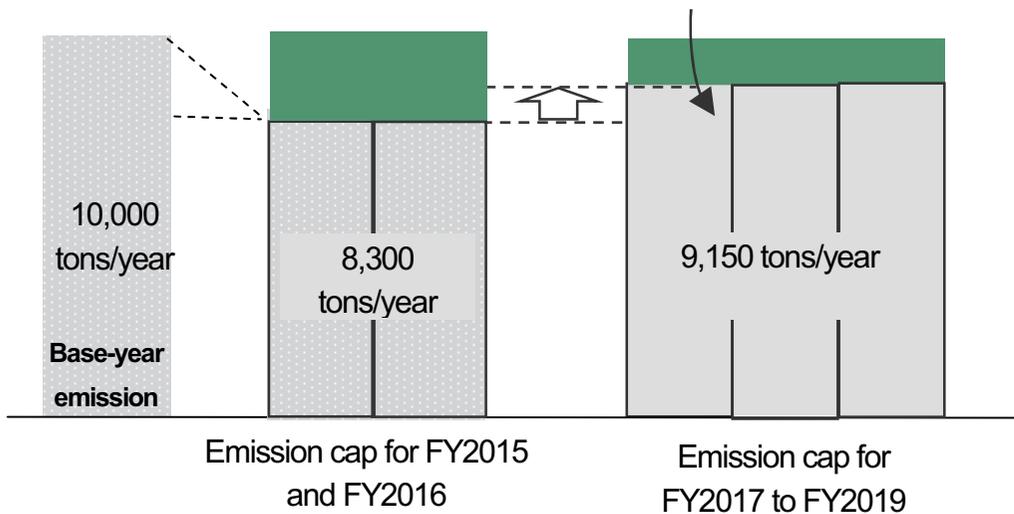
※2: On-site inspection will be held if needed.

### 3(28) Top-Level Facilities Part 3

- The compliance factor of the certified facilities will be reduced from the 2<sup>nd</sup> fiscal year (fiscal year following facility certification).  
(As a general rule, this rate will be effective during the current compliance period; however, if the progress of a facility declines, its certification will be cancelled or downgraded).

(Example) A top-level facility whose cap will be reduced to 1/2 effective from the fiscal year 2017.

The cap will be reduced to 1/2 effective from the fiscal year 2017.  
(Effective during the first compliance period\*)



#### <Total emissions reduction obligation>

- Base-year Emissions : 10,000 tons/year
- Normal compliance factor: 17%
- ① FY2015-116(2 years): 16,600 tons (8,300 tons/year (10,000 tons/year×17%)× 2 years)
- ② FY2017-19 (3 years): 27,450 tons (9,150tons/year (10,000 tons/year×8.5%)× 3 years)
- ⇒ Emission cap for 5 years: less than 44,050 tons (The cap becomes 41,500 tons from 44,050 tons)

#### ■ To continue, downgrade, or cancel from the 2nd fiscal year

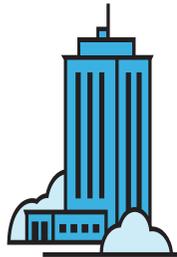
In every fiscal year from the 2<sup>nd</sup> fiscal year (fiscal year following facility certification), a certified facility must report on its compliance to the standards to TMG (verification from a registered agency is not necessary). One of the following actions will occur to the facility based on its total score and other related matters.

Total score / Evaluation of conditions*	Upgrade:	Same level:	Downgrade:
	① Improves to "80 points or higher" from "70 to 79 points"	① Stays at "70 to 79 points" ② Stays at "80 points or higher"	① Falls to "79 points or lower" from "80 points or higher" ② Falls to "69 points or lower" from "70 to 79 points"
Upgrade	Choose either; 1. Stay as a near-top-level facility, or 2. Request to upgrade to a top-level facility (verification from a registered agency is necessary)	Stay at the same level	Stay at the same level
Same level			In the case where the total score declines into a lower level due to changes in energy consumption ratio despite making the same efforts, no downgrade or cancellation will be applied.
Downgrade			Downgrade to a near-top-level facility, or cancel the certification

will apply if no efforts are made and the total score declines into a lower level.

\*The action to occur will be determined by comparing the total score of the conditions submitted from a certified facility every year after its certification to the score from April 1<sup>st</sup> in the fiscal year that the approval was made.

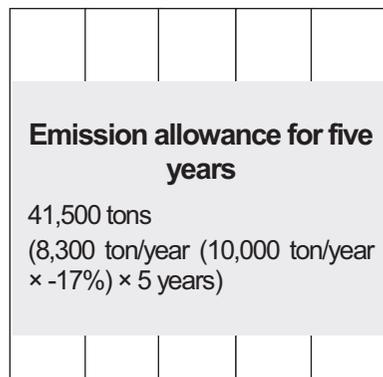
## ■ Compliance factor of the second compliance period (average between FY2015 and FY2019)



### [Emissions reduction obligation]

(Example) In case of facilities whose compliance factor in the second compliance period is 17%

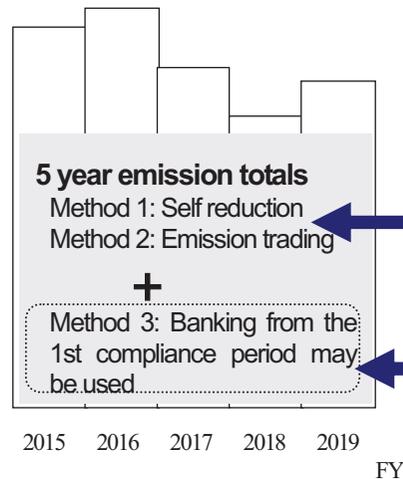
- Base-year emissions: 10,000 ton/year (value obtained by the recalculation using the emission factor of the second compliance period)  
(set at the average of emissions of three consecutive years between the FY2002 and the FY2007)
- Compliance factor of the second compliance period: 17%



(Compliance period: five)

IV

Reduction obligation



## 1. Self reduction

- By installing energy efficient equipment/devices and promoting measures for emissions reduction (measures aiming to reduce fuel, heat, and electricity consumption)  
Other gas reductions (reduction of greenhouse gasses other than CO2 derived from the reduction of water use and sewage water) can be also used (reductions that can be used for compliance are up to half of the reduced volume).
- Framework for low-carbon electricity and heat  
In order to encourage facilities to choose low-carbon power/heat suppliers, the Program will introduce a new framework where the difference between the emission factors of the contracted power/heat suppliers are reflected to a certain extent in the calculation of the emissions of the facilities.

## 2. Credits for emission trading

### (1) Excess emission reductions

Emission reductions by other compliance facilities exceeding the obligation  
(The extent is limited to half of the base-year emissions)

### (2) Small and midsize facility credits in Tokyo (reductions in Tokyo)

Emission reductions achieved through energy-saving measures by small and midsize facilities within the Tokyo area

### (3) Renewable energy credits (environmental value equivalent, other reductions)

Environmental value of renewable energy  
(solar (heat), wind, geothermal and hydro power (under 1000kW) are multiplied by 1.5)

### (4) Outside Tokyo credits (Reductions outside the Tokyo area)

Emission reductions achieved through energy-saving measures by large facilities outside the Tokyo area  
(Up to one third of the reduction obligation amount can be used for compliance)

### (5) Saitama credits (other reductions)

Excess emission reductions and small and midsize facility credits in Saitama that are derived from the "Target-Setting Emissions Trading Program" in Saitama prefecture.

## 3. Banking from the first compliance

Excess emission reductions and credits from the first compliance period can be used for compliance in the second compliance period.  
(They are not allowed to be banked for the third compliance period.)

### 3 (30) Compliance Part 2

- Facilities subject to the cap-and-trade program should promptly launch energy-saving strategies at their facilities to fulfill the reduction obligation, however the use of emissions trading will not be restricted.
- Facilities subject to the program can choose how to fulfill their obligations ; reduce emissions through activities undertaken at their facilities, use offset credits created through the activities of others (through emission trading), or combine both methods.
- To fulfill their reduction obligations, facilities can choose from flexible options when updating equipment or taking on other costs for reduction measures.

#### Flexible options to time equipment updates at a facility

FY	H22	H23	H24	H25	H26	H27	H28	H29	H30	H31
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
	First compliance period					Second compliance period				

■ Companies can decide on the timing of equipment updates as part of their business plan.

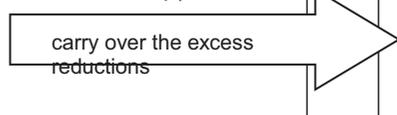
■ Based on the timing of equipment updates and other costs for reduction measures, facilities can meet their obligation through activities undertaken at their facilities, use offset credits created through the activities of others, or a combination of both methods.

\*Although it is preferable that facilities basically fulfill the obligation through activities undertaken at their facilities, it does not restrict the use of emissions trading.

Facilities can choose from flexible options to fulfill their mandatory emission reduction based on their business plans, including equipment updates.

#### 1) In the case of major equipment updates during the first compliance period

- Achieve the obligation through updates. (emissions reduction under the cap)

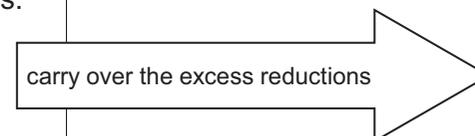


\* Excess reductions can be carried over (banked) to the next compliance period.

#### 2) In the case of major equipment updates during the second compliance period

- Procure reduction shortfall through emissions trading to fulfill the obligation for the first compliance period.

- Fulfill the obligation through updates. (Emissions reduction under the cap)

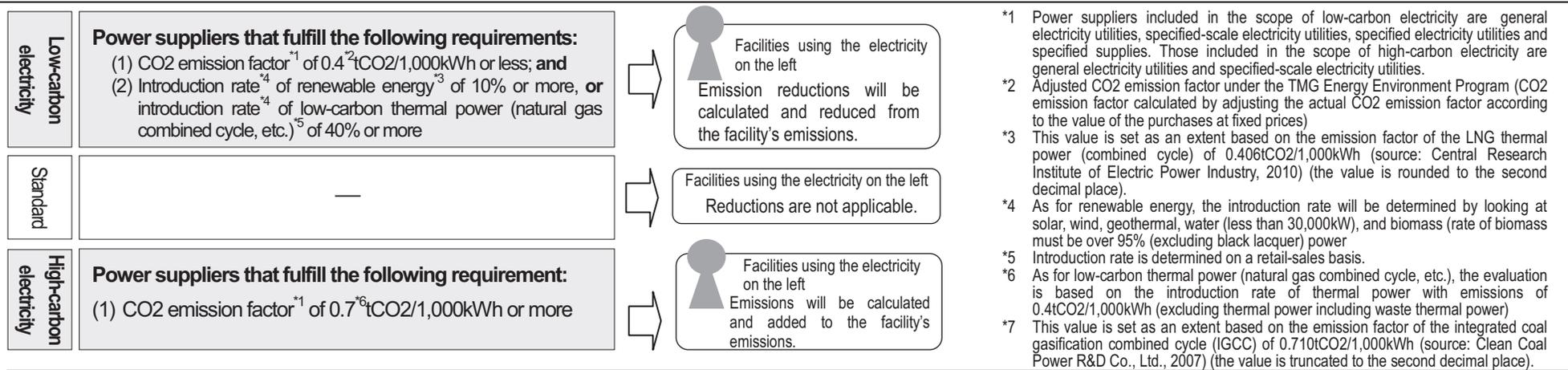


### 3 (31) Introduction of the Framework to Promote the Selection of Low-Carbon Electricity

[Second compliance period]

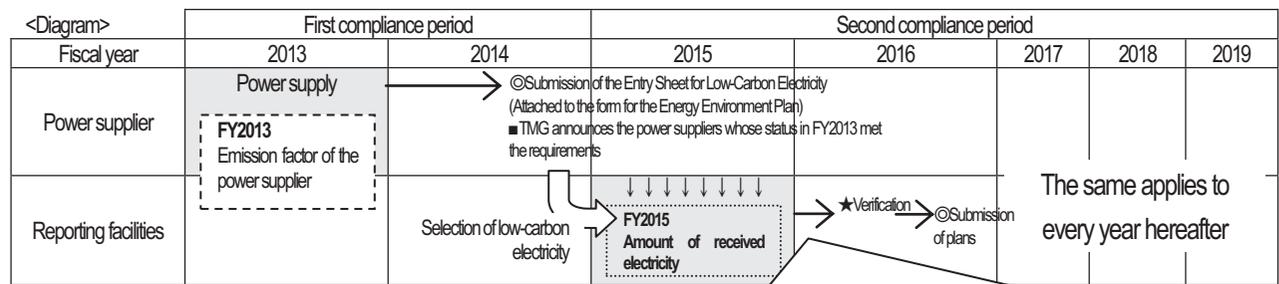
- In order to appreciate the CO2 reduction effects owing to energy-saving efforts by the facilities, the CO2 emission factors which TMG has provided for each energy type will be fixed throughout a compliance period when calculating CO2 emissions of facilities.  
(Example) Facilities use the CO2 emission factors provided by TMG regardless of the power suppliers of the facilities. The factor will be exempt from annual amendment.
- In the second compliance period, in order to encourage facilities to choose low-carbon electricity suppliers, the Program will introduce a new framework where the difference between the emission factors of the contracted electricity suppliers are reflected to a certain extent in the calculation of the emissions of the facilities.

#### ● Framework to promote the selection of low-carbon electricity (outline)



#### ● Calculation of reductions, emissions and yearly emissions

- In order to facilitate planning toward the achievement of the reduction obligation of the facility, reductions will be calculated using the emission factor of the power supplier in the second preceding year, which has already been confirmed and publicized.
- Power suppliers of low-carbon or high-carbon power will be announced by TMG every year (based on the published value under the TMG Energy Environment Program)
- Facilities must include the calculated reductions in the Energy-related CO2 Emissions Monitoring Report attached to the plan, and submit them to TMG by the end of November after undergoing the verification by a verification agency.



<b>Reductions due to low-carbon electricity and emissions due to high-carbon electricity</b>	$\text{Reductions} = \text{received electricity in calculation year}^{\text{*8}} \times (\text{emission factor for the second period (0.489t-CO2/1,000kWh)} - \text{emission factor of the power supplier (two fiscal years ago)}^2 \times 0.5 / \text{emission factor for the second period (electricity: 0.489)})$ $\text{Emissions} = \text{received electricity in calculation year}^{\text{*8}} \times (\text{emission factor of the power supplier (two fiscal years ago)} - \text{emission factor for the second period (0.489t-CO2/1,000kWh)})$
<b>Calculated yearly emissions</b>	$\text{Calculated yearly emissions} = \text{CO2 emissions of fuels}^{\text{*8}} (- \text{reductions}) \text{ or } (+ \text{emissions})$

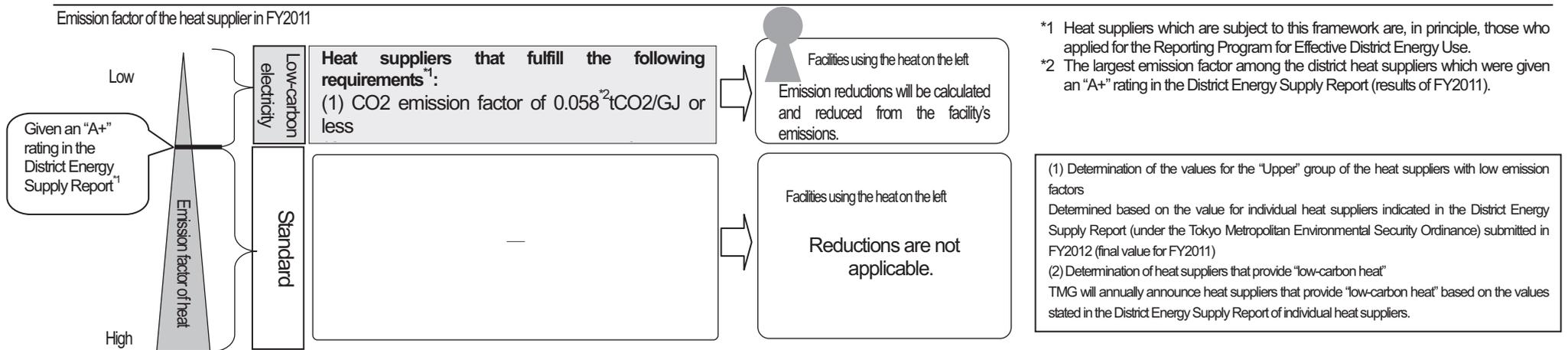
<sup>\*7</sup> When the power supplier is changed part-way during the fiscal year, we will only calculate reductions and emissions that correspond to the electricity received from the power suppliers that fulfill the requirements of low-carbon or high-carbon electricity.  
<sup>\*8</sup> As for the base-year emissions, reductions due to low-carbon electricity will not be subtracted, nor will the emissions due to high-carbon electricity be added.

### 3 (32) Introduction of the Framework to Promote the Selection of Low-Carbon Heat

[Second compliance period]

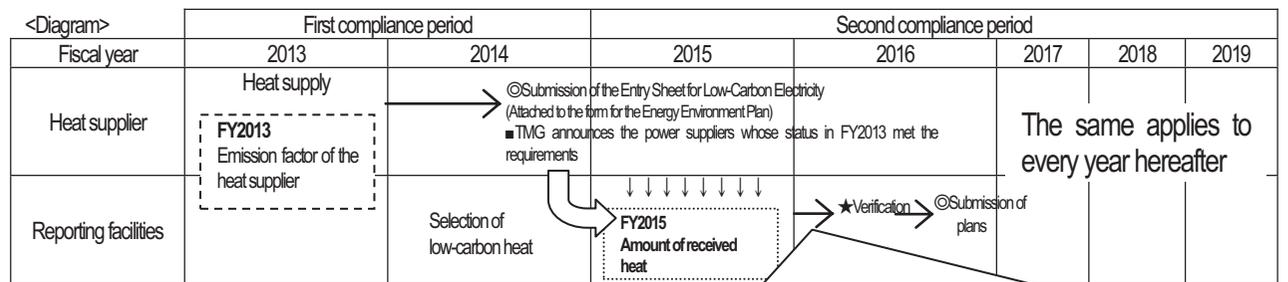
- In order to appreciate the CO2 reduction effects owing to energy-saving efforts by the facilities, the CO2 emission factors which TMG has provided for each energy type will be fixed throughout a compliance period when calculating CO2 emissions of facilities.  
(Example) Facilities use the CO2 emission factors provided by TMG regardless of the heat suppliers of the facilities. The factor will be exempt from annual amendment.
- As with the framework to promote the selection of low-carbon electricity, in the second compliance year, in order to encourage facilities to choose low-carbon heat suppliers, the Program will introduce a new framework where the difference between the emission factors of the contracted heat suppliers are reflected to a certain extent in the calculation of the facilities' emissions.

#### • Framework to promote the selection of low-carbon heat (outline)



#### • Calculation of reductions and yearly emissions

- ✓ In order to facilitate the planning toward the achievement of the reduction obligation of the facility, reductions will be calculated using the already-confirmed emission factor of the heat supplier two years before the current year.
- ✓ Suppliers of low-carbon heat will be announced by TMG every year (based on the published value under the District Energy Supply Report)
- ✓ The framework to promote the selection of low-carbon electricity and evaluation for the introduction of high-efficiency cogeneration will not be considered when calculating the emission factor of heat suppliers.
- ✓ Facilities must include the calculated reductions in the Energy-related CO2 Emissions Monitoring Report attached to the plan, and submit them to TMG by the end of November after undergoing the verification by a verification agency.



<b>Reductions</b>	Reductions will be calculated by the method established by TMG based on the emission factors of heat suppliers in FY2013 and the amount of received heat in FY2015 (a certain upper limit will be set). Reductions = received electricity in calculation year <sup>3</sup> × (emission factor for the second period (0.060t-CO2/1,000kWh) – emission factor of the power supplier (two fiscal years ago) <sup>2</sup> × 0.5 / emission factor for the second period (electricity: 0.060)
Calculated yearly emissions	Calculated yearly emissions = CO2 of fuels <sup>3</sup> – reductions

<sup>2</sup>When low-carbon heat and non-low-carbon heat are both included, reductions will be calculated regarding the heat received from the heat suppliers that fulfill the requirements for low-carbon heat.  
<sup>3</sup>As for the base-year emissions, reductions due to low-carbon heat will not be subtracted.

### 3 (33) High-Efficiency Cogeneration (i) Overview

[Second compliance period]

- Evaluation of energy-saving and CO2 reduction effects due to the use of high-efficiency cogeneration: Adjustment of the emissions which were implemented in the first compliance period will be discontinued since the energy saving and CO2 reduction effects will be evaluated by the new CO2 emission factor of electricity in the second compliance period.
- Framework to evaluate the reception of high-efficiency cogeneration: The Program will introduce a new framework where low emission factors of electricity/heat received from high-efficiency cogeneration can be reflected to a certain extent in the calculation of emissions of the recipient facilities.

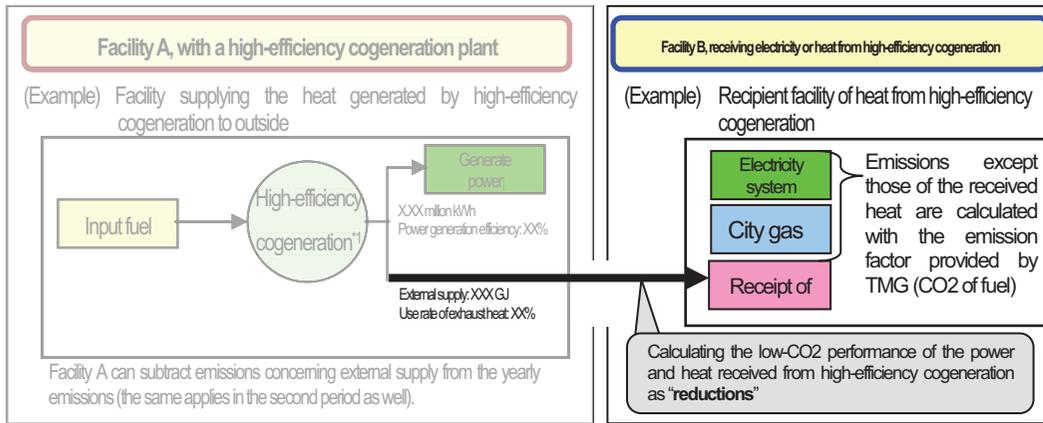
		First compliance period	Second compliance period
Facilities in which high-efficiency cogeneration is installed	Evaluation of energy-saving and CO2 reduction due to the use of high-efficiency cogeneration	<ul style="list-style-type: none"> <li>• Reductions will be calculated if they comply with the requirements of high-efficiency cogeneration<sup>*1</sup> (provisions by TMG) (reductions will be subtracted from calculated yearly</li> </ul> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 1</b> Checking the conformity with the requirements of high-efficiency cogeneration<sup>*1</sup></p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 2</b> Reductions calculated according to the guidelines</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 3<sup>*2</sup></b> Calculated yearly emissions = CO2 of fuels - reductions</p> </div> </div> <p style="text-align: center; font-size: small;">*2 This value is also subtracted from the base-year emissions.</p>	<p>Adjustment of the emissions which were implemented in the first compliance period will be discontinued since the energy saving and CO2 reduction effects will be evaluated by the new CO2 emission factor of electricity in the second compliance period.<sup>3</sup></p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p>Step —</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p>Step —</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p>Step —</p> </div> </div> <p style="text-align: center; font-size: small;">*3 Neither calculated yearly emissions nor base-year emissions will be adjusted.</p>
	Subtraction of emissions concerning power and heat by cogeneration supplied to the outside	<ul style="list-style-type: none"> <li>• CO2 emissions concerning all power and heat by cogeneration supplied to the outside are subtracted</li> </ul> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p>Step —</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 1</b> Emissions concerning the supply to the outside are calculated according to the guidelines</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 2<sup>*2</sup></b> Calculated yearly emissions = CO2 of fuels – supply to the outside</p> </div> </div>	<ul style="list-style-type: none"> <li>• Same as the first compliance period</li> </ul> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p>Step —</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 1</b> Emissions concerning the supply to the outside are calculated</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 2<sup>*2</sup></b> Calculated yearly emissions = CO2 of fuels – supply to the outside</p> </div> </div>
Recipient facilities of power or heat by cogeneration	Evaluating low-CO2 performance of the power and heat received from high-efficiency cogeneration	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p>Step —</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p>Step —</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p>Step —</p> </div> </div> <ul style="list-style-type: none"> <li>• The emission factor provided by TMG will apply for calculation regardless of the supplier</li> </ul>	<p><b>Framework to evaluate the reception of high-efficiency cogeneration</b></p> <p>The Program will introduce a new framework where low emission factors of electricity/heat received from high-efficiency cogeneration can be reflected to a certain extent in the calculation of emissions of the recipient facilities.</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 1:</b> Check against the requirements</p> <div style="border: 1px dashed gray; padding: 2px; font-size: x-small;">                     Conformity with the requirements of high-efficiency cogeneration<sup>*1</sup> </div> <p style="text-align: center; font-size: x-small;">&amp;</p> <div style="border: 1px dashed gray; padding: 2px; font-size: x-small;">                     The cogeneration factor concerned must be lower than the emission factor (provided by TMG) in the second compliance period                 </div> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 2</b> Reductions calculated according to the guidelines</p> </div> <div style="border: 1px solid gray; padding: 5px; width: 30%;"> <p><b>Step 3</b> Calculated yearly emissions = CO2 of fuels – reductions</p> </div> </div>

\*1 As the requirement of high-efficiency cogeneration, power generation efficiency × 2.17 + use of exhaust heat must be greater than 87%.

### 3 (34) High-Efficiency Cogeneration (ii) Introduction of a Framework to Evaluate the Reception of High-Efficiency Cogeneration

[Second compliance period]

#### ● Schematic diagram of the framework to evaluate the reception of high-efficiency cogeneration



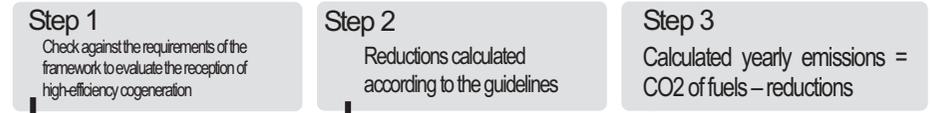
#### ● Procedures in the first compliance period (2010–2014)

As with other energy types, emissions are calculated using the emission factor provided by TMG regardless of the supplier



#### ● Procedures in the second compliance period (2015–2019)

The Program will introduce a new framework where low emission factors of electricity/heat received from high-efficiency cogeneration can be reflected to a certain extent in the calculation of emissions of the recipient facilities.



#### ● Requirements for the suppliers concerning the framework to evaluate the reception of high-efficiency cogeneration

- ✓ Recipient facilities may apply the calculation based on the framework to evaluate the reception of high-efficiency cogeneration only when the supplier of the heat or power from high-efficiency cogeneration fulfills all of the following requirements.
- ✓ However, the calculation based on the "framework to evaluate the reception of high-efficiency cogeneration" cannot be applied when the supplier is announced by TMG as one of the suppliers that fulfill the requirements of the "framework to promote the selection of low-carbon electricity."

	Requirements of the framework to evaluate the reception of high-efficiency cogeneration
Electricity	(i) The cogeneration must be highly efficient.*1 (ii) The emission factor of the power generated by the cogeneration concerned must be lower than that of the second compliance period (provided by TMG). (iii) Power must be transmitted to reporting facilities using self-prepared electric lines (iv) Over half of the total power supplied must be produced by the company's own cogeneration plant (v) It must not be high-carbon power
Heat	(i) The cogeneration must be highly efficient.*1 (ii) The emission factor of heat generated by the cogeneration concerned must be lower than that of the second compliance period (provided by TMG). (iii) Over half of the total heat supplied must be produced by the company's own cogeneration plant*2 (iv) If heat supply is its main business, the system COP value must be 0.80 or more (0.65 or more if the supply contains steam).

\*1 High-efficiency cogeneration refers to the ones whose power generation efficiency × 2.17 + use of exhaust heat must be greater than 87%.

\*2 Only when the heat from cogeneration is supplied without conversion (excludes the cases where the heat is supplied after converting it to cold water)

#### ● Calculation of reductions and yearly emissions

- ✓ In order to facilitate the planning toward the achievement of the reduction obligation of the facility, the check against the requirements and calculation of reductions will be implemented based on the already-confirmed condition of the cogeneration plant concerned two years before the current year.
- ✓ Facilities must include the calculated reductions in the Energy-related CO<sub>2</sub> Emissions Monitoring Report attached to the plan, and submit them to TMG by the end of November after undergoing the verification by a verification agency.

Period	First compliance period		Second compliance period					
	Fiscal year	2013	2014	2015	2016	2017	2018	2019
Facility A, with a high-efficiency cogeneration plant <sup>3</sup>		Supply of power or heat	★ Verification →	◎ Submission of the Report on High-Efficiency Cogeneration, etc. (Attached to the plan) ■ TMG checks the conformity with the requirements				
Facility B, receiving power or heat from cogeneration		Emission factor of power or heat in FY2013	Receipt of power or heat from high-efficiency cogeneration	Amount of received power or heat in FY2015	★ Verification →	◎ Submission of MIRV plan		

The same applies to every year hereafter

\*3 When the facility with high-efficiency cogeneration is a reporting facility

<b>Reductions</b> <sup>*6</sup>	Reductions will be calculated by the method established by TMG based on the emission factors of power or heat two fiscal years earlier and the amount of received power or heat in the calculation year (a certain upper limit will be set). $\text{Reductions} = \text{Calculated yearly use of power or heat received by CGS} \times (\text{emission factor of power or heat for the 2nd period}^{\dagger 4} (\text{power: } 0.489\text{t-CO}_2/\text{1,000kWh; or heat: } 0.060\text{t-CO}_2/\text{GJ})) - \text{CGS emission factor (two fiscal years ago)}^{\dagger 5} \times 0.5 \times (\text{emission factor of power or heat for the 2nd period (power: } 0.489; \text{ or heat: } 0.060))$
<b>Calculated yearly emissions</b> <sup>*5</sup>	Calculated yearly emissions = CO <sub>2</sub> emissions of fuels <sup>5</sup> - reductions

\*4 Emission factors for power, heat are used when calculating the reductions of power, heat, respectively.

\*5 As for the base-year emissions, reductions under the framework to evaluate the reception of high-efficiency cogeneration will not be subtracted.

\*6 Under the framework to evaluate the reception of high-efficiency cogeneration, the reduction may be calculated by the following formula when the supplier newly installed a cogeneration plant after the base year of the recipient facility.

$$\text{Reduction} = \text{received amount} \times (\text{emission factor of power or heat for the 2nd period} - \text{emission factor of the supplier of power or heat})$$

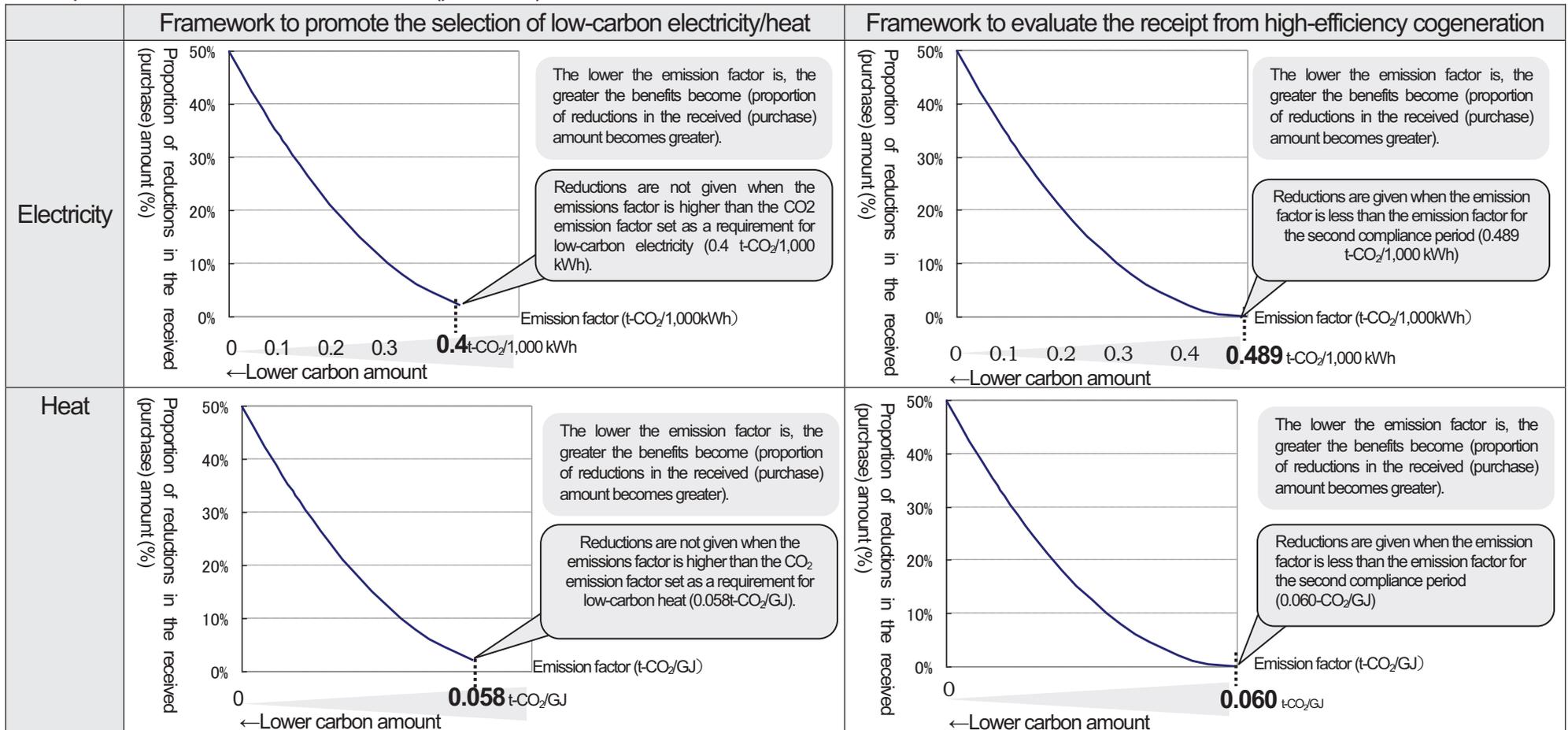
(When facilities falling under group I-2 calculate the reductions concerning the received heat, 2% of the base-year emissions will be subtracted from the reductions.)

### 3 (35) Means to Perform the Reduction Obligation (vii) Reductions through the Selection of Low-Carbon Electricity/Heat and Receipt from High-Efficiency Cogeneration [Second compliance period]

- Formula for reductions calculation • • • Reductions are calculated with the emission factor of the supplier two fiscal years ago and received (purchase) amount of the fiscal year of calculation.

$$\text{Reductions} = \underbrace{\text{Received (purchase) amount of the fiscal year of calculation}}_{\text{Values for each facility}} \times \left( \underbrace{\text{Emission factor for the 2nd compliance period (Electricity: 0.489t-CO}_2\text{/1,000 kWh; or heat: 0.060t-CO}_2\text{/GJ)}}_{\text{Value for each supplier}} - \underbrace{\text{Emission factor of the power/heating supplier (2 years ago)}}_{\text{Value for each supplier}} \right)^2 \times \frac{0.5}{\text{Compliance factor for the 2nd compliance period (Electricity: 0.489t-CO}_2\text{/1,000 kWh; or heat: 0.060t-CO}_2\text{/GJ)}}$$

- Proportion of reductions in the received (purchase) amount

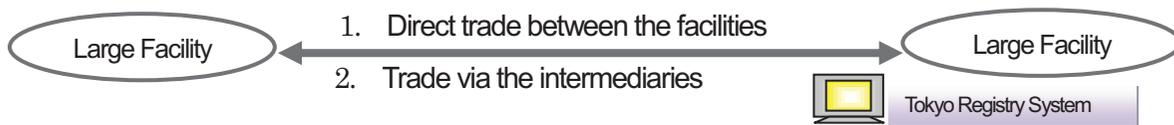


\*Under the framework to promote the selection of low-carbon electricity/heat, reductions can be calculated using the following formula, provided that the supplier newly installed cogeneration and supplied electricity/heat after the base year of the receiving facility:  $\text{Reductions} = \text{Received amount} \times (\text{emission factor of electricity/heat for the second compliance period} - \text{emission factor of electricity/heat of the supplier})$ . (However, when facilities under Group I-2 calculate reductions derived from receipt of heat, amount equivalent to 2% of the base-year emissions is subtracted from the reductions.

### 3 (36) Overview of Emissions Trading

- The emissions trading launched in April 2011, as the operation of the registry started.
- For the details on how to trade the emission credits, please refer to the “Guidelines for Emissions Trading.” This includes information such as (1) the mechanism of the Tokyo Registry System (how to open an account), (2) credit issuance and transfer procedures, and (3) TMG’s administrative policy to ensure safe and efficient trading environment.

#### 1. Excess Emission Reductions (Excess Credits)



Public access to the information such as the annual verified emissions from facilities and the annual compliance status of facilities as a whole are available online (compliance status of the individual facilities are available only after the compliance period) through the Tokyo Registry System (electronic database operated by TMG).

#### 2. Emission reductions from Small and Midsize Facilities in Tokyo (Small and Midsize Facility Credits)

1. Trade within the same corporate body and/or affiliated companies, or with other companies

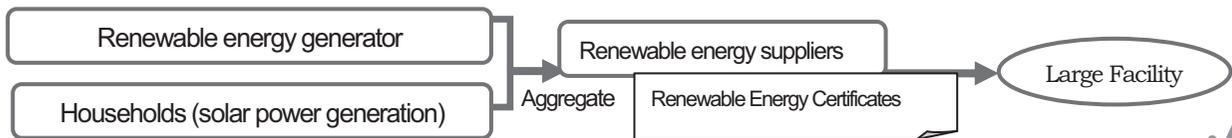


2. Trade via the intermediaries



Only large facilities (buildings or factories) are covered by the Tokyo Cap-and-Trade Program. However, recognition of offset credits to encourage comprehensive emission reduction measures to be undertaken within the same corporate body and/or affiliated companies (who owns multiple facilities such as covered facility, small and midsize facilities in Tokyo and/or large facilities outside Tokyo) to create offset credits for compliance usage in their covered facility.

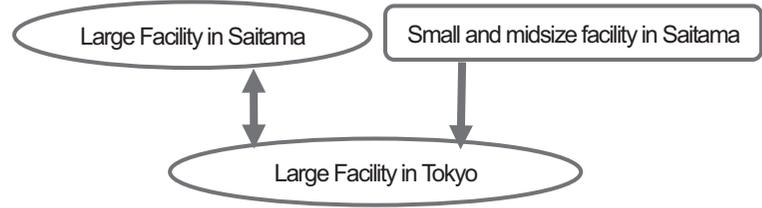
#### 3. Renewable Energy Credits



#### 4. Emission Reductions outside Tokyo area (Outside Tokyo Credits)



#### 5. Saitama Credits



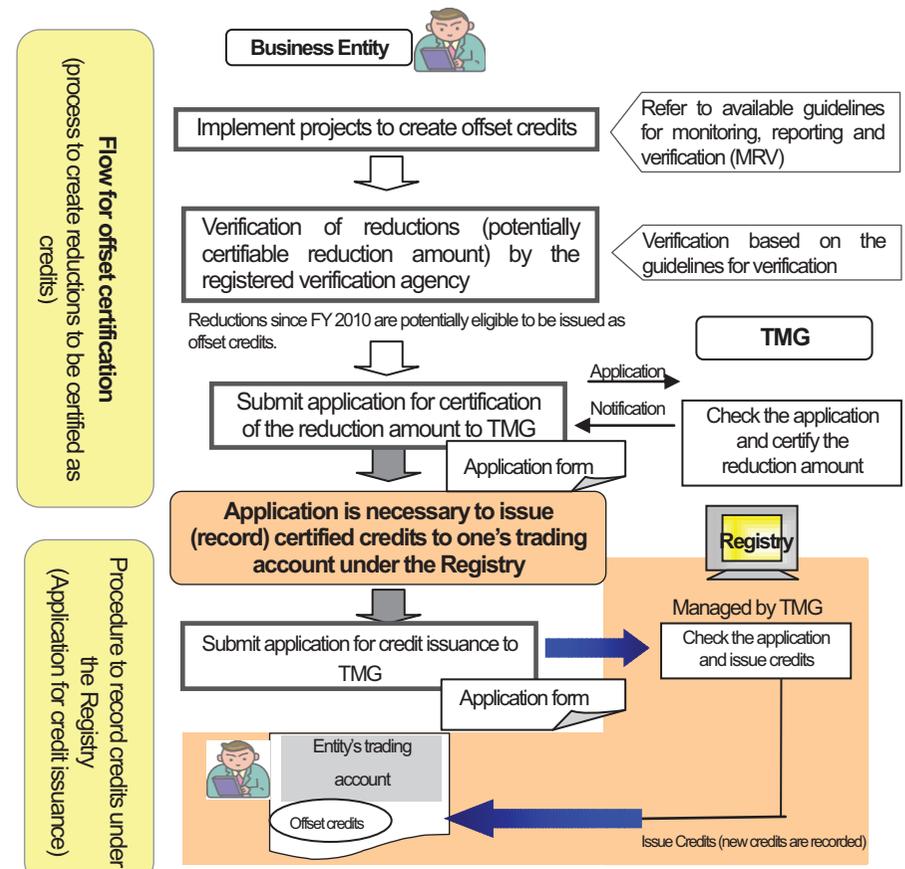
## 3(37) Emissions Trading (ii) Credits for Emissions Trading

- Five types of credits, **Excess Emission Reductions (Excess Credits)**, **Emission Reductions from Small and Midsize Facilities in Tokyo (Small and Midsize Facility Credits)**, **Renewable Energy Credits**, **Emission Reductions Outside Tokyo Area (Outside Tokyo Credits)**, and **Saitama Credits** are tradable under the Tokyo C&T Program. Of those credits, Small and Midsize Facility Credits, Renewable Energy Credits, Outside Tokyo Credits, and Saitama Credits are collectively called “**offset credits**”.
- To issue **Excess Credits**, facilities must file an application for credit issuance to TMG within a given period after the emissions are determined. After the submission of **GHG Emissions Reduction Report** for the next year of the compliance period, GHG emissions for the entire compliance period and issuable amount of excess credits are determined.
- To issue **offset credits** (excluding Saitama Credits), facilities must file an application for certification of the reduction amount and an application for credit issuance to TMG.

### ■ Credits for emissions trading

Credit Type	Potentially Eligible Reductions	Credit Issuance
Excess Emission Reductions	Reductions exceeding the obligation achieved by covered facilities	From FY 2011 (If there are excess emissions reductions in FY 2010 when verified in FY 2011, facilities may apply to TMG for credit issuance.)
Offset Credits	Emission Reductions from Small and Midsize Facilities in Tokyo (Small and Midsize Facility Credits)	From FY 2011 (Emission reductions in FY 2010 that are verified and certified in FY 2011 can be issued as credits.)
	Renewable Energy Credits	From FY 2011 (Electricity generated by renewable energy in FY 2010 that is verified and certified in FY 2011 can be issued as credits)
	Environmental Value Equivalent	From FY 2011 (Electricity generated by renewable energy in FY 2010 that is verified and certified in FY 2011 can be issued as credits)
	Other Reductions	From FY 2011 (Credits are issued based on the renewable energy generated in and after FY 2008) *It is possible to buy renewable energy certificates before FY 2010 but application to convert the certificate into credit will be necessary.
	Renewable Energy Certificates	From FY 2011 (Credits are issued based on the environmental value issued under the RPS Law in and after FY 2008)
	New Energy Electricity Generated under the RPS Law	From FY 2011 (Credits are issued based on the environmental value issued under the RPS Law in and after FY 2008)
Emission Reductions Outside Tokyo Area (Outside Tokyo Credits)	In FY 2015 (Credits are issued based on the emissions reductions achieved in the end of five years (FY 2010 to FY 2014).)	
Saitama Credits	Excess Emission Reductions	FY2015 (Past emissions reductions from the four years from FY2011 to FY2014 can be transferred to a trading account of the Tokyo Registry System after Saitama Prefectural Government confirms that the facility attained its goal.)
	Small and Midsize Facility Credits	From FY2012 (After verifying emissions of FY2011 in FY2012, Saitama Prefectural Government issues credits for the amount certified as reductions.)

### ■ Basic process to issue offset credits



<Banking>

Excess Credits and offset credits issued during the first compliance period (FY 2010 to 2014) can be banked for compliance use in the second compliance period (FY 2015 to 2019). They are not permitted to be banked until the third compliance period (FY 2020 to 2024).

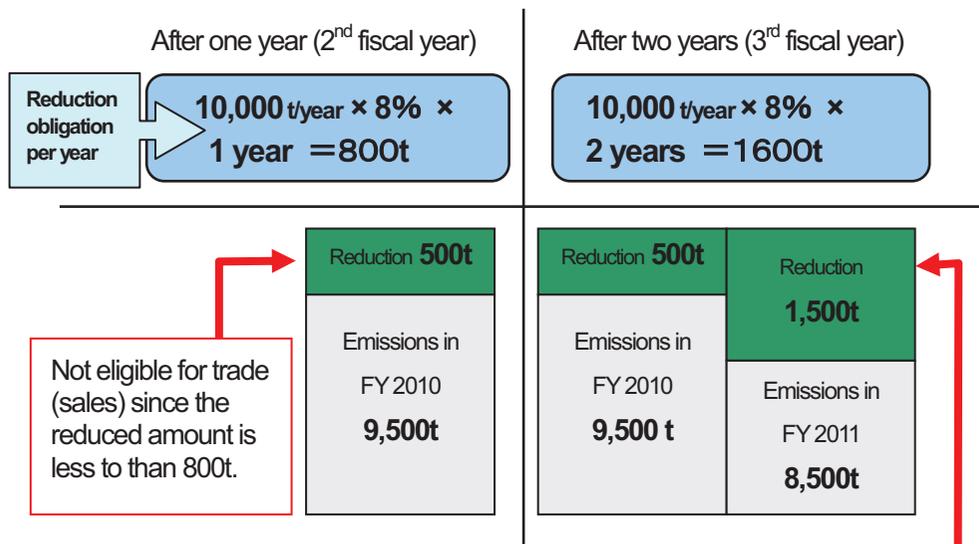
### 3 (38) Excess Credits

- **Compliance entities that achieve emissions reductions for more than a certain amount are allowed to sell the excess emissions reductions before the end of the compliance period.**
- The “certain amount” is calculated every fiscal year by the formula, “**Base-year emissions × Compliance factor × Elapsed years of the compliance period**”.
- This system enables entities to start emission trading from the 2<sup>nd</sup> fiscal year (FY 2011) of the first compliance period.

(1) Emissions trading will be possible from the 2<sup>nd</sup> fiscal year in the first compliance period if the emissions reduction exceeds the amount calculated by the above formula.

A system which enables entities who achieve emission reductions exceeding a certain amount of their obligations every fiscal year to sell the amount reduced before the end of the compliance period.

(Example) If a compliance facility has base-year emissions of 10,000 t/year and compliance factor is 8%, their Excess Credits will be calculated as below.



Of the total 2,000t reduced, 400t exceeding the 1,600t (reduction obligation in the second compliance year) can be sold or traded.

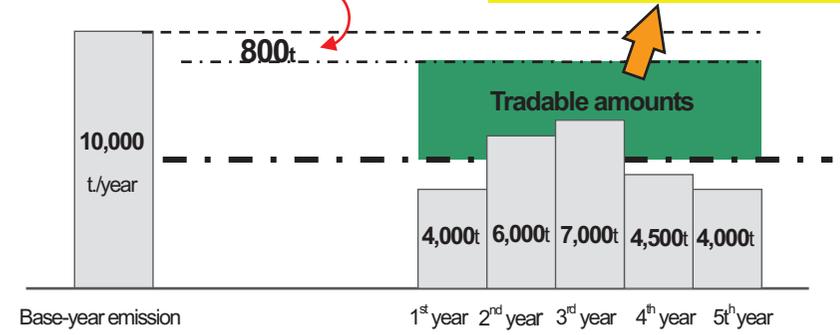
(2) The compliance seller is allowed to sell Excess Credits up to one half of the compliance facility's base-year emissions.

The limit is set to prevent facilities which achieve significant reductions without implementing energy-saving measures from making large benefits through the emissions trading.



Reduction obligation per year derived from the rule of (1).

**18,000 tonnes can be traded**  
(4,200+3,200+2,200+4,200+4,200)



\* **Calculation of Excess Credits when emissions from gases other than CO<sub>2</sub> are reduced**  
 Reductions from gases other than CO<sub>2</sub> (CH<sub>4</sub>, N<sub>2</sub>O, PFC, HFC, SF<sub>6</sub>) are not allowed to be sold or traded. However, facilities can increase the amount of Excess Credits by surrendering the reductions from other gases for compliance first.



### 3 (40) Small and Midsize Facility Credits (Flow of procedures)

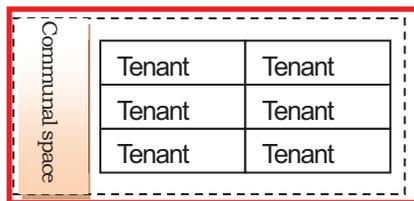
- People who have the authorization to upgrade equipments in small and midsize facilities, or those who are given the consent from the person who has such authority can file applications regarding Small and Midsize Facility Credits.
- In principle, emission reduction projects are implemented with an extent. However, application with a tenant extent or with a condominium ownership extent is also allowed.
- Application to certify reduced emissions can be either filed separately every fiscal year, or filed all at once. (Verification is necessary)

#### 1. People eligible to apply for the credits

- (1) People who have the authorization to upgrade equipments in small and midsize facilities, or
- (2) People who were given consent from above (1).

#### 2. Extent for application

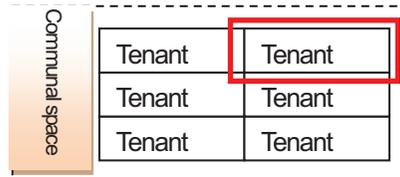
- (1) In principle, application is made with a building extent.



**The reduction amount of the entire building is calculated.**

(Example: leased building)

- (2) If energy usage can be monitored separately, application with a tenant extent or a condominium ownership extent is possible.



**The reduction amount of the relevant tenant is calculated.**

(Example: leased building)

#### 3. Procedures to issue Small and Midsize Facility Credits

- **Decide the extent of the facility**
- **Calculate the estimated reduction amount**

**Submit the application for extent, and the notification of estimated reduction amount regarding Small and Midsize Facility Credits**

- Verification is unnecessary.
- Submit the application within the date of contract to 30 days before the installation of emission reduction measures are completed (for details, see the guideline for monitoring and reporting).

- Implement emission reduction measures as stipulated in the certification standards
- Calculate the reduction amount for certification

**Submit the application to certify the reduction amount of the Small and Midsize Facility Credits**

- Verification is necessary.
- Calculation, verification, and application of reduction amount eligible for certification, can be jointly done in every few years. (for details, see the guideline for monitoring and reporting)

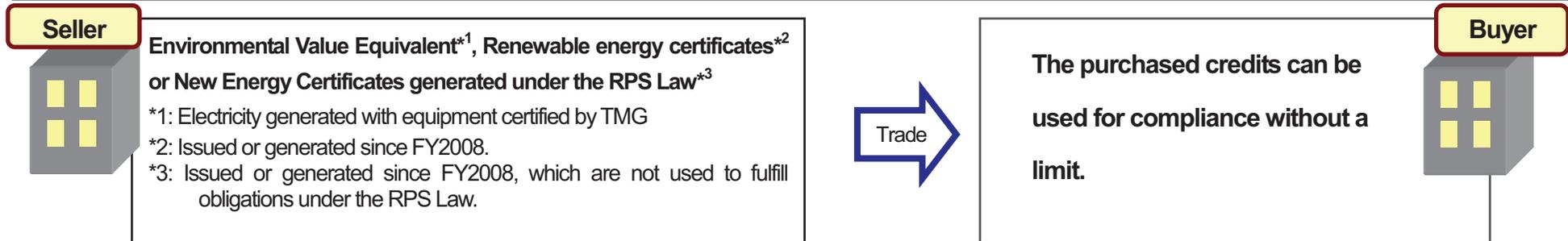
Open a trading account

**Submit application to issue tradable credits**

- Credits are issued to the applicant's trading account (for details, see the Guideline for Emissions Trading)

## 3(41) Renewable Energy Credits (Overview)

- In order to achieve the CO<sub>2</sub> emissions reduction goals by 2020 and to continue drastic emissions reduction thereafter, the expansion of renewable energy usage along with the promotion of energy saving measures are essential.
- The Japanese government and local governments are promoting various measures to expand the renewable energy usage, such as fixed-price purchase. Tokyo Cap-and-Trade Program puts priority on offset credits generated from renewable energy in order to increase the renewable energy supply.



### \*Renewable energy credits certified under this program

I. Solar light (heat), wind power, geothermal power, hydro power (under 1,000 kW)

II. Biomass (1. Biomass energy ratio of electricity production must be 95% or more. 2. Black liquor is excluded)

### Credits created by renewable electricity under each category will be converted as follows:

(Example) 1,000 kWh of electricity generated by solar light: (Second Compliance Period)

● In general

$1000\text{kWh} \times \text{CO}_2 \text{ emission factor for electric power (}0.489\text{kgCO}_2/\text{kWh}) = 489\text{kgCO}_2$

● Renewable energy credits issued under Tokyo Cap-and-Trade Program

$1000\text{kWh} \times \text{CO}_2 \text{ emission factor for electric power (}0.489\text{kgCO}_2/\text{kWh}) \times 1.5 = 733\text{kgCO}_2$

\* Converting methodologies for facilities that generate electricity for own use is available in the guideline for monitoring and reporting.

\* Renewable Energy Credits from solar heat will be only eligible as renewable certificates.

### 3 (42) Renewable Energy Credits (Renewable Energy Certificates)

- A compliance entity that holds renewable energy certificates can convert the certificates into Renewable Energy Credits upon application.
- The certificates are convertible to Renewable Energy Credits if it is indicated in the issued certificates that the purpose of issue is to be used under the Tokyo Cap-and-Trade Program.

#### 1. People eligible to convert renewable energy certificates to Renewable Energy Credits

- Compliance Entities
- The holder of renewable energy certificates\*.

\*In principle, the holder who has notified themselves as the end holder of the certificate to the Green Energy Certification Center.

#### 2. Intended use of green energy certificates

- Certificates with clear indication that it will be used for the Tokyo Cap-and-Trade Program under the Tokyo Metropolitan Environmental Security Ordinance are eligible to be converted to Renewable Energy Credits\*.

\*Renewable energy certificates issued in FY 2008 and FY 2009 that does not meet the above condition can still be eligible for conversion if it is openly publicized, for example in the CSR report, that the purpose of the certificate purchase is for compliance under the Tokyo Cap-and-Trade Program.

#### 3. Power generation and issue periods

- Renewable energy certificates issued in the previous compliance period as well as the current compliance period. (Certificates issued since FY 2008 are eligible for compliance use during the first compliance period.)
- Renewable energy certificates issued from electricity generated during the previous compliance period as well as the current compliance period.

#### < Relationship between the timing of power generation, renewable energy certificate issuance, and compliance periods to use the certificates (Example)>

FY	2007	2008	2009	2010	2011	2012	2013	2014	2015	Compliance period that certificates may be used
Pattern	Prior to the first compliance period			First compliance period					Adjustment fiscal year	
①	Generate power	Issue certificates			Convert to credits					First compliance period
②			Generate power	Issue certificates	Convert to credits					First and second compliance periods
③								Generate power	Issue certificates Convert to credits	First, second and third compliance periods

If generated in the first compliance period, it is eligible for compliance use in the first and second compliance periods.

If issued in the second compliance period, it is eligible for compliance use in the second and third compliance periods.

### 3 (43) Renewable Energy Credits (Environmental Value Equivalent)

The following applications are necessary to obtain Renewable Energy Credits (environmental value equivalent). Facilities need to apply separately for credits issuance after their energy generated is certified.

- **Application for certification of renewable energy generating equipment...**TMG will certify renewable energy generating equipment which satisfy **standards** (verification is necessary).
- **Application for certification of electricity generation...**TMG will certify electricity generated at facilities with certified equipment (verification is necessary).

#### 1. People eligible to file applications for certification of renewable energy generating equipment

##### <Principle>

- The owner of the equipment\* subject to certification.

\* The location of the equipment may be either in or outside Tokyo.

Equipment whose environmental values are certified by other programs is not covered, in principle.

Example) Equipment certified under a fixed-price purchase program

##### <Cases where people other than the owner can apply\*>

- A person to whom the right regarding environmental value of renewable energy is transferred.
- A person with the equipment owner's consent to apply.

#### 2. People eligible to apply for certification of electricity generation

##### <Principle>

- **Applicant for certification of renewable energy generating equipment.**

##### <Cases where people other than the applicant can apply>

1. Same terms as cases for certification of renewable energy generating equipment\*.

\*Documents that prove the transfer of rights must be submitted

#### 3. Procedures to issue Renewable Energy Credits

- Plan how to calculate electricity generation subject to certification.
- Plan how to calculate biomass energy ratio

**Submit the application for certification of renewable energy generating equipment.**

- Verification is necessary

- Monitor power generation
- Calculate biomass energy ratio

**Submit the application for certification of generated amount of renewable energy.**

- Verification is necessary.
- Electricity generation should be monitored, verified and reported every fiscal year. (For details, see the guidelines for monitoring, reporting and verification.)

Open a trading account

**Submit the application to issue tradable credits.**

- Record the issued credits to the registry (For details, see the Guideline for Emissions Trading.)

### 3 (44) Renewable Energy Credits (For Own Use)

If a covered facility generates electricity from renewable source for its own use, the facility can choose one of the following:

- Exclude the amount of electricity for own use when calculating the emissions from energy-related CO<sub>2</sub>. Renewable Energy Credits cannot be issued in this case\*.
- Include the amount of electricity for own use when calculating the emissions from energy-related CO<sub>2</sub>, and apply for Renewable Energy Credit issuance\* for the own used amount.

\*Renewable Energy Credits cannot be issued also when the environmental value is transferred to others, for example as a renewable energy certificate.

#### ■ If electricity is generated from renewable source for own use

If a covered facility excludes the amount of electricity for own use when calculating the emissions from energy-related CO<sub>2</sub>, Renewable Energy Credits cannot be issued for the own used amount to avoid double counting of the environmental value from the renewable energy.

**If a covered facility includes the amount of electricity for own use when calculating emissions from energy-related CO<sub>2</sub>, it may apply for Renewable Energy credit issuance (or may transfer environmental value to others in the form of renewable energy certificates) for the own used amount. In this case, the energy-related CO<sub>2</sub> emissions is calculated by adding the own used electricity and the supplied electricity and then multiplying the total amount with the emission factor.**

#### <When electricity generated from solar power is used by the generator>



- Solar power generation in FY 2015: 1,000,000 kWh (489t-CO<sub>2</sub>)
- Electricity supplied by outside party in FY 2015: 10,000,000 kWh (4,890t-CO<sub>2</sub>)

##### Pattern 1

- Exclude the amount of electricity generated for own use when calculating the energy-related CO<sub>2</sub> emissions.
- 0.5 times the own used amount can be issued as Renewable Energy Credits.

○ Energy-related CO<sub>2</sub> emissions:  
4,890t-CO<sub>2</sub>

○ Amount of Renewable Energy Credits issued:  
244t-CO<sub>2</sub> (382t-CO<sub>2</sub> × 0.5)

##### Pattern 2

- Exclude the amount of electricity generated for own use when calculating the energy-related CO<sub>2</sub> emissions.
- Multiply the own used amount by 0.5 and then multiply the value by the emission factor. This value can be deducted from the emissions as reduced energy-related CO<sub>2</sub>.

○ Energy-related CO<sub>2</sub> emissions:  
4,646t-CO<sub>2</sub> (4,890t-CO<sub>2</sub> - 489t-CO<sub>2</sub> × 0.5)

○ Amount of Renewable Energy Credits issued:  
0t-CO<sub>2</sub>

##### Pattern 3

- Include the amount of electricity generated for own use when calculating the energy-related CO<sub>2</sub> emissions.
- 1.5 times the own used amount can be issued as Renewable Energy Credits.

○ Energy-related CO<sub>2</sub> emissions:  
5,379t-CO<sub>2</sub> (4,890t-CO<sub>2</sub> + 489t-CO<sub>2</sub>)

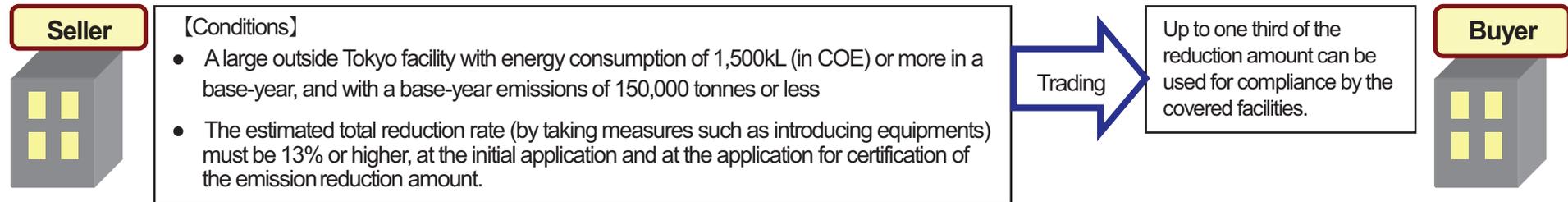
○ Amount of Renewable Energy Credits issued:  
733t-CO<sub>2</sub> (489t-CO<sub>2</sub> × 1.5)

All three patterns result in **“amount of energy-related CO<sub>2</sub> emissions” – “amount of renewable energy credits issued” = 4,646t-CO<sub>2</sub>.**

## 3(45) Outside Tokyo Credits

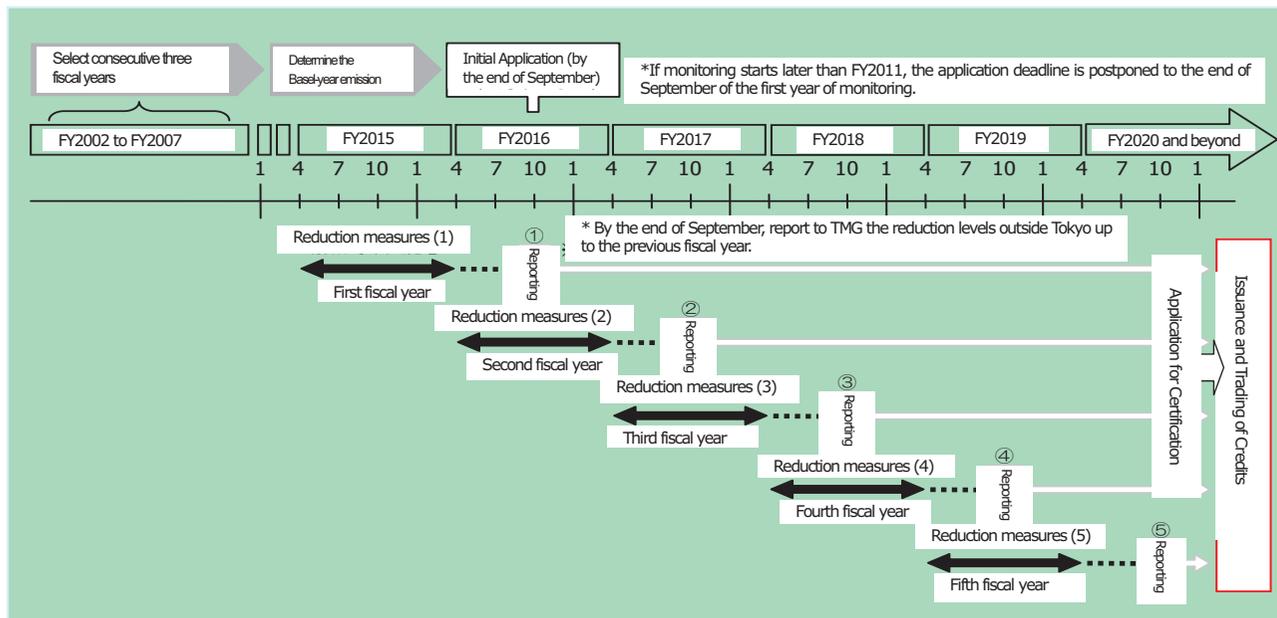
- Considering the efficiency of businesses investing into energy-saving measures nationwide in a planned manner, the emission reductions achieved from an outside Tokyo facility (which is equivalent in the size of the facility in scope of the Tokyo Cap-and-Trade Program) can be used for compliance, to the extent that such use will not negatively impact the reduction effort within Tokyo.
- The main goal of Tokyo Cap-and-Trade Program is to achieve reduction of the total CO<sub>2</sub> emission within Tokyo. Therefore, this provision will not be applicable to small and midsize facilities outside Tokyo, for the time being.

### ● Outside Tokyo Credits (Emission reductions outside Tokyo area)



### <Method to Calculate the Reduction Amount>

When issuing Outside Tokyo Credits, it is assumed that applicant has reduction obligation equivalent to that of a large facility in Tokyo. The Outside Tokyo Credits will be the reduction amount (eligible up to 25% of the base-year emissions per fiscal year) that exceeds the compliance factor (17%).



### <Credit Issuance Procedure>

- Entity must submit the initial application by the end of September 2016 and obtain certification by TMG.
- Entity must submit the Outside Tokyo Credit Monitoring Report (verification is necessary) to TMG every fiscal year.
- Credits will be issued and recorded in the Registry beginning from FY2020. (The application for certification of reduction amount and the application for credit is required.)

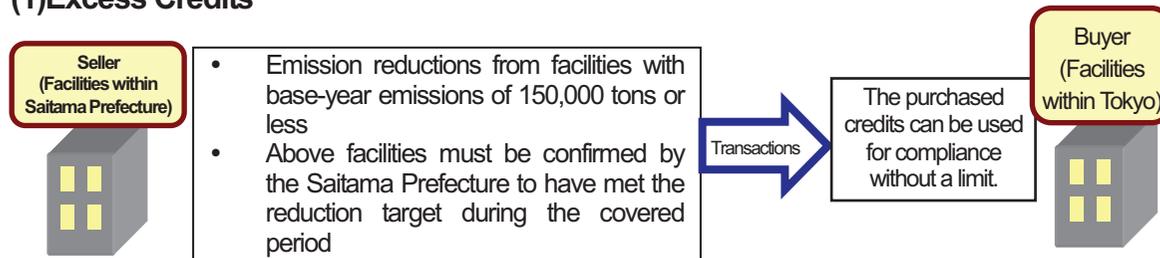
### 3 (46) Saitama Credits (Linkage)

The following credits from the Saitama Prefecture Target Setting Emissions Trading Scheme ("the Saitama Scheme") may be used to fulfill obligations under the Tokyo Cap-and-Trade Program.

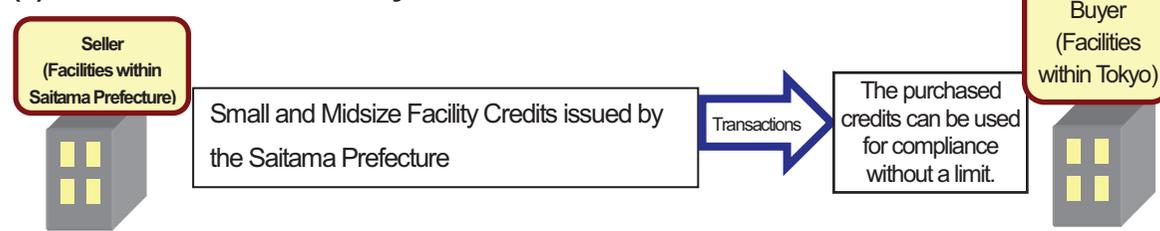
- **Excess Credits under the Saitama Scheme**  
Emission reductions from facilities with base-year emissions of 150,000 tons or less  
Above facilities must be confirmed by the Saitama Prefecture to have met the reduction target during the covered period
- **Small and Midsize Facility Credits under the Saitama Scheme**  
Excess Credits and Small and Midsize Facility Credits issued by TMG can be used to meet reduction target in the Saitama Scheme.

#### Tradable Credits

##### (1) Excess Credits



##### (2) Small and Midsize Facility Credits



#### Credits NOT Eligible for Transaction

##### (1) Renewable Energy Credits

Renewable Energy Credits can be used only in the issued scheme (either the Tokyo Cap-and-Trade Program or the Saitama Scheme).

##### (2) Outside Tokyo/Saitama Credits

Outside Tokyo/Saitama Credits can be used only in the issued scheme (either the Tokyo Cap-and-Trade Program or the Saitama Scheme).

(Reference) Comparison between Outside Tokyo Credits and mutually-usable excess emission reductions under the Saitama Scheme

Requirements	Outside Tokyo Credits	Excess emission reductions achieved by facilities in Saitama Prefecture that can be mutually used
Covered facilities	Large facilities whose annual energy consumption in the base year is 1,500 kL or more and the base-year emissions are 15,000 t-CO <sub>2</sub> or less	Same as the left
Requirements concerning estimated reduction ratio	The ratio of estimated reductions that would be achieved by installing equipment is 6% or more in total (at the time of initial application or at the time of application for certification of reductions)	No requirement (Facilities are deemed to have implemented equivalent measures, being covered by the Saitama Scheme)
Amount to be certified as credits	Reductions exceeding 8% (up to 16%)	Reductions exceeding the reduction targets (no upper limit) (Reductions exceeding a half of the base-year emissions are not certified as credits as they are not issued as reductions)
Advance application	Initial application must be made by September 2011	Not required (Follow the procedures required for facilities covered under the Saitama Scheme)
Verification and reporting	A monitoring report must be submitted to TMG every year after receiving verification	Facilities must receive verification before the submission of the plan for FY2015. The plan is submitted to Saitama Prefecture. (In both processes, follow procedures required for facilities covered under the Saitama Scheme)
Period of transaction	FY2015 onward	Same as the left*12 (After Saitama Prefecture confirms that the facility has attained the target)
Requirements concerning operation management standards	Facilities are required to receive verification to determine whether their levels of promotion of climate change measures fulfill the operation management standards	Not required (Facilities are deemed to have implemented measures equivalent to those required by the operation management standards through the previous program in Saitama Prefecture)
Buyer	Facilities can use credits up to one third of their mandatory emission reduction	Facilities can use credits without any limitations

\*1. Excess reductions that are issued in the middle of the first compliance period before the adjustment period can also be mutually used after the facility is confirmed to have attained the target.

\*2. When the ending fiscal year of the compliance period is changed due to the cessation of operation, etc. of the facility, excess reductions can be mutually used before FY2015 after the facility is confirmed to have attained the target.

Reference: Excerpt from "Partnership Agreement between the Tokyo Metropolitan Government and the Saitama prefectural Government for the Expansion of the Cap-and-Trade Programs in the Greater Tokyo Area" (signed on 17 September 2010)

The Tokyo Metropolitan Government and the Saitama Prefectural Government hereby agree to

1. Share information on their respective programs and collaborate in program design and operation to enable measures such as the trading of credits across the two programs.
2. Actively inform other local governments in the Greater Tokyo Area about the results achieved by linking the two programs, with a view to expand cap-and-trade in the Greater Tokyo Area.
3. Take initiatives to encourage the national government to promptly implement an effective national cap-and-trade program.

### 3 (47) Banked Excess Emission Reductions

[Second compliance period]

- The effects of the revised emissions factor will be also reflected in the banked excess emission reductions.
- When the CO2 emission factor of the second compliance period is greater than that of the first compliance period, the usable credit amount for the second period will be calculated by the banked amounts of excess emission reduction, etc. by the factor provided by TMG.
- Procedures: The banked amount will be raised across the Program in FY2017 (by multiplying the banked amount by the factor). (Facilities are not required to submit an application for the multiplication. TMG will thoroughly provide information before the implementation.)

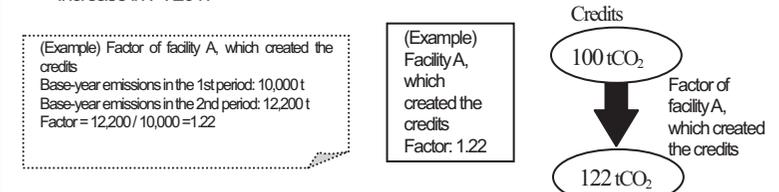
$$[\text{Banked amount of the 1st period}] \times [\text{Factor}] = [\text{Usable credit amount in the 2nd period}]$$

#### ■ The factor to be applied to the banked amount (stipulation by TMG)

	The factor to be applied to the banked amount (stipulation by TMG)
Excess emission reductions	<ul style="list-style-type: none"> <li>• The factor will be set at the fraction of the base-year emissions of the first and second periods of the facility that created excess emission reductions and outside Tokyo credits.</li> </ul>
Outside Tokyo credits	$\text{Factor} = \frac{\text{Base-year emissions of the 2nd period}}{\text{Base-year emissions of the 1st period}}$ <p>*The banking transferred before the program-wide increase will be also multiplied by the factor of the facility that created the banking.</p>
Renewable energy credits	<ul style="list-style-type: none"> <li>• The factor will be set at the fraction of the emission factors of the first and second periods.</li> </ul>
Other gas reductions	$\text{Factor} = \frac{\text{Emission factor of the 2nd period}}{\text{Emission factor of the 1st period}}$ <p>(Example) In cases of renewable energy credits (solar power generation)</p> $\text{Factor} = \frac{\text{Emission factor of electricity in the 2nd period}}{\text{Emission factor of electricity in the 1st period}}$ <p>*Other gas reductions will not be multiplied if the emission factor is not increased in the second period. (Example) N<sub>2</sub>O, SF<sub>6</sub></p>
Small and midsize facility credits in Tokyo	<ul style="list-style-type: none"> <li>• A uniform factor will be set in order to simplify the procedures for small and midsize facilities (the fraction of the emission factors of electricity will be used based on the fact that the use rate of electricity is high in such facilities).</li> </ul> <p>Factor = Emission factor of electricity in the 2nd period / Emission factor of electricity in the 1st period</p>
Saitama credits	<ul style="list-style-type: none"> <li>• The factor will be considered based on the future measures in Saitama prefecture.</li> </ul>

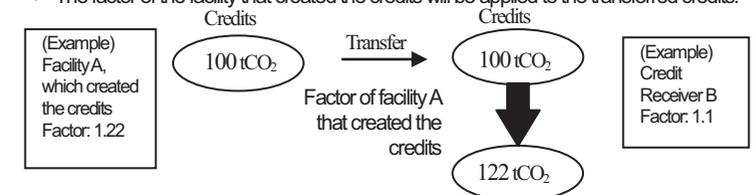
#### <Examples of the raising of excess emission reductions and outside-Tokyo credits>

- (1) When the credits belong to the facility that created them at the time of the Program-wide increase in FY2017



- (2) When the credits have been transferred at the time of the Program-wide increase in FY2017

⇒ The factor of the facility that created the credits will be applied to the transferred credits.



#### ■ Procedures

■ TMG will give information after checking the contents (such as emissions of FY2014) of the plans submitted in FY2015.

Compliance period	First compliance period		Second compliance period			
	First compliance period	Adjustment period	16	2017	2018	2019
Fiscal year	First compliance period	Adjustment period	16	2017	2018	2019
Items concerning the first compliance period	<ul style="list-style-type: none"> <li>◎ Opening of compliance accounts</li> </ul>	<ul style="list-style-type: none"> <li>★ Submission of plans</li> </ul>	<p>Compliance status is checked on the Tokyo Registry System If reductions exceed the obligation, issuance application for excess credits must be submitted Issued excess credits will be banked automatically</p>	<p>■ Raising banking</p> <p>*The raise will be implemented simultaneously across the Program. *TMG will inform facilities beforehand</p>		
Items concerning the second compliance period	<ul style="list-style-type: none"> <li>Announcement of the emission factor of the second compliance period</li> </ul>	<ul style="list-style-type: none"> <li>Recalculation and confirmation of the base-year emissions</li> <li>Confirmation of the factors for excess emission reductions</li> </ul>	<p>*When trading emissions for compliance in the 2nd compliance period, facilities should note that the banked amounts will be raised.</p>			

Banked excess emission reductions will be increased by multiplying the factor of the facility that created the reductions.

### 3 (48) Relationship with National Schemes, Including the J-Credit Scheme

- Since there are no penalties under the national schemes, including the National Credit Scheme, Emission Trading Trial Scheme, JVETS, J-VER and J-Credit Scheme, the values achieved under these schemes do not affect emissions or reductions calculated under this Program even if they can be transferred between those schemes.
- If a national scheme with a reduction obligation is introduced in the future, the handling of those values will be organized in the course of adjusting all the schemes.

☆The National Credit Scheme and J-VER are integrated into the J-Credit Scheme from FY2013.

#### ■National emissions trading schemes

**\*There are no national schemes with a reduction obligation.**

##### National Credit Scheme

- Started in 2008
- In this scheme, emission reductions achieved by SMEs' efforts to reduce CO2 emissions supported by major companies' technologies and funds are certified for use for fulfilling the targets in a voluntary action plan, etc.

##### Emission Trading Trial Scheme

- Started in 2008
- This scheme covers companies which voluntarily applied for participation. Reduction targets are set in voluntary action plans (targets can be set based on either total reductions or emission intensity standard).

##### JVETS

- Started in 2005
- It covers companies which voluntarily applied for participation.
- Reduction targets are set.

##### J-VER

- Started in 2008
- This scheme certifies reductions and removal achieved through the national reduction/removal project.

#### ■Notes■

- Large facilities in Tokyo are not required to calculate additional emissions even when they have transferred their national credits, etc. to others.
- Reductions certified under the National Credit Scheme, etc., cannot be readily used for the Program. Certification using the calculation and verification rules of the Program will be required.
  - \*Due to the great difference in calculation and verification rules for reductions
- Environmental values concerning use of renewable energy cannot be used simultaneously with the national credits, credits under the J-VER, or New Energy Certificates generated under the RPS Law.

### 3 (49) Measures in the Event of Excessive Price Evolution

#### ■ Measures to Prevent Excessive Price Evolution

- The basic approach is to prevent excessive price evolution by increasing the supply of credits available for emissions trading.

Example:

Increase the supply of Small and Midsize Facility Credits

Increase the supply of Excess Credits by promoting CO<sub>2</sub> reduction measures

Promote renewable energy supply

Utilizing the Solar Energy Bank

Utilizing credits created from the project to promote energy-saving and creation of carbon credit for small and medium facilities

Admitting mutual use of credits between the Tokyo Cap-and-Trade Initiative— Mutual Emissions Credit Transactions between Tokyo Cap-and-Trade Program and the Saitama Scheme

- If the credit supply in the market remains scarce and excessive price evolution is foreseen despite the above measures, the offset credit eligible to be used under the program would be expanded.
    - The decision to expand the offset credits and the process (and/or the timing) to do so will be disclosed to the public in a timely manner, and opinions from emissions trading experts will be heard when deciding the range of expansion.
    - Certain limit for the usage of expanded offset credits will be placed when considered necessary.
    - If the price of newly recognized offset credits (Expanded Credits) is far lower than the market price, the price will be adjusted according to the price difference so there will be no disadvantage for those who have already purchased offset credits.
- ⇒ Measures will be taken to level the price of existing offset credits and the Expanded Credits.

#### ■ Measures against Market Misconducts

If market misconduct is suspected, TMG will:

- (1) Hold hearings with the suspected market participants
- (2) Provide guidance to the market participants involved when necessary, and warn all other market participants and compliance facilities on the issue.
- (3) Penalties in accordance with the Tokyo Metropolitan Environmental Security Ordinance will be applied to the market participants involved when the issue is deemed malicious in nature.

#### Acts Subject to Penalties under the Environmental Security Ordinance

- Submitting fraudulent applications or engaging in actions that obstruct the Governor's investigation on such applications
- Receiving credits in the registry account through illegal actions

#### Legal Restrictions on market misconduct

- In accordance with the Act on Specified Commercial Transactions, vendors engaged in door-to-door sales and/or telemarketing are prohibited from engaging in unwanted solicitation or re-solicitation
- Acts generally regarded as constituting fraud, blackmail or any other crime

## 3(50) Carbon Price and Offset Credits Offered by TMG for Sale

### Carbon Price

- The volume and price of emissions credits shall be negotiated and agreed upon by the market participants involved in the transaction.
- TMG will not take a role in setting carbon prices, nor will it set upper or lower limits, or other restrictions, on prices.
- Price information released by TMG as a reference:
  - (1) Selling price of offset credits offered by TMG
  - (2) Declared price listed in the application to TMG for the transfer of credits (information after statistical processing. Individual declared prices will not be publicized.)
  - (3) Price assessed based on surveys conducted by 3<sup>rd</sup> party (estimated price for a standard transaction based on interviews with participants in transactions)

### Offset Credits Offered by TMG for Sale

#### Objective

- To ensure smooth implementation of emissions trading in the initial phase after the system is launched and to act an easing measure when demand for credits is tight

#### Types of Offset Credits Sold

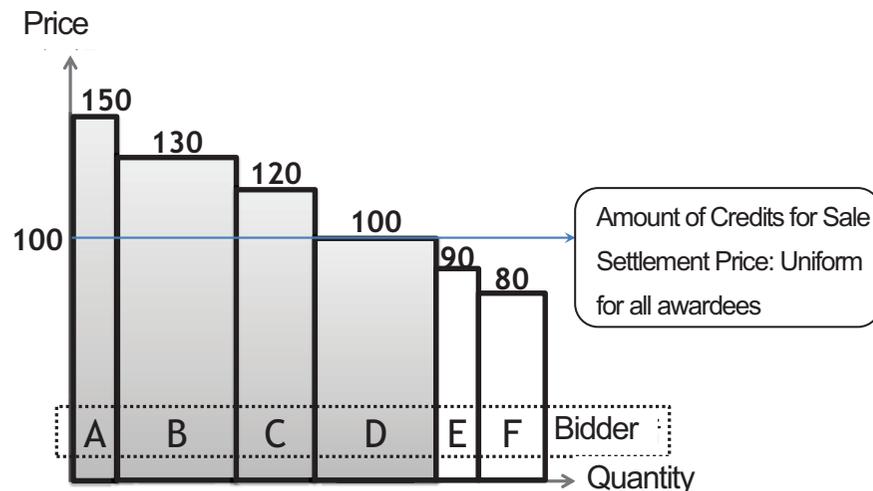
- Renewable energy certificates (which can be converted to Renewable Energy Credits) issued from the Solar Energy Bank (environmental value transferred to the Tokyo Environmental Public Service Corporation though the project to promote solar energy equipment to households)
- Small and Midsize Facility Credits transferred to TMG though the project to promote energy-saving and creation of carbon credit for small and midsize facilities

#### Method of Sale

- Credits offered by TMG or the Tokyo Environmental Public Service Corporation may be sold by a uniform price auction or at a fixed price.
- When selling at a fixed price, the price will be determined by TMG with a reference to the market price of offset credits.

### Uniform Price Auctions

- The bids will be indicated from the highest bidding price to the lowest. The settlement price will be the price where the demand equals the amount of credits for sale.
- Credits are purchased at the uniform settlement price (100 in the figure) by A, B, C and D.
- The bidder E and F cannot purchase the credits since their bid price was lower than the settlement price.



### Sales Schedule

- Annual sales schedule (timing and frequency) and scheduled sales volumes
  - ⇒ To be announced at the beginning of each fiscal year
- Detailed procedures for purchase
  - ⇒ To be announced before the first sales
- \* Measures such as restricting the sales to compliance buyers only, or limiting the volume of credits that can be purchased by a single participant

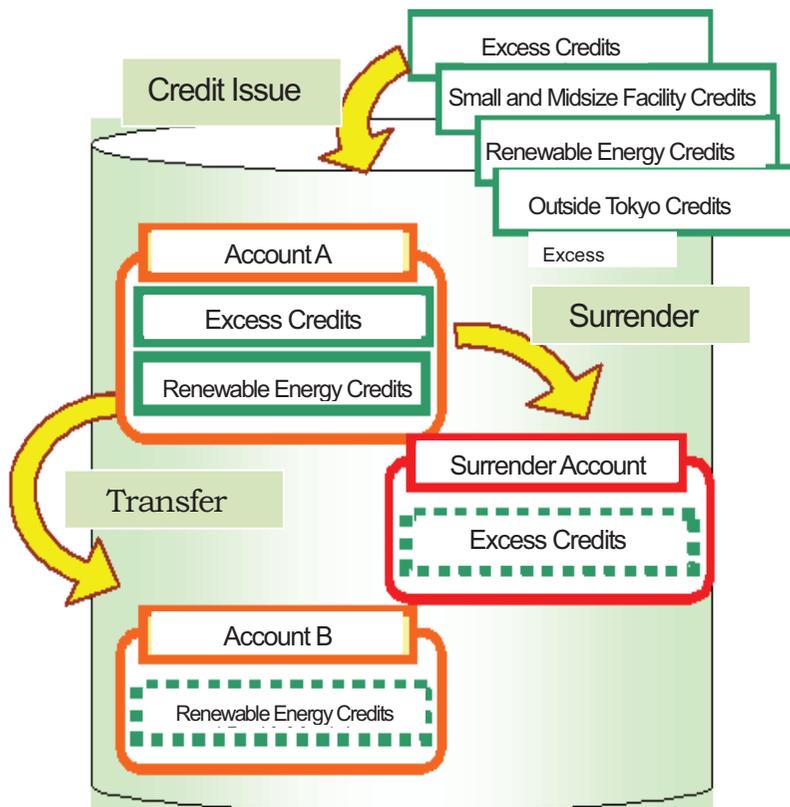
## 3 (51) Registry (Overview)

### Registry

- An electronic system to record issued credits and to manage the transactions of credits.
- TMG is responsible for the maintenance as well as the data input and update (based on the paper application from the entities) of the registry.
- There are three types of accounts in the registry, each with a different function: compliance accounts, trading accounts, and a surrender account.

The registry records the issuance, transfer, and surrender of the credits.

Covered facilities and other market participants must open an account in the registry in order to record and manage their credits.



### Compliance Accounts

Accounts used to track the emission reduction status of the covered facilities  
(Each covered facility must open a compliance account)

#### ● Account Holders

- Covered facilities (both reporting facilities and compliance facilities)

#### ● Fees for Opening an Account

- Free

#### ● Application Deadline

- Final day of the compliance period for the compliance facilities.
- There is no particular deadline for the reporting facilities.

### Account Manager

- If there are multiple compliance entities in a single compliance facility, **an account manager may be assigned.**  
(As long as all compliance entities agree, anyone can be named as an account manager.)
- On behalf of the covered entities (i.e. account holders), the account manager may submit paper applications to TMG to (1) open a compliance account, (2) issue Excess Credits, (3) transfer credits to the trading account, (4) surrender credits and (5) modify compliance account information.

### Surrender Account

Account to record credits surrendered for compliance.

### 3 (52) Registry (Trading Accounts)

- **Trading account is an account opened by the people who wish to transfer credits through the emissions trading. The credits bought and sold are recorded in the trading account of the market participants.**

#### Trading Accounts

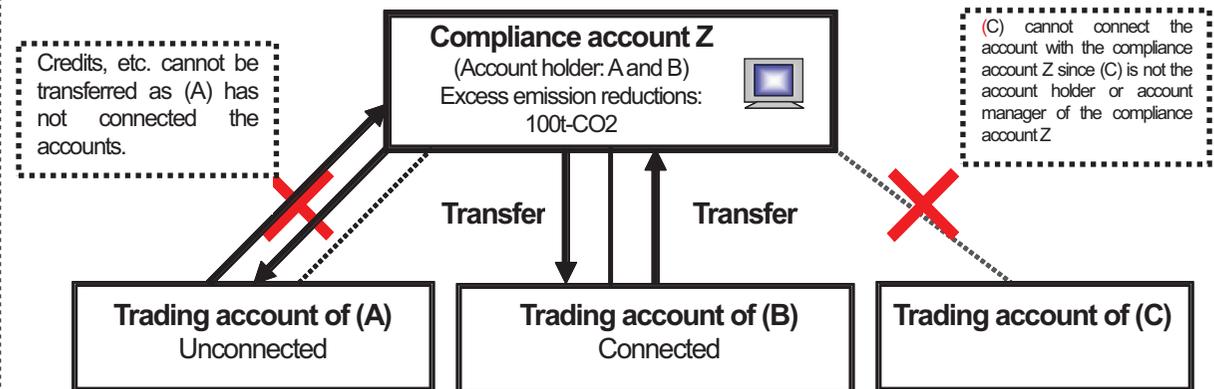
- **People eligible to open a trading account**
  - Covered facilities (corporations or individuals)
  - Legal entities (excluding foreign entity that does not possess an office or a branch in Japan)
  - Following individuals:
    - Account manager
    - Person eligible to receive offset credits
    - Heir of the trading account holder
- **Fees for opening an account and renewal fees**
  - Covered facilities and account managers: Free
  - Market participants other than above: 13,400 yen per account (Renewal fees are not decided yet.)

(Exempted parties: National and local government agencies, public assistance recipients, persons exempt from special resident tax or income tax, small and midsize enterprises (1st planning period only))
- **Maximum Number of Accounts**
  - Covered facilities and account managers can open accounts up to the number of covered facilities they are responsible for.
  - All other market participants may open one account. Exception: Additional accounts may be permitted if multiple accounts must be managed separately.
- **Application Deadline**

There is no particular deadline to submit the application to open the trading account.

#### 《Connection of a compliance account and trading account》

- ✓ In order to transfer credits between a compliance account and trading account, the compliance account needs to be connected to the trading account opened by the account holder or account manager of the compliance account.
- ✓ A person who wishes to transfer credits, etc. between a compliance account and trading account has to submit an application for connection with the compliance account to TMG when the trading account is opened or at any time after that.



#### Trading Account Renewal and Closure Policy

Trading accounts opened by market participants other than covered facilities and account managers can only be used until the final day of the adjustment period of the first compliance period, without an application for renewal. By taking renewal procedures within a specified period (for the first compliance period, from April to the end of September 2016), the trading accounts can be used by the end of the next adjustment period. Accounts that have not been renewed will be closed.

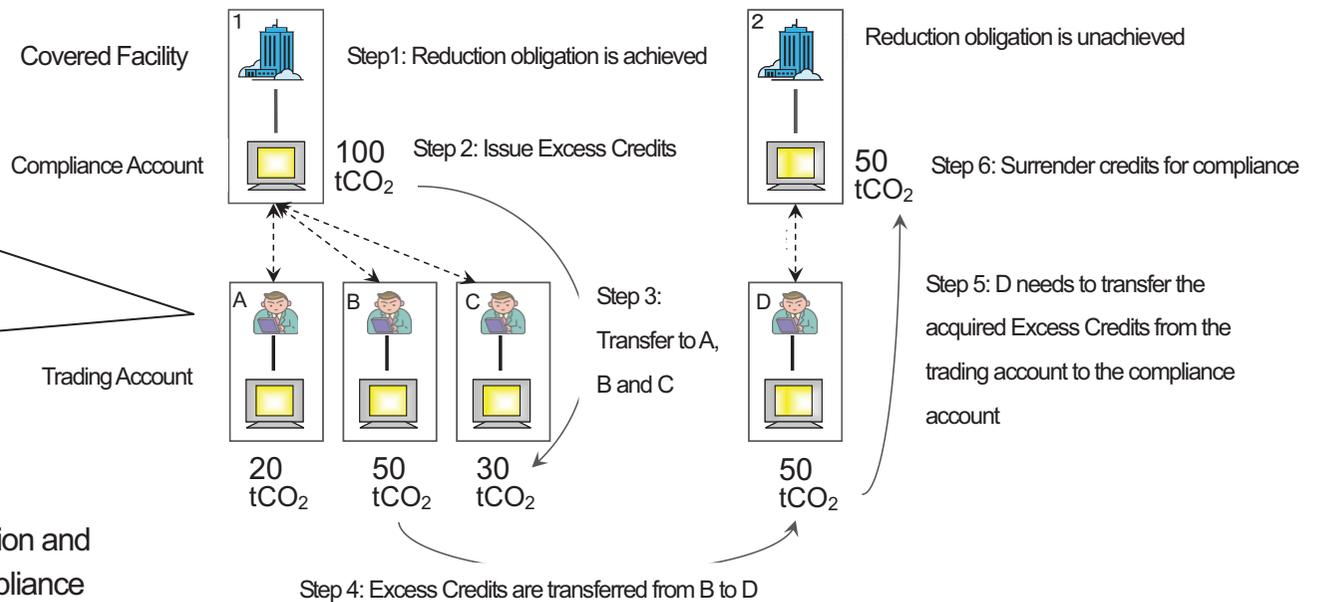
### 3 (53) Registry (Transactions)

Transfer patterns	Significance of transfers
Trading account to Trading account	A general emissions trading. Credit owner record is amended.
Compliance account to Trading account	A transfer to determine the ownership of Excess Credits recorded in a compliance account.
Trading account to Compliance account	A transfer to a facility's compliance account in order to fulfill its obligations (to transfer to the surrender account). Credits transferred to the compliance account cannot be returned to a trading account.
Compliance account to Compliance account	Not eligible. Transfer must be done through the trading accounts.

#### Example: Transaction of Excess Credits

Excess Credits allocation in a case where 3 compliance entities (owners) exist in a covered facility

- The share of ownership is not determined when Excess Credit is held in the compliance account (property rights cannot be claimed)
- Once transferred to the trading account, the credits become the property of the account holder (property rights can be claimed)



- The ratio of the distribution of reduction obligation and Excess Credits is determined among the compliance entities.
- TMG will not be involved in the decision making.

### 3 (54) Information Recorded in the Account and Publicly Available Information

#### Information Recorded in the Compliance Accounts

- Name of the covered facility
- Base-year emissions
- Allowance
- Yearly emissions data
- Amount of tradable Excess Credits
- Amount of Excess Credits and offset credits gained for compliance

#### Information Recorded in the Trading Accounts

- Name of the enterprise
- Amount of Excess Credits and offset credits held in the account

- A serial number will be associated with each carbon tonne of Excess Credits and offset credits.
- Serial number is comprised of a three-digit regional code, followed by a consecutive number starting with 1. (Ex.: 130-1234 (130 is the regional code))
- The serial number will be used as a record of transfer that can be used to determine what kind of credit was transferred, the date of transfer and the parties involved in the transaction (i.e. sender and recipient).
- Other than the serial number, the type of credit and the expiration date of the credit is also recorded in the accounts..

\*Account managers and account holders can access their account information by logging in to the Registry through the TMG website.

#### Account Record Certification

- **An account holder (or account manager) can file an application to receive a account record certification of the following items:**

Volume of offset credits held in the account of the applicant, transfer record (transfer dates and volumes etc.) of the applicant.

\*These information are not publicly disclosed, but if the entities involved in the transaction determine it is necessary, a certificate can be issued to the account holder (or account manager) upon request by the account holder. When needed, the account holder (or account manager) may present this certificate to their transaction partners.

- **Fee for Certification Issuance**

¥ 400 per certificate

(Exempted parties: National and local government agencies, public assistance recipients, persons exempt from special resident tax or income tax)

#### Publicly Available Information

The following information is publically available online:

- Name of account holder (updated regularly)
- Base-year emissions, allowance, and the yearly emissions data of the individual facilities (updated annually)
- Total base-year emissions, total allowance and total emissions of the covered facilities (updated annually)
- Amount of offset credits issued and the recipient (recipient information is only released to the public if the recipient request to do so) (updated monthly)
- Amount of credits traded and the number of trade contract (updated monthly)

## 3 (55) Reduction Credit Accounting

### ■ Accounting Procedures

#### ● Deliberated in the 199th meeting of the Accounting Standards Board of Japan (April 9, 2010)

The Accounting Standards Board of Japan (ASBJ) issued the following basic policy on accounting with regard to Tokyo Cap-and-Trade Program.

#### Basic Policy

There is no issue with using the accounting standards for the trial emissions trading system stipulated in "Practical Issues Task Force Report No. 15 "Interim Rules for the Accounting of Emissions Transactions" when buying and selling credits. Since the system is based on a local ordinance and since said ordinance stipulates penalties, it may be necessary in some cases to consider using allowances or annotated contingent liabilities.

#### Actual Accounting Methods

##### 1. When acquiring credits during the reduction planning period free of charge (Note: When issuing Excess Credits)

No accounting (no journal entry)

##### 2. When selling credits obtained free of charge

The sale price is recorded as a temporary receipt or added to a suspense account and can be transferred to profit at the point when the cumulative targets for five years are expected to be attained (or can be written-down if targets are not attained).

##### 3. When purchasing credits

For use in fulfilling reduction obligations: Reported as the acquisition of "intangible fixed assets" or "investments and other assets".  
For sale to a third party: Reported as the acquisition of "inventory".

##### 4. Allowances

If reduction targets cannot be expected to be met, allowances will be reported in line with general account standards.

##### 5. When earmarking credits after the quantity of insufficient reductions has been determined

Credits recorded as assets acquired for a fee shall be recorded as expenses ("selling and general administrative expenses") when they are transferred from a trading account to a compliance account.

##### 6. Annotated contingent liabilities

Annotations may be necessary in cases deemed as significant.

#### ● TMG also issued its "Basic Approach on Accounting" (September 2010)

This document is issued as a practical resource for entities involved in the emissions trading, which contains accounting examples for each possible kind of trade within the Tokyo Cap-and-Trade Program. The objective of the "Basic Approach on Accounting" is to provide accounting examples based on the ASBJ opinion, thus TMG does not intend to formulate new accounting standards by announcing this document.

### ■ Taxation

- Deliberations with the National Tax Administration Agency (Tokyo Regional Taxation Bureau) are ongoing.
- Participants in the Tokyo Cap-and-Trade Program is recommended to consult their nearest tax office for any questions that they may have regarding taxation of the credits.

## 3 (56) Reduction Credit Tax Accounting Part 1

### ■ Tokyo Regional Taxation Bureau's response to TMG's queries on tax procedures for the Tokyo Cap-and-Trade Program

#### 1 How to deal with tax related to trading of credits acquired

(June 2012, Tokyo Regional Taxation Bureau's response: <http://www.nta.go.jp/tokyo/shiraberu/bunshokaito/shohi/120611/index.htm>)

	If obligators themselves receive issuance from TMG	If credits are purchased from a third party
i When credits are acquired	Corporation tax : No measures taken (off-balance). Consumption tax : Not subject to capital transfer rules, etc. (No measures taken).	Corporation tax : Expenses required for trading are included in calculations as intangible fixed assets Consumption tax : Taxation collected. (Note:) When employing the Itemized Method, (1) in the case of credits being acquired for one's own company's use, purpose of use category will be determined in accordance with the details of the obligator's trading and facility operations; and, (2) in the case of credits being acquired for the purpose of selling to a third party, it will be subject to "That Required Only for the Transfer, etc. of Taxable Assets."
ii Own company use (transferring credits to the facility's surrender account for the purpose of redeeming)		Corporation tax : Factors in the value of financial loss as "Selling, General and Administrative Expenses," etc. The value of loss in this case will be calculated based on the book value at the time of transfer (redeeming). Consumption tax : Not subject to capital transfer rules, etc. (No measures taken).
iii When sold to a third party	Corporation tax: Treated as the sale of an intangible fixed asset. In this case the transfer cost price is treated as being zero. Consumption tax: Treated as taxable sales proceeds.	Corporation tax : Treated as the sale of an intangible fixed asset. In this case the transfer cost price is treated as being that of book value at the time of sale. Consumption tax : Treated as taxable sales proceeds.

#### 2 Tax treatment of trading relating to the acquisition, etc. of credits for emission reductions from small and midsize facilities in Tokyo, credits for emission reductions outside Tokyo area, and Renewable Energy Credits

- The same as above in regard to treatment of credits. (October 2012, Tokyo Regional Taxation Bureau's verbal response)

#### 3 Tax treatment for trading related to Renewable Energy Credits, etc. that have had their renewable energy certification converted due to the project for promoting devices that utilize solar energy for home use that was implemented cooperatively by TMG and the Tokyo Environmental Public Service Corporation. (June 2012, Tokyo Regional Taxation Bureau's response)

	When obtaining Renewable Energy Credits through renewable energy certificates
i When acquiring a renewable energy certificate (purchasing with cash, etc.)	Corporation tax : Included in calculations as a temporary advance to the value of cash, etc. paid when acquiring a renewable energy certificate. Consumption tax : No measures taken.
ii When acquiring Renewable Energy Credits from TMG	Corporation tax : The sum of the temporary advance in "i" above is included in calculations as an intangible fixed asset. Consumption tax : Taxation collected. (Note:) When employing the Itemized Method, (1) in the case of credits being acquired for one's own company's use, purpose of use category will be determined in accordance with the details of the obligator's trading and facility operations; and, (2) in the case of credits being acquired for the purpose of selling to a third party, it will be subject to "That Required Only for the Transfer, etc. of Taxable Assets."
iii Own company use (transferring Renewable Energy Credits to the facility's surrender account for the purpose of redeeming)	Corporation tax : Factors in the value of financial loss as "Selling, General and Administrative Expenses," etc. The value of loss in this case will be calculated based on the book value at the time of transfer (redeeming). Consumption tax : Not subject to capital transfer rules, etc. (No measures taken).
iv When sold to a third party	Corporation tax : Treated as the sale of an intangible fixed asset. In this case the transfer cost price is treated as being that of book value at the time of sale. Consumption tax : Treated as taxable sales proceeds.

(Note:) The carbon price in emissions trading in this case is based on a value found to be appropriate when taking into consideration the following: inter-third party trading, obligators' expenditures in creating emissions credits for themselves, and other relevant economic conditions.

When adjustments are being made to suit specific cases of trading, etc. being carried out by individual taxpayers, there may arise differences in taxation between their cases and the details of the response given here.

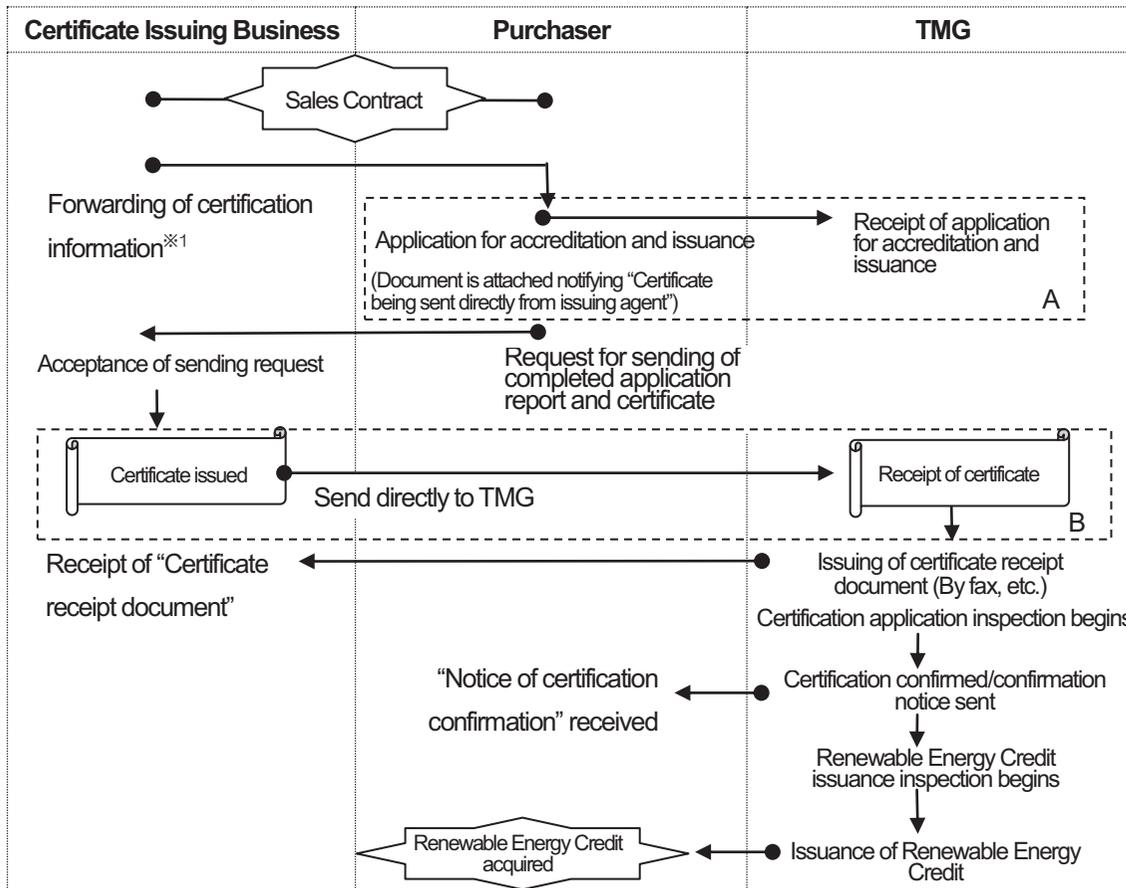
### 3 (56) Reduction Credit Tax Accounting Part 2

■Tokyo Regional Taxation Bureau’s response to TMG’s’ queries on tax procedures for the Tokyo Cap-and-Trade Program

4 Taxation procedures related to trading, etc. of Renewable Energy Credits with converted renewable energy certificates that were sold by someone other than Tokyo Environmental Public Service Corporation.

- When carrying out trading in accordance with contract examples and purchasing procedures indicated by TMG, measures are the same those when trading Renewable Energy Credits with converted renewable energy certificates sold by Tokyo Environmental Public Service Corporation (March 2013, Tokyo Regional Taxation Bureau’s verbal response)

○Procedures for sales contract



※1 "Certification information" refers to information necessary for application for certification, such as: renewable energy type, serial number, emission amount to be certified, etc.

Points regarding procedure:

- (1) After conclusion of the contract of the sale of certification and before issuance of said certificate, the purchaser must submit to TMG the following documents: "Application for certification of energy, etc. related to other reductions" and "Application to issue tradable credits." At this time a document is attached with the title "Certificate being sent directly from issuing agent."
- (2) As the certificate issued is sent directly by the certificate issuer to TMG the actual certificate is not given to the purchaser.

○Sample Contract (Excerpt)

**(Purpose)**

**Item 1:** Under this contract, in accordance with the Tokyo Cap-and-Trade Program prescribed in the "The Tokyo Metropolitan Environmental Security Ordinance" (Referred to below as "The Ordinance."), the purchaser can acquire Renewable Energy Credits with a renewable energy certificate with converted environmental value and thereby fulfill their obligations. Due to this, this contract has the purpose of regulating the transfer of renewable energy certificates from seller to purchaser.

**(The transfer of renewable energy certificates)**

**Item 2:** The seller is to transfer the renewable energy certificate to the purchaser in accordance with the following contract item.

- (1) The energy amount to be transferred to the purchaser by the seller by way renewable energy certification is to be XXX kWh. The method for converting the energy amount to be transferred to Renewable Energy Credits shall be in accordance with the separate form.
- (2) The renewable energy certificate to be transferred can be used in fulfilling reduction obligations, and the seller must issue said certification by X year, X month, and X day under the name of XXX and send it to TMG.
- (3) The seller, upon sending the aforementioned renewable energy certificate to TMG, must send to TMG copies, which outline the details of the applicable renewable energy certificate, of: (a) the certification of renewable energy generating equipment and (b) the generated energy certificate, issued by The Green Energy Certification Center.

2 The seller is not able to change the purpose of use or the name on the certificate after issuance of the renewable energy certificate is as outlined in the previous item. Nor are they able to transfer it to a third party.

**(Acquisition of Renewable Energy Credits)**

**Item 3:** In regard to the renewable energy certificate issued in accordance with this contract, the seller must, before X year, X month, and X day, apply to TMG for accreditation and issuance according to the Ordinance and the guideline, and soon after lodging the appropriate application forms, inform the seller of such action.

**(Separate form)**

<On the method for converting energy transfer>

Conversion to the Renewable Energy Credit amount printed on the renewable energy certificate, which is passed to the buyer by the seller, is calculated as per below.

**(Calculation formula of energy amount to be transferred)**

In the case of energy generated by solar, wind, geothermal, or small hydro

Renewable Energy Credit (tCO2) =  
 Transferred energy (kWh) × CO2 emission factor for electric power (tCO2/千kWh) ※ +1,000×1.5  
 (rounded after the decimal point)

In the case of energy generated by biomass

Renewable Energy Credit (tCO2) =  
 Transferred energy (kWh) × CO2 emission factor for electric power (tCO2/千kWh) ※ +1,000×1.0  
 (rounded after the decimal point)

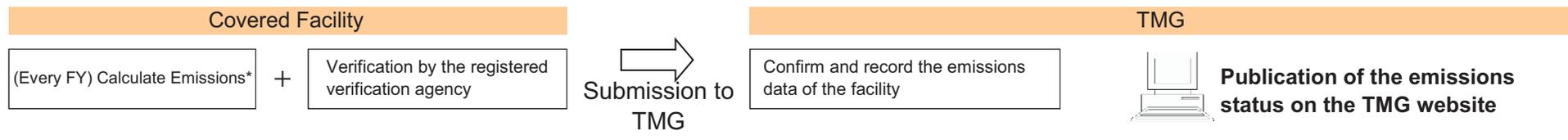
※The value of the CO2 emission factor is set by TMG for each individual compliance period

Content that must be detailed in the contract:

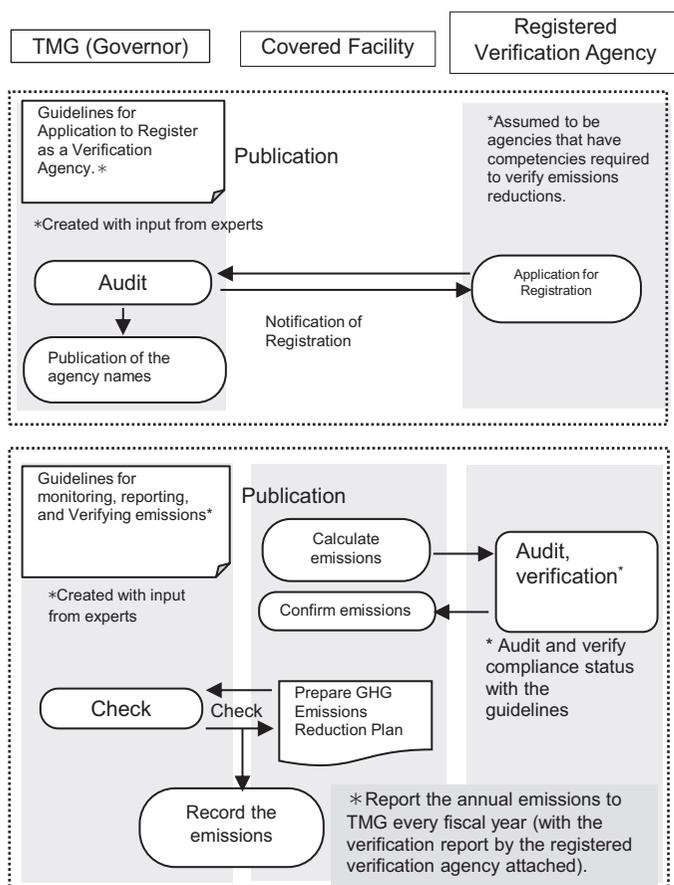
- ✓Have it noted that the purchaser acquired the renewable energy certificate with its environmental value converted to Renewable Energy Credits in accordance with TMG’s ordinance and that it will be used as obligation.
- ✓Have it noted that the certificate will be sent by the issuing business entity to TMG
- ✓Calculation formula to tCO2 regarding energy amount to be transferred.

# 3(57) Calculation and Verification of Annual Emissions

● It is important to verify the emissions (reductions) in order to ensure fairness of the compliance and the emissions trading.

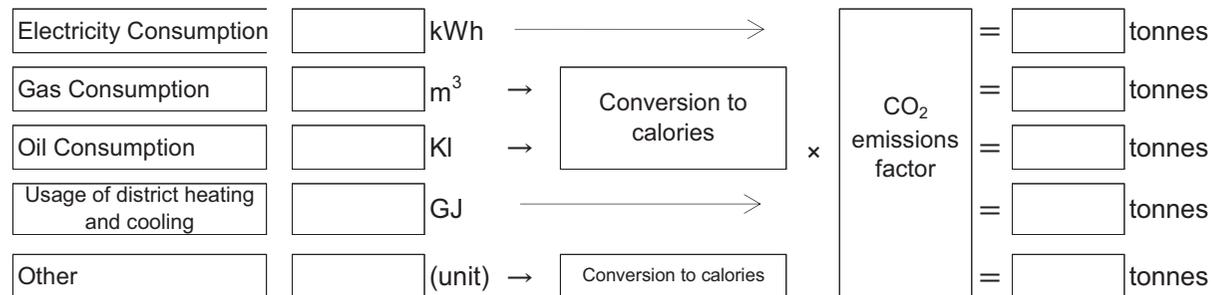


## Annual Reporting Flow of GHG Emissions



## Calculation Example

◆ Calculation of annual energy consumption of a facility --> Conversion to annual CO<sub>2</sub> emissions



\*The following figures must be verified by the registered verification agency.  
GHGs subject to reduction  
(CO<sub>2</sub> emissions from the use of fuel, heat, and electricity.)

**Refer to the Guidelines for Monitoring and Reporting/ Verifying Energy Related CO<sub>2</sub> Emissions.**

● **Registered Verification Agency (Conditions to become a verification manager): Must meet the conditions below + pass the TMG Training Course**

Experience of 10 or more cases in the past three years on either of the following; energy-saving diagnostic work, ISO14001 audit, CDM activation audit/verification work, or verification work for Emission Trading Trial Scheme/National Credit Scheme/JVETS/J-VER

The list of registered verification agencies is published and updated regularly on the website of the Bureau of the Environment, Tokyo Metropolitan Government.

### 3 (58) Low-intensity Buildings Such as Parking Lots, Warehouses, and Elementary Schools, etc. [Second compliance period]

- At facilities with multiple buildings, when there are comparatively small-sized buildings used for business other than the primary business and whose CO<sub>2</sub> emission intensity is less than a certain value (low-intensity buildings), the CO<sub>2</sub> emissions of such buildings can be excluded from calculations for the base-year emissions and for annual energy related emissions (but is included in crude oil equivalent energy consumption).
- The excluded CO<sub>2</sub> emissions are calculated via “actual energy consumption measurements” or “estimation (multiply emission intensity for low-intensity buildings by floor space area).”

#### ● Requirements for low-intensity buildings

Must be a facility with multiple buildings that fulfills all of the following requirement items, (1) through (3). (When requirements are met with multiple buildings, omissions may be made till the total for all buildings is 10% or less than the base-year emissions.)

##### Item ① Buildings must have CO<sub>2</sub> emission intensity of 25kg-CO<sub>2</sub>/m<sup>2</sup> or less

- Energy usage must be properly measured.
- However, as it is usual for parking lots, warehouses, and elementary schools, etc.\* to be at or under 25kg-CO<sub>2</sub>/m<sup>2</sup>, measurement is not necessary.
- In cases when, due to construction, etc., in applicable buildings there are anomalies in CO<sub>2</sub> reduction conditions such is excluded from measurement.

##### Item ② Applicable buildings must be used for business other than the primary business of the facility.

- Primary business refers to that which produces the highest CO<sub>2</sub> emissions of all businesses conducted at the target facility.
- Parking lots used by persons connected with the primary business of the facility and warehouses for items produced by the primary business are not subject to this requirement.

##### Item ③ CO<sub>2</sub> emissions must be 10% or less than the base-year emissions for applicable buildings

<Example>

	Building A	Building B	Building C
Item ① Emission intensity	83kg-CO <sub>2</sub> /m <sup>2</sup>	34kg-CO <sub>2</sub> /m <sup>2</sup>	20kg-CO <sub>2</sub> /m <sup>2</sup>
Item ② Business	Primary business	Primary business	<ul style="list-style-type: none"> <li>• Other than primary business</li> <li>• No relationship with primary business</li> </ul>
Item ③ Percentage to base-year emissions	60%	40%	10%
All required items	Inapplicable	Inapplicable	Applicable

#### ● Calculation method for excludable CO<sub>2</sub> emissions

The CO<sub>2</sub> emission amount that can be excluded for low-intensity buildings is calculated with one of the two methods below. It is calculated when fulfillment of the required items is confirmed and, as long as there is no change in the low-intensity building's floor space area, the same amount as that from during the compliance period is excluded.

- (1) In the case of parking lots, warehouses, and elementary schools, etc.\*, emission is calculated by multiplying 25kg-CO<sub>2</sub>/m<sup>2</sup> by the floor space area.
- (2) In cases other than (1), the CO<sub>2</sub> emission rate is calculated based on actual measurement values of the applicable building's energy usage (upper limit: 25kg-CO<sub>2</sub>/m<sup>2</sup>).

#### ● Excludable items and exclusion method

Energy consumption in crude oil equivalent	Non-excludable ×	Exclusions cannot be made from energy consumption in crude oil equivalent so the obligation, in terms of being a reporting/compliance facility (energy consumption in COE at or above 1,500 kL), is the same as until now.
Base-year emissions	Excludable ○	When excludable, exclusions need to be made from the base-year emissions, not only from yearly emissions.
Yearly emissions		

※In regard also to the scope of exclusion, reductions must be promoted as far as possible.

#### ● Procedure

Confirmation (including revisions) of fulfillment of requirement items, based on base-year emissions in the second compliance period, is only conducted once (not subject to verification).

	1 <sup>st</sup> Compliance Period	2 <sup>nd</sup> Compliance Period	
	... 2014	2015	~2019
Facilities that become compliance facilities before FY2014	<div style="border: 1px solid black; padding: 5px;">                     Requirement Confirmation                      When recalculating base-year emissions (when submitting compliance documents), apply to TMG.                 </div>	<div style="border: 1px dashed black; padding: 5px;">                     Hereafter excluded from yearly emissions for each FY.                       ※As long as there is no change in floor space area of low-intensity buildings, during the compliance period the same amount is excluded. (Exclusion amount is not subject to verification)                 </div>	

If the facility becomes a compliance facility in FY2015 onward, the application must be made when determining the base-year emissions.

\*“Parking lots, warehouses, and elementary schools, etc.”: Parking lots, warehouses (limited to when energy use is primarily for ventilation and lighting—not for when a constant temperature is kept to maintain the integrity of items stored), kindergartens, and elementary and junior and senior high schools.

## 3(59) Use of Specified Measuring Instrument

### ● The 1<sup>st</sup> compliance period (easing measures)

- ✓ When the amount of fuels, etc. cannot be ascertained via purchasing slips, etc., it is possible to take actual measurements with the appropriate measuring equipment for the purpose of trading or certification.
- ✓ As an easing measure, until the end of FY 2014 it will also be possible to use measuring devices to test actual usage that are not applicable for use in measurements for trading and certification.

(Refer to Guideline for Monitoring and Reporting Energy-Related CO<sub>2</sub> Emissions, pp. 57–60)

### ● The 2<sup>nd</sup> compliance period

- ✓ From FY 2005 onward (the 2<sup>nd</sup> compliance period), measuring will be limited to those devices able to be used for trading and certification purposes.
- ✓ However, when it cannot be avoided and measurements are taken with equipment not usable in trading and certification, from the perspective of fairness, the **measurement will be conservative**.

※The yearly emission rate for reporting/compliance facilities (including emissions from the year in which base-year emissions were calculated) is used in the 1<sup>st</sup> compliance period (easing measure).

### ●Conservative measurements (calculated based on 5% increase/decrease)

- ① **For emissions rate that should be tested** : Calculate emission rate as fuel usage amount, being actual emissions ×1.05.

Example: When measuring facility's actual energy usage with equipment not specialized for energy measurement.

Sample calculation: When actual value is 120,000kWh

Take  $120,000\text{kWh} \times 1.05 = 126,000\text{kWh}$  as that facility's fuel usage rate.

- ② **For emissions that should be excluded**: Exclude emissions as actual value ×0.95 for fuel usage rate.

Example: When measuring supply to housing or other facilities with equipment not specialized for energy measurement.

Sample calculation: When actual value of supply to housing is 6,800kWh

Make exclusions taking  $6,800\text{kWh} \times 0.95 = 6,460\text{kWh}$  as that facility's fuel usage rate.

- **Application scope of conservative calculations**: Applies to emissions that must be calculated (or excluded). On the other hand, as the actual measured value of reductions and exclusions that can be measured must be measured with specified equipment, conservative calculations do not apply.

- **When the measurement device does not have specified measuring functions** : When the measurement device does not have specified measuring functions (for example, a calorimeter with an aperture of more than 40mm), it is not necessary to make conservative measurements, but more sensitive measurements must be taken after periodical maintenance and calibration of the applicable device.

### ●Transitioning from 1st period treatment to 2nd period treatment

- (1) Facilities that will become reporting/compliance facilities by FY 2014

The calculation of yearly emissions from the second period onward will be subject 2<sup>nd</sup> period treatment.

Example: From FY 2013 designated base-year emission value will be the average of FY 2010–2012.

\*RF: Reporting facility CF: Compliance facility

1st compliance period					2nd compliance period				
2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
RF	RF	RF	CF	CF	CF	CF	CF	CF	CF
1 <sup>st</sup> period treatment (easing measures)					2 <sup>nd</sup> period treatment				

- (2) Facilities that become reporting/compliance facilities in FY 2015 onward

The calculated yearly emission rate before becoming designated as a reporting/compliance facility is treated as being 1st period (easing measures) and, even when the base-year emissions are calculated with the averages from each FY after that, calculations will be treated as being 1st period (easing measures).

Example: Designated from FY 2017, with base-year emissions as average value of FY 2014–2016.

1st compliance period					2nd compliance period				
2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
—	—	—	—	RF	RF	RF	CF	CF	CF
1 <sup>st</sup> period treatment (easing measures)							2 <sup>nd</sup> period treatment		

\*The 1<sup>st</sup> period treatment (easing measures) is also applied to base-year emissions.

### 3(60) Requirements of Verification by a Registered Verification Agency (a Third-party Organization)

#### 1. Verification of Emission Amounts

Obligation <sub>1</sub>	Timing	Objects of Verification	Main Points of Verification	
			Boundaries and Monitoring Points of the Facility	Energy Consumption; CO <sub>2</sub> Emission
○	When the facility falls in the scope of the Program for the first time (Submission of a letter confirming that it has fallen in scope.)	Size requirement of a covered facility (Energy consumption figures of the past three years at maximum) (For facilities that fall in scope after FY2009, energy consumption figures of the past one year only)	<ul style="list-style-type: none"> <li>Facility boundaries must be appropriate.</li> <li>Monitoring points achieve total coverage.</li> </ul> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin-left: 20px;">Verification by drawings and site inspection</div>	<ul style="list-style-type: none"> <li>Check if energy consumption and other figures match the records on bills, etc.</li> </ul> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin-left: 20px;">Verification by electricity bills, etc.</div>
○	When reduction obligation takes effect (Application to Determine the Base-year Emissions)	Base-year Emissions (energy- related CO <sub>2</sub> emission levels of each fiscal year of the base years)	<ul style="list-style-type: none"> <li>(Whether or not there is any status change)</li> </ul>	<ul style="list-style-type: none"> <li>Check if energy consumption and other figures match the records on bills, etc.</li> <li>Check that there is no calculation error in the conversion to CO<sub>2</sub> emission levels.</li> </ul>
○	Every FY (Submission of a Plan)	Emission levels of the previous FY (Only for energy- related CO <sub>2</sub> emissions)	<ul style="list-style-type: none"> <li>(Whether or not there is any status change)</li> </ul>	<ul style="list-style-type: none"> <li>Check if energy consumption and other figures match the records on bills, etc.</li> <li>Check that there is no calculation error in the conversion to CO<sub>2</sub> emission levels.</li> </ul>
△	If using reduction of other gas emissions in fulfillment of the Cap Obligation	Other gas emission reduction figures	<ul style="list-style-type: none"> <li>Identification of the sources of emission of other gases</li> <li>Check if the measurement of the emissions of other gases is highly accurate.</li> </ul>	<ul style="list-style-type: none"> <li>Check if the figures concerning the emissions of other gases match meter readings and records on bills, etc.</li> <li>Check that there is no calculation error in the conversion to CO<sub>2</sub> emission levels.</li> </ul>

\*1 ○: Compulsory submission △: Voluntary submission

#### 2. Verification for a Top-level Facility Certification

Obligation	Timing	Items	Main Points of Verification
△	When applying for a certification as a top-level facility	Check if the facility satisfies the criteria for a top-level facility.	<ul style="list-style-type: none"> <li>Check if the facility is implementing the operational measures specified in the criteria for a top-level facility.</li> <li>Check if the facility has introduced the equipment specified in the criteria for a top-level facility.</li> </ul>

#### 3. Verification of Credits (emission reductions from small and midsize facilities in Tokyo, renewable energy credits (reserve of electric power and other environmental value) and emission reductions outside Tokyo area)

Obligation	Timing	Items	Main Points of Verification
△	When certifying reduction levels, or when certifying equipment for a renewable energy certificate, etc.	Check if the facility has met the criteria for issuing credits	<ul style="list-style-type: none"> <li>Check if the measurement of electric power consumption and reduction is accurate, etc.</li> </ul>

## 3(61) Registration Requirements for a Verification Agency

- There are two types of verifications (verification of emission levels etc., and verification of promotion of measures) a would-be verification agency must be registered with the Governor.

### ● Requirements for a Verification Agency

- Appoint one or more lead verifier in each office in Tokyo.
- Prepare documentation concerning management and guarantee of accuracy of verification work.
- Have a section that performs verification work and a section that assures and manages the accuracy of the verification work. (Additionally, it is desirable to have a lead verifier in each section.) (Additionally, it is desirable to have a lead verifier in each section.)

### ● Requirements of a Lead Verifier: Requirements as below + completion of training by TMG

#### **Class 1: Verification of base-year emissions, energy-related CO2 emissions of each fiscal year, or a new facility's compliance with the standard to counter global-warming countermeasures**

Experience of a total of ten or more cases, in the past three years, of verification work for this Program, energy-saving diagnostic work, ISO14001 audit, ISO50001 audit, CDM activation audit/verification work, verification work for the Emission Trading Trial Scheme, National Credit Scheme, JVETS, J-VER, J-Credit Scheme or ASSET, or verification work for the Saitama Scheme

#### **Class 2: Verification of emission reductions from small and midsize facilities in Tokyo and emission reductions outside Tokyo area**

Experience of a total of ten or more cases, in the past three years, of verification work for this Program, energy-saving diagnostic work, ISO14001 audit, ISO50001 audit, CDM activation audit/verification work, or verification work for Emission Trading Trial Scheme, National Credit Scheme, JVETS, J-VER, J-Credit Scheme or ASSET, or one-year or longer experience in diagnosis, consulting, or commissioning work for energy-saving and/or CO2 emission reduction measures

#### **Class 3: Verification in case where the reduction figures of other gases that are not covered under the reduction obligation are used to fulfill the reduction obligation**

Experience of a total of three or more cases, in the past three years, of verification work for this Program, ISO14001 audit, ISO50001 audit, CDM activation audit/verification work, or verification work for the Saitama Scheme (concerning projects to reduce emissions of gases other than CO2 from energy consumption)

#### **Class 4: Verification of renewable energy credits**

Experience of a total of ten or more cases, in the past three years, of verification work for this Program, Green Electricity Certification work, CDM activation audit/verification work, verification work for the National Credit Scheme/JVER/J-Credit Scheme or ASSET (those related to projects that involve the use of renewable energy) or verification work for the Saitama Scheme

#### **Class 5, 6: Verification of a Top-level Facility certification for Class 1 or Class 2**

Have one of the qualifications listed below, and three-year or longer experience in diagnosis, consulting, or commissioning work for energy-saving and/or CO2 emission reduction measures

Certified Energy Manager, Registered First Class Architect for Building Equipment Design, Building Mechanical and Electrical Engineer (BMEE), or Consulting Engineer (electrical and electronic, mechanical, sanitary engineering, total technology management (electrical and electronic, mechanical, sanitary engineering))

### ● List of Verification Agencies

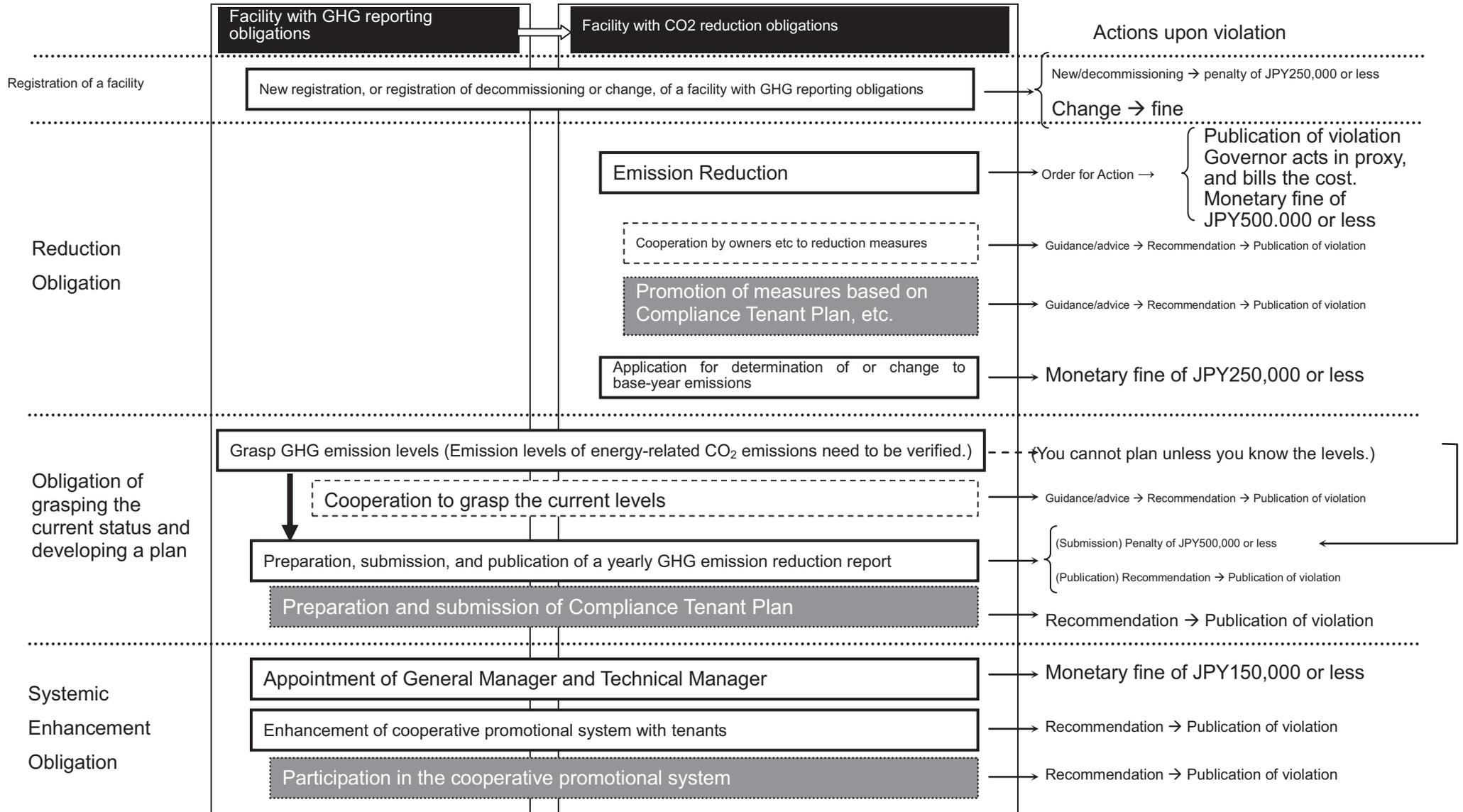
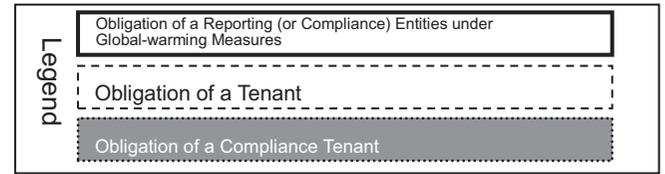
- Please refer to the "Registered Verification Agencies" page on the website of the Bureau of the Environment, Tokyo Metropolitan Government, for a list of verification agencies(Japanese only): [http://www.kankyo.metro.tokyo.jp/climate/large\\_scale/authority\\_chief/registered\\_agency.html](http://www.kankyo.metro.tokyo.jp/climate/large_scale/authority_chief/registered_agency.html)

\*A registered verification agencies evaluation system has been applied from FY2013. For details, see the webpage titled "About the evaluation system for the registered verification agencies" in the website of the Bureau of Environment.

[http://www.kankyo.metro.tokyo.jp/climate/large\\_scale/authority\\_chief/hyouka.html](http://www.kankyo.metro.tokyo.jp/climate/large_scale/authority_chief/hyouka.html)

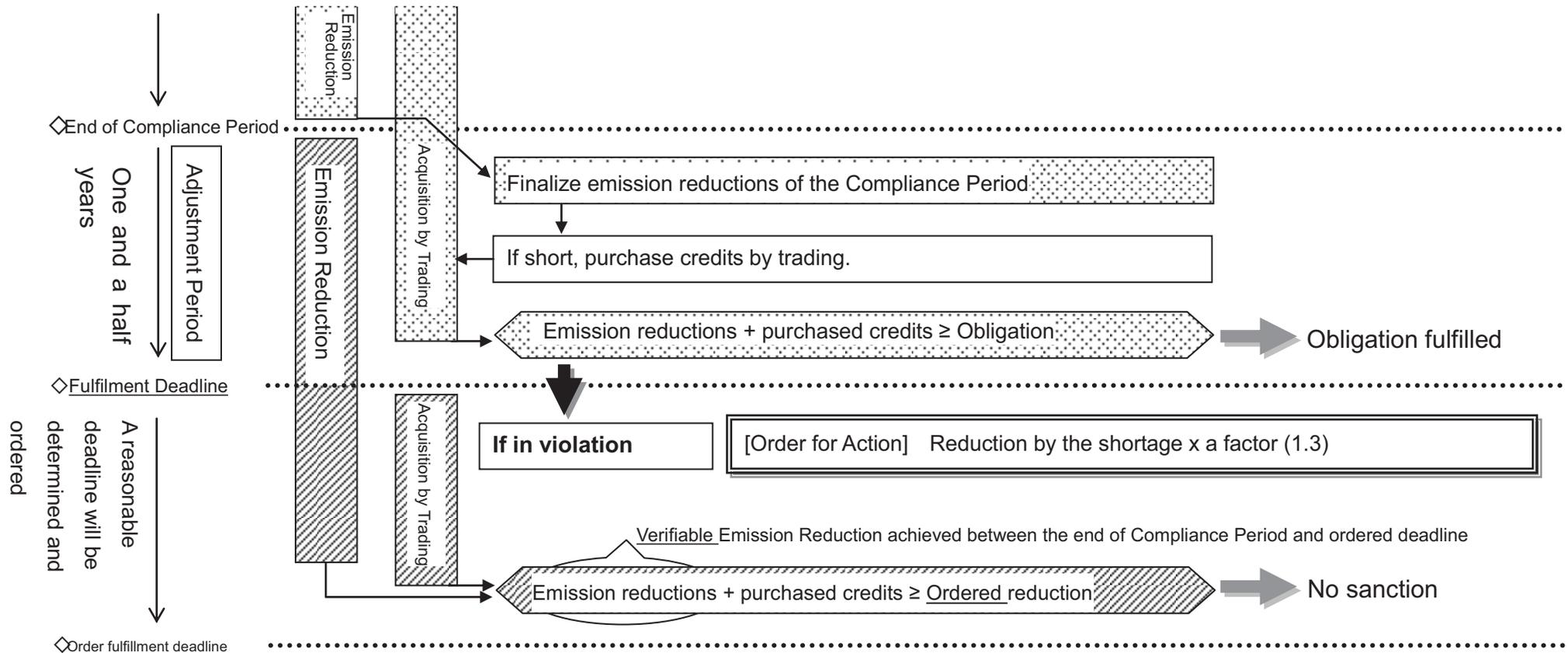
# 3(62) Main Obligations and Actions against a Violation Part 1

- A violation by an owner etc may incur a penalty payment.
- A violation by a tenant will lead to a recommendation to the tenant, and public announcement of the violation by the tenant.



### 3(63) Main Obligation and Actions against a Violation Part 2

- If the reduction obligation is not fulfilled, an order will be issued to reduce the emission by the amount of reduction shortage multiplied by 1.3.
- If the business violates the order, the fact of the violation will be published and the payment of the monetary amount of the reduction shortage and/or a penalty (up to JPY500,000) will be ordered.



**If in violation**

Publication of violation

Governor's action as proxy, and billing of the cost

Monetary amount corresponding to the reduction shortage

Monetary fine of JPY500,000 or less

**Governor's action in proxy:**

- Governor acts in proxy to purchase the reduction shortage and record the figures as the fulfillment of the order.
- The cost of purchase is billed to the party that violated the order.

### 3(64) Leased Buildings Part 1

● **Both the building owners and Tenants must be involved, in order to reduce GHG emission effectively.**

(Examples) In general, only the Building Owner may implement refurbishment of the equipment of the building, but Tenants must be involved in day-to-day energy-saving actions.

● **Building Owner is the primary party under reduction obligation, and**

1) All Tenants will have the obligation to cooperate with the owner to fulfill its reduction obligation.

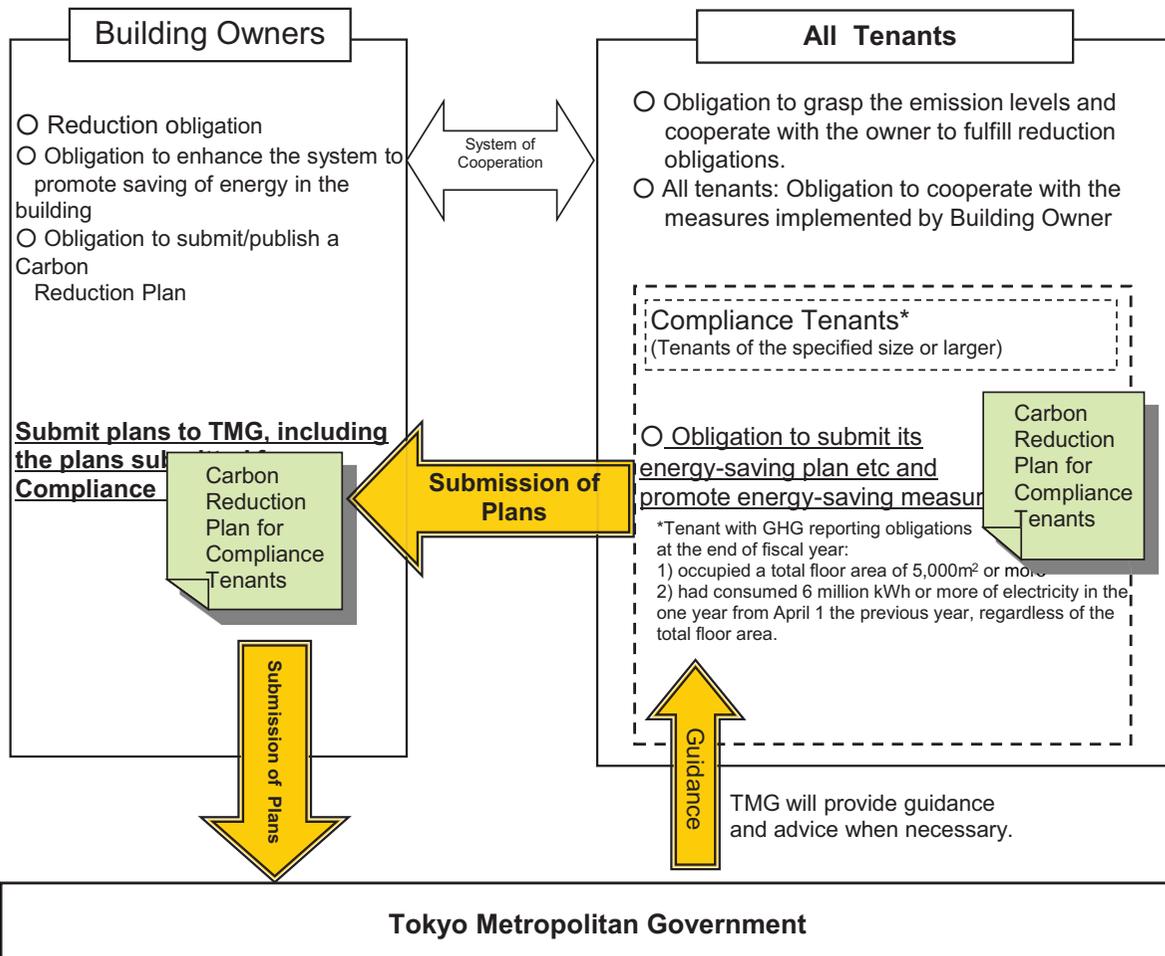
2) A Tenant of a size larger than the specified size (“Compliance Tenants”) will have the obligation to prepare its own emission reduction plan as a building tenant, and submit it to TMG via the Building Owner, in addition to the obligation of cooperation with the owner to fulfill its Cap Obligation.

● **TMG will offer guidance to Tenants directly, as necessary, to help them implement their measures.**

(Governor’s “recommendation” and “publication of violation” are provided for as the actions against tenants in violation of its obligation of cooperation.)

● **From FY2014, TMG has started evaluating and publicizing tenants’ carbon reduction measures.**

### ■ Main Obligations of Building Owners and Tenants



### ■ Building Owners

○ Obligation to enhance the system to promote global-warming measures in cooperation with tenants (Enhancement of a cooperative promotional system)

○ Provision of information useful for promotion of emission reduction measures by tenants

### ■ All Tenants

\*Obligation to cooperate with Building Owner’s fulfillment of reduction obligation

- Obligation to make effort to participate in the cooperative promotional system enhanced by Building Owner (Obligation of Effort)
- Obligation to provide the Building Owner with the relevant energy consumption data, if having an account with an energy supply company separately
- Obligation to comply with the regulations concerning the operations of the facility
- Obligation to enhance the tenant-side promotional system of countermeasures that involves the whole tenant organization
- Obligation to make effort to grasp emission levels and promote countermeasures in a planned manner (Obligation of Effort)

### ■ Compliance Tenants

\*Obligation to cooperate with Building Owner’s fulfillment of reduction obligation

- In addition to all the above obligations of all tenants,
- Obligation to participate in the cooperative promotional system enhanced by the Building Owner
  - Obligation to prepare and submit a plan of countermeasures implemented by the tenant itself (GHG emissions reduction Plan for compliance tenants), and obligation to promote the countermeasures based on the said plan
  - Obligation to accommodate negotiations if the Building Owner offers to become a joint party under reduction obligation.

<A cooperative promotional system> A system that ensures the actions listed below will be taken:

- Regular meeting between the owner and tenant(s) to check the current status, communicate the countermeasures to all parties concerned, present issues, and prepare improvement actions etc to promote countermeasures against Global-warming
- Owner and tenant(s) have discussions and prepare, and comply with, the regulations concerning the operations of the facility subject to CO<sub>2</sub> emissions reduction obligation (“covered facility”).

● Owner takes steps to know the energy consumption of each tenant (including estimated consumption), and notifies tenant(s) of their consumption level(s). Tenant being thus notified will make effort to reduce its energy consumption.

● If a tenant has an account with an energy supply company separately, such a tenant will provide the owner with its energy consumption data, and the Owner will grasp the total GHG emission level of the facility as a whole.

# 3(65) Leased Buildings Part 2

## Examples of Actions/Measures Expected of Building Owners

### Energy-saving Measure

- ◆ Talk about energy-saving measures regularly

TOPICS  
 1). Energy consumption data from each tenants last month  
 2). energy-saving measures  
 \*temperature setting on



### Revision of House-keeping Rules

- ◆ Revise rules that would lead to wasteful

operates on Saturday Is it necessary?

Rules of XX Building

- ◆ Operation time of Air conditioning
  - Workday 9am-6pm
  - Saturday 9am-1pm
  - Sunday -
- ◆ Temperature of the room
  - summer season 24°C
  - winter season

It's too hot for the office.

It is not necessary on Spring or Autumn season.

### Inclusion of Energy Consumption

- ◆ Building Owner should provide the tenants' energy consumption data so they may know their own

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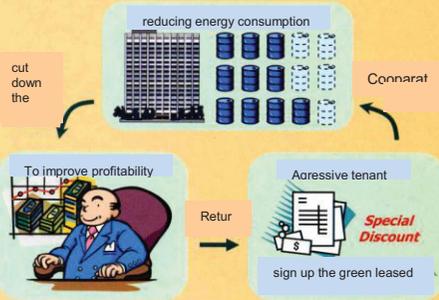
1. Energy Consumption on this month
  - Electricity usage
  - Operation time of air condition
  - Compare this month with last month

2. Compare other tenants in same building



### Preferred Treatment of Tenants Cooperative to Energy-saving Effort

- ◆ Discuss preferred treatment of tenants cooperative to energy-saving effort to motivate them to save energy continually.
- ◆ If their energy consumption is reduced, the cost to the Building Owner is also reduced.



## Examples of Actions/Measures Expected of All Tenants

### <Check Methods>

- ◆ Check the energy consumption, if that information is included in the monthly invoice.
- ◆ If the energy consumption is not included,

BILL for leased tenant

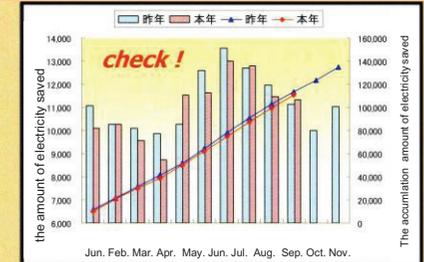
\$ XXX,XXX,XXX

(DETAIL)  
 RENT \$ XX,XXX,XXX  
 ELECTRICITY \$ X,XXX,XXX

energy consumption (X,XXX,XXX)

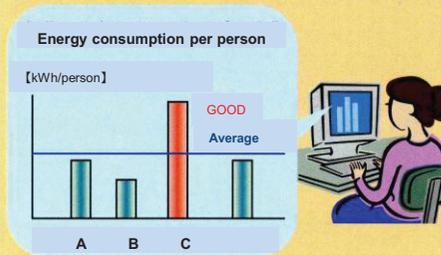
### <Check for Wasteful Use>

- ◆ Check if energy consumption has increased from the level last month or same month last year.



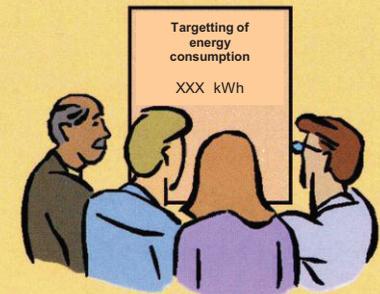
### <Raise Energy-saving Awareness of>

- ◆ Explain your energy consumption status to your employees and ask them to save energy.
- ◆ Obtain the consumption data of each meter from the Building Owner, if there are multiple meters in your premises.



### <Target Setting and>

- ◆ Having a defined target will motivate energy-saving effort.
- ◆ Have each of your employees understand the target



\*All Tenants are also required to take actions/undertakings as follows.

- 1) Participation in the cooperative promotional system (meetings on energy-saving measures etc) enhanced by the Building Owner.
- 2) Cooperation with the Building Owner to help them fulfill their reduction obligation (promotion of day-to-day energy-saving actions, etc.)
  - Turning off lights when not in use
  - Use of energy-saving or low-standby-energy models of PCs, copiers, and facsimile machines, and utilization of the energy-saving mode of each piece of equipment
  - Active use of energy-saving and/or low-heat-generating IT servers, etc.
  - Whether or not the tenant had an OA equipment manufacturer etc. to propose energy-saving measures that can be practiced daily; whether or not such proposals have been discussed and implemented

### 3(66) Leased Buildings Part 3

The energy consumption from the area occupied and used by tenants is about 60% of the energy consumption of the whole building.

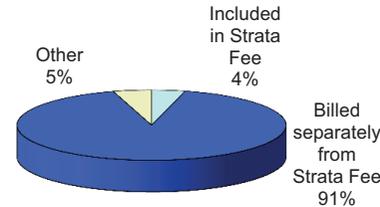
(This is in the case where the rentable area ratio (rentable area/total area) is 52.6%; from a brochure by the Energy Conservation Center, Japan.)

In order to promote measures to reduce CO<sub>2</sub> emission from leased

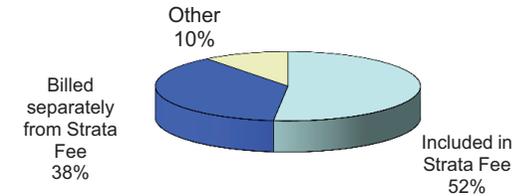
### [Reference Information] Results of a Questionnaire Survey of Leased Buildings (Overview)

(A questionnaire survey of large facilities in Tokyo (leased buildings); A survey by the Bureau of the Environment, Tokyo Metropolitan Government in 2007)

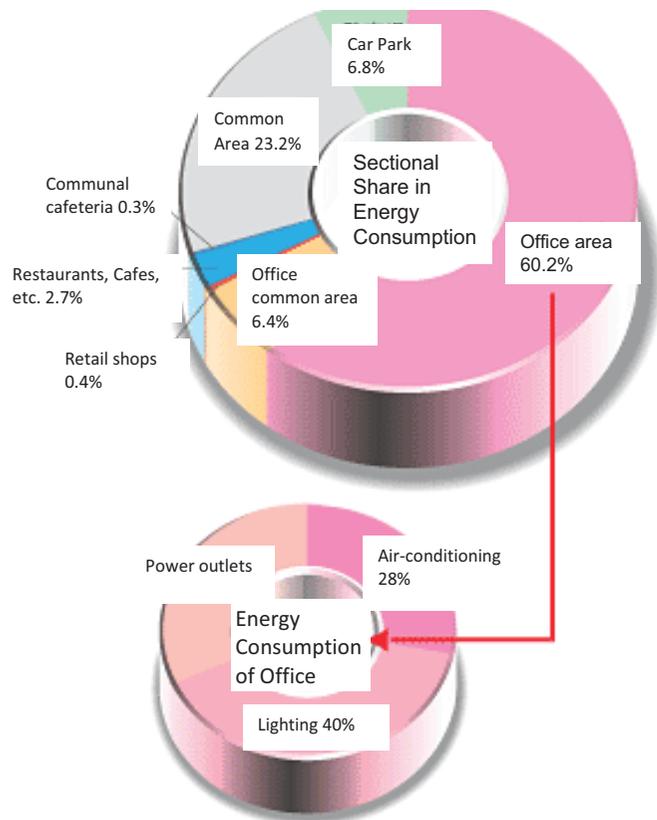
■ Billing method of electricity charge used in the tenanted space.



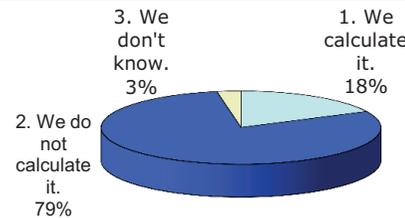
■ Billing method of air-conditioning cost used in the tenanted space.



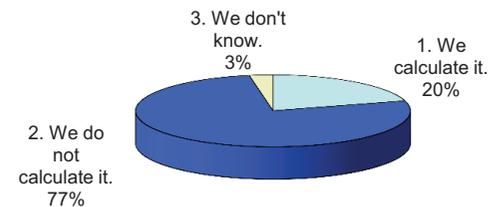
### Sectional Share in Energy Consumption



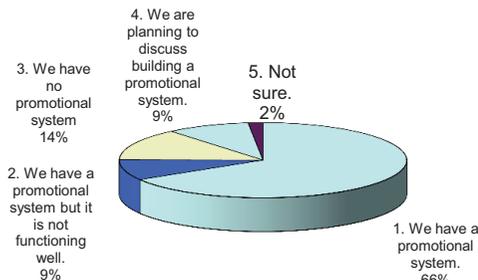
■ Calculation of electricity charge (yen/m<sup>2</sup>) used in the tenanted space per m<sup>2</sup>.



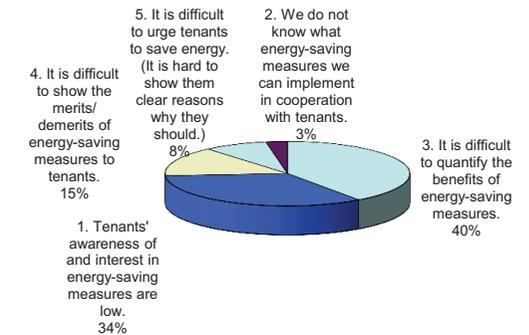
■ Calculation of air-conditioning cost (yen/m<sup>2</sup>) used in the tenanted space per m<sup>2</sup> per hour.



■ Building-wide system including tenants to promote energy-saving measures



■ Issues in promoting energy-saving measures in coordination with tenants



### 3 (67) List of Documents to Submit, Such as Plans

Documents to submit (name)	Submitter	Obligation *1	Conditions of submission	Deadline for submission	Main contents	Remarks
<b>&lt;Reporting (compliance) facilities&gt;</b>						
Confirmation Document Concerning the Designation of the Compliance Facility	Owners, etc. of facilities	◎	When the facility is not designated as a reporting facility and its energy consumption in the previous year was 1,500 kL or more in crude oil equivalent	End of October	• Energy consumption in the previous year	TMG will designate reporting facilities based on these notifications.
Notification of Owner, etc.	Those who bear a reduction obligation other than owners of facilities	△	When selecting an entity other than the facility owner as a compliance entity	As needed	• Name of the compliance entity • Reason for why that entity takes the obligation	
GHG Emissions Reduction Report	Reporting facilities (Compliance facilities)	◎	Every fiscal year	Either of the following, whichever comes later (1) End of November (2) 90 days after designation	• Reduction target, plan for reduction measures and past records • Promotional framework • GHG emissions in the previous year • Compliance status with reduction obligation (only for facilities whose obligation has begun)	A document that integrates the plan and report under the previous program
Compliance Tenant GHG Emissions Reduction Report	Compliance tenants, etc.	◎	Every fiscal year	End of November	• A plan and past records for reduction measures by the tenant	This document is developed by the owner, etc. and submitted to TMG.
Application to Determine the Base-year Emissions	Compliance facilities	◎	When reduction obligation starts	End of September	• Selected base-years • Calculated base-year emissions	
Application to Change Base-Year Emissions	Compliance facilities	○	When there is a significant change that causes the change of the base-year emissions	End of September	• How the situation has changed • Base-year emissions after the change	
Application to Change Facility Extent	Owners of facilities, etc. Reporting facilities (Compliance facilities)	△	When there is a change to the facility extent	End of September of the application year, after the following year of the year the change occurred	• How the facility Extent has changed	
Notification of Change to the Name, etc. of the Compliance Facility	Reporting facilities (Compliance facilities)	○	When the name of the reporting facility has been changed	Within 30 days from the day on which the change occurred	• Details of the change	
Notification of Ownership Change in Covered Facilities	Reporting facilities (Compliance facilities)	○	When the owner of the reporting facility has been changed	Within 30 days from the day on which the change occurred	• Details of the change	
Request for the Emissions Report of the Previous Owner	Reporting facilities (Compliance facilities)	△	When the facility owner is changed but the new owner cannot determine emissions before the change of ownership	Within 60 days from the day on which the change occurred	• Name and address of the previous owner • Why emissions cannot be determined	
Emissions Report of the Previous Owner	Previous owners of reporting facilities	○	When the new owner requires the reporting of emissions	Within 90 days from the day on which request for reporting was made	• Emissions as of the time the previous owner owned that facility	

\*1 ◎Documents that must be submitted by all facilities. ○Documents required to submit when the facility meets the conditions. △Facilities can decide whether or not to submit.

### 3 (67) List of Documents to Submit, Such as Plans (Continued)

Documents to submit (name)	Submitter	Obligation *1	Conditions of submission	Deadline for submission	Main contents	Remarks
Notification of cessation of the Compliance Facility	Reporting facilities (Compliance facilities)	○	When the facility operation is ceased or significantly reduced	(Cessation) within 30 days (Reduction) End of September	• Status of cessation or reduction of facility operation	
<Facility owned by SMEs with GHG Reporting Obligations (SMEs Facility)>						
Notification Concerning SMEs Facility	Owners, etc. of facilities	○	When SMEs, etc., hold more than 50% of ownership of facilities that fulfill the requirements for reporting facilities	End of October	• Energy consumption in the previous year (Verification is not required) • SMEs, etc. hold more than 50% of ownership	
GHG Emissions Reduction Report	SMEs Facilities	◎	Every fiscal year	Either of the following, whichever comes later (1) End of November (2) 90 days later from confirmation	• Reduction target, plan for reduction measures and records • Promotional framework • GHG emissions in the previous year (Verification is not required.)	
Compliance Tenant GHG Emissions Reduction Report	Compliance tenants, etc.	◎	Every fiscal year	End of November	• A plan and records for reduction measures by the tenant	This document is developed by the owner, etc. and submitted to TMG.
Notification of cessation of SMEs Facility	SMEs Facilities	○	When the facility operation is ceased or significantly reduced	(Cessation) within 30 days (Reduction) End of November	• Status of the cessation and reduction of facility operation	
<Top-level facility, etc.>						
Application for a Relaxed Compliance Factor for Top-Level Facilities	Compliance facility	△	When the facility wishes to receive certification as a top-level facility	End of September	• Implementation situation of measures at the facility	
<Emissions trading>						
Application to Open a Compliance Account	Reporting facilities or account managers	○	When the facility becomes a reporting facility	By two weeks before the end of the fiscal year in which the facility was designated as a compliance facility	• Request for the issuance of an account number • Departments, etc. in charge of managing credits	Compliance accounts must be opened by the end of the fiscal year in which the facility was designated as a compliance facility
Application for Registration (Deregistration) of the Account Manager	Reporting facilities	△	When registering an account manager, changing registered matters, and deregistering for a compliance account	As needed	• Name of the account manager	
Application to Open a Trading Account	Those who wish to open a trading account	△	When a trading account is opened	As needed	• Name of the account holder • Departments, etc. in charge of managing credits	

### 3 (67) List of Documents to Submit, Such as Plans (Continued)

Documents to submit (name)	Submitter	Obligation <sup>*1</sup>	Conditions of submission	Deadline for submission	Main contents	Remarks
Application to Close a Trading Account	Account holders of trading accounts	○	When the trading account is no longer needed	As needed	<ul style="list-style-type: none"> <li>Account number of the account to be closed</li> </ul>	
Application to Connect/Disconnect Trading Accounts	Account holders of trading accounts	○	When the facility wishes to transfer credits between a compliance account and trading account or when the facility wishes to disconnect the accounts and stop transfers of credits	As needed	<ul style="list-style-type: none"> <li>Account numbers of the compliance account and trading account</li> </ul>	Only the account holders of compliance accounts can apply for the connection of accounts.
Application to Change the Name of Account Holder	Account holder or manager of compliance accounts, or account holders of trading accounts	○	When there is a change to the name or contact of account holder <sup>*2</sup> and when the issuance of additional account user number is needed	Immediately after the change	<ul style="list-style-type: none"> <li>Details of the change</li> </ul>	
Application for Notification of Account User Number	Account holder or manager of compliance accounts, or account holders of trading accounts	△	When the user forgets the account user number (user ID) or pass code (password)	As needed	<ul style="list-style-type: none"> <li>Request for re-notification of the account user number (user ID) or pass code (password)</li> </ul>	
Application to Issue Tradable Credits	Account holder or manager of the account that receives issued credits	△	When the facility wishes to receive the issuance of credits	As needed	<ul style="list-style-type: none"> <li>Account number of the account to receive issued credits</li> <li>The type and amount of credits to be issued</li> </ul>	
Application to Transfer Tradable Reductions	Account holder or manager of the account that transfers credits	△	When the facility wishes to transfer credits	As needed	<ul style="list-style-type: none"> <li>Account numbers of the sender and receiver</li> <li>The type and amount of credits to be transferred</li> </ul>	
Application for Surrender of the Credits	Account holder or manager of compliance accounts	△	When transferring credits to the surrender account in order to fulfill the facility's obligation	As needed	<ul style="list-style-type: none"> <li>Account number of the compliance account</li> <li>The type and amount of the credits to be used</li> </ul>	
Application for Issuance of Records of the Registry	Account holder or manager of compliance accounts, or account holders of trading accounts	△	When certification of records of a compliance account or trading account is needed	As needed	<ul style="list-style-type: none"> <li>Account number of the account subject to certification</li> <li>Items to be certified</li> </ul>	

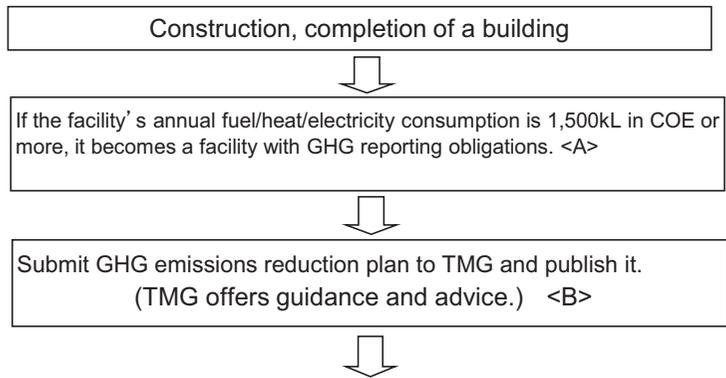
\*2 As for a change to the name of account holders of compliance accounts (=reporting facilities), the Application to Change the Name of Account Holder is not required if the change is submitted by the Notification of Ownership Change in Covered Facilities.

# 3(68) New Buildings Part 1

●As for a newly constructed building that falls in the definition by the scale\* of a facility in scope, it will not become a facility under reduction obligation immediately after completion and beginning of operational use. Rather, the owner of such a building will prepare a GHG emissions reduction Plan, submit it to TMG and publish it, and make efforts to implement the measures. (TMG will offer guidance and advice.)

\*Definition by the scale: The annual consumption of fuel, heat, and electricity of the previous fiscal year is 1,500kL or more (crude oil equivalent).

●If the facility's annual energy consumption is 1,500kl or more (crude oil equivalent) for three consecutive fiscal years (if the use of the facility starts in the



If the facility's annual energy consumption is 1,500kL or more (crude oil equivalent) for three consecutive fiscal years (if the use of the facility starts in the middle of a fiscal year, three consecutive fiscal years of use except the first fiscal year in operation), the facility becomes a compliance facility (a facility under reduction obligation) <C>

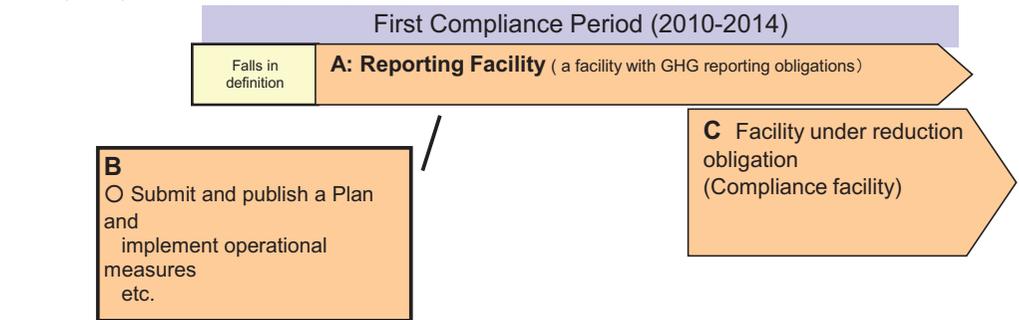
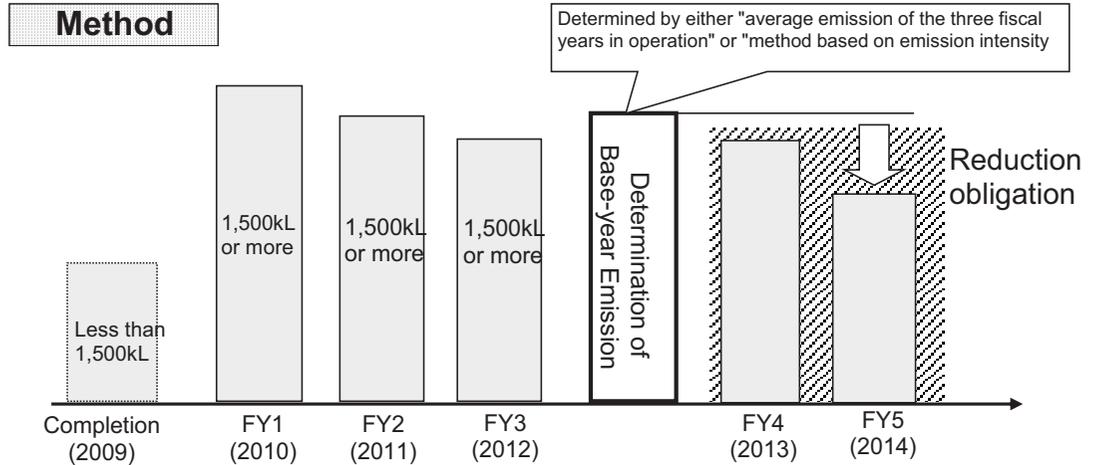
### 【Two Methods to Calculate Base-year Emission】

- (1) "Method based on past emissions" (Calculated from the actual emission figures after the start of operation, with the assumption that certain emission reduction measures would be implemented. (The emission figures are determined based on the average emission of multiple fiscal years.)
- (2) "Method based on emission intensity standards" (Based on the data of CO<sub>2</sub> emission accumulated in the current Program, the standard emission intensity per a unit of floor area is deduced, to be equivalent with that of other existing covered facilities.)

\*Method 1 or 2 is selected. If appropriate measures are not implemented after the start of operation of the facility, Method 2 will be adopted. (See 3(9) for details.)

### \* Note on how it relates to the Compliance Period

- The Compliance Period consists of two 5-year periods, namely, the First Program Period (2010-2014) and the Second Program Period (2015-2019).
- During the Compliance Period, if a facility is newly designated a compliance facility, its cap obligation is calculated to match the level of the particular fiscal year in the Compliance Period.



【Concept】 Where the reduction rate for the First Compliance Period is ▲8%:

FY	2010	2011	2012	2013	2014
First Compliance Period					Reduction Obligation Period

★FY2013: designation as a compliance facility

【Status of fulfillment of the Cap Obligation】  
 Baseline Emission: 10,000 tons/year  
 Reduction Obligation (%): ▲8%  
 ⇒ Keep the total emission of two years under 18,400 tonnes (9,200 tonnes/year x 2 years)

## 3(69) New Buildings Part 2

This is an example of a new facility that is in operation for less than a year in the year of completion, but its energy consumption is 1,500kL or more from the year of completion.

	(1) Base-year Emissions based on the past actual emission levels	(2) Value calculated by the method of emission intensity standard
Guidelines	<ul style="list-style-type: none"> <li>The Guidelines for Calculating energy-related CO2 Emissions in the Tokyo Cap and Trade Program</li> <li><b>The Guidelines to Certify the Compliance with the Operation Management Standard for Selecting the Actual Emission Approach in the Determination of Baseline Emission</b></li> </ul>	<ul style="list-style-type: none"> <li>The Guidelines for Calculating energy-related CO2 Emissions in the Tokyo Cap and Trade Program</li> </ul>
Completion		
Fiscal Year 2	<ul style="list-style-type: none"> <li>Submission of the Confirmation Letter for a compliance facility (with the verification attached) (End of October)</li> <li>Preparation (by the later of end of November or 90 days after date of designation as a reporting facility ) and publication of a yearly GHG emissions reduction plan</li> </ul>	<ul style="list-style-type: none"> <li>Same as left</li> <li>Same as left</li> </ul>
Fiscal Year 3	<ul style="list-style-type: none"> <li>Preparation (by end of November) and publication of a yearly GHG emissions reduction plan (with the verification attached)</li> <li><b>As it is the applicable period of the Operation Management Standard, the business strives to meet the operation management requirements.</b></li> </ul>	<ul style="list-style-type: none"> <li>Same as left</li> <li>N/A</li> </ul>
Fiscal Year 4	<ul style="list-style-type: none"> <li>Preparation (by end of November) and publication of a yearly GHG emissions reduction plan (with the verification attached)</li> <li><b>Submission of Operation Management Report (by end of September <sup>*1</sup>)</b></li> <li><b>As it is the applicable period of the Operation Management Standard, the business strives to meet the operation management requirements.</b></li> </ul>	<ul style="list-style-type: none"> <li>Same as left</li> <li>N/A</li> <li>N/A</li> </ul>
Application to Determine the Base-year Emission	<ul style="list-style-type: none"> <li>Preparation and submission of Application to Determine the Base-year Emissions etc (with the verification attached) (by end of September)</li> <li><b>Submission of Operation Management Report (by end of September <sup>*1</sup>) with the verification result concerning the Operation Management Standard by a verification agency attached <sup>*2</sup></b></li> </ul>	<ul style="list-style-type: none"> <li>Same as left</li> <li>N/A</li> </ul>
Fiscal Year 5 and after	<ul style="list-style-type: none"> <li>Preparation (by end of November) and publication of a yearly GHG emissions reduction plan (with the verification attached) Designation as a compliance facility • • • &lt;&lt;&lt;reduction obligation&gt;&gt;&gt;</li> </ul>	

\*1: For FY2010, the Business must describe the status of operation management after July 1 on the Operation Management Report.

\*2: If the Business applies for the status of a top-level facility in the same year as the application to determine the base-year emission, it is not required to have a verification agency verify the compliance with the Operation Management Standard.





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## **“Tokyo Cap-and-Trade Program” for Large Facilities [Detailed Documents]**

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