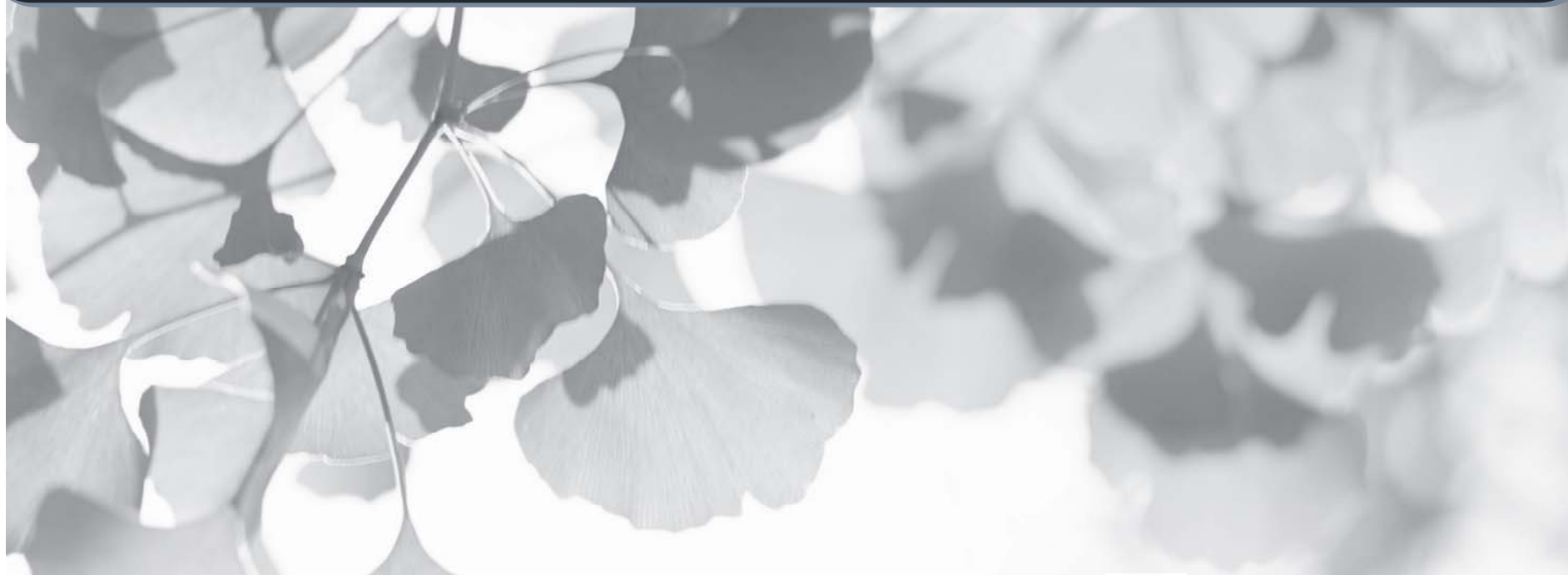


The Tokyo Metropolitan Environmental Security Ordinance

As of Mar. 30, 2012

**“Tokyo Cap-and-Trade Program”**  
**for Large Facilities**  
**<Detailed Documents>**



Bureau of Environment  
Tokyo Metropolitan Government

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## Descriptions of terms used in this material

	terms	description
1	reporting facility	facility with GHG reporting obligations
2	compliance facility	facility with CO2 reduction obligations
3	compliance entity	people who have responsibility of CO2 reduction obligations, usually owners of facilities
4	compliance tenant	business tenant with GHG reporting obligations
5	fiscal year	from April 1 to March 31 in Japan
6	base-year emissions	The emissions amount to be used as a basis to assign the allowance. Basically, it is calculated based on the average of selected 3 consecutive fiscal years between FY2002–FY2007.
7	top level facility	business facility which makes great progress against climate change and meets the standards established by the Governor of Tokyo
8	excess credits	emission reductions exceeding the obligation derived from other compliance facilities
9	offset credits	credits which can be used to fulfill reduction obligations by compliance facilities. Under the Tokyo Cap-and-Trade Program, we allow four kinds of credits: 1)Small and Midsize Credits, 2)Renewable Energy Credits, 3)Outside Tokyo Credits and 4)Saitama Credits.
10	verification agency	a third-party organization who verifies emission amounts or other fulfillment of facilities. Registration to TMG is required in advance.

# 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 is 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.

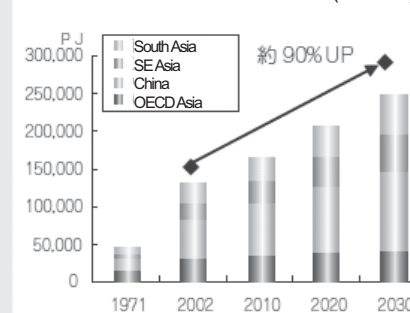
## 2. The purposes of action against climate change

- 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 is 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)



(資料) IEA [World Energy Outlook 2004]

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.

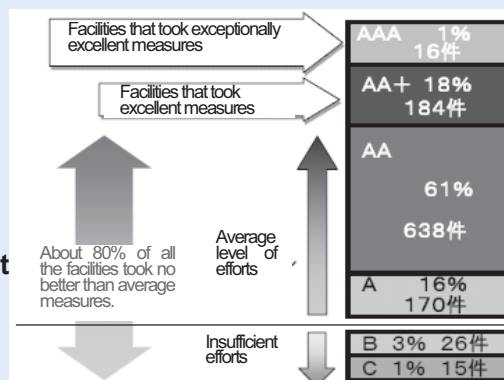


Need to reinforce the program

- 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

# 1 (3) Tokyo's Proposals on Nationwide introduction of Cap-and-Trade Program

Nov. 27, 2009

- TMG welcomes 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

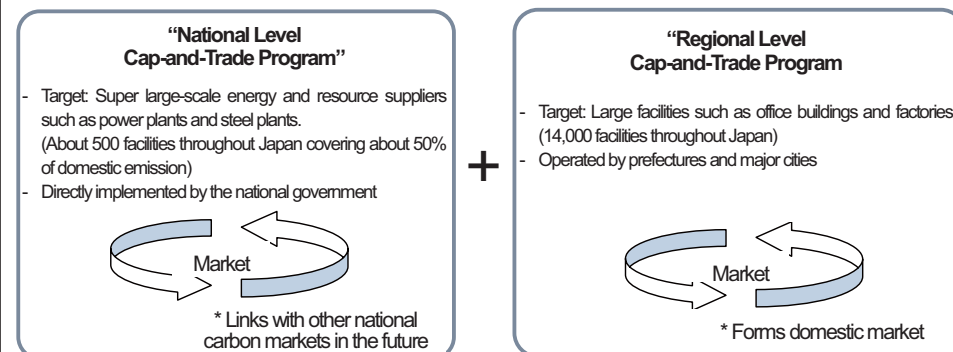
- Consists of two sub-programs of “National Level Cap-and-Trade Program” and “Regional Level Cap-and-Trade Program”

### [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 Carbon Reduction 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
- <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

## 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 “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
	●Tenants of a scale over a certain level (Compliance Tenants)	Obligation to appoint a technical manager (The title has been changed to “technical manager”)
	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

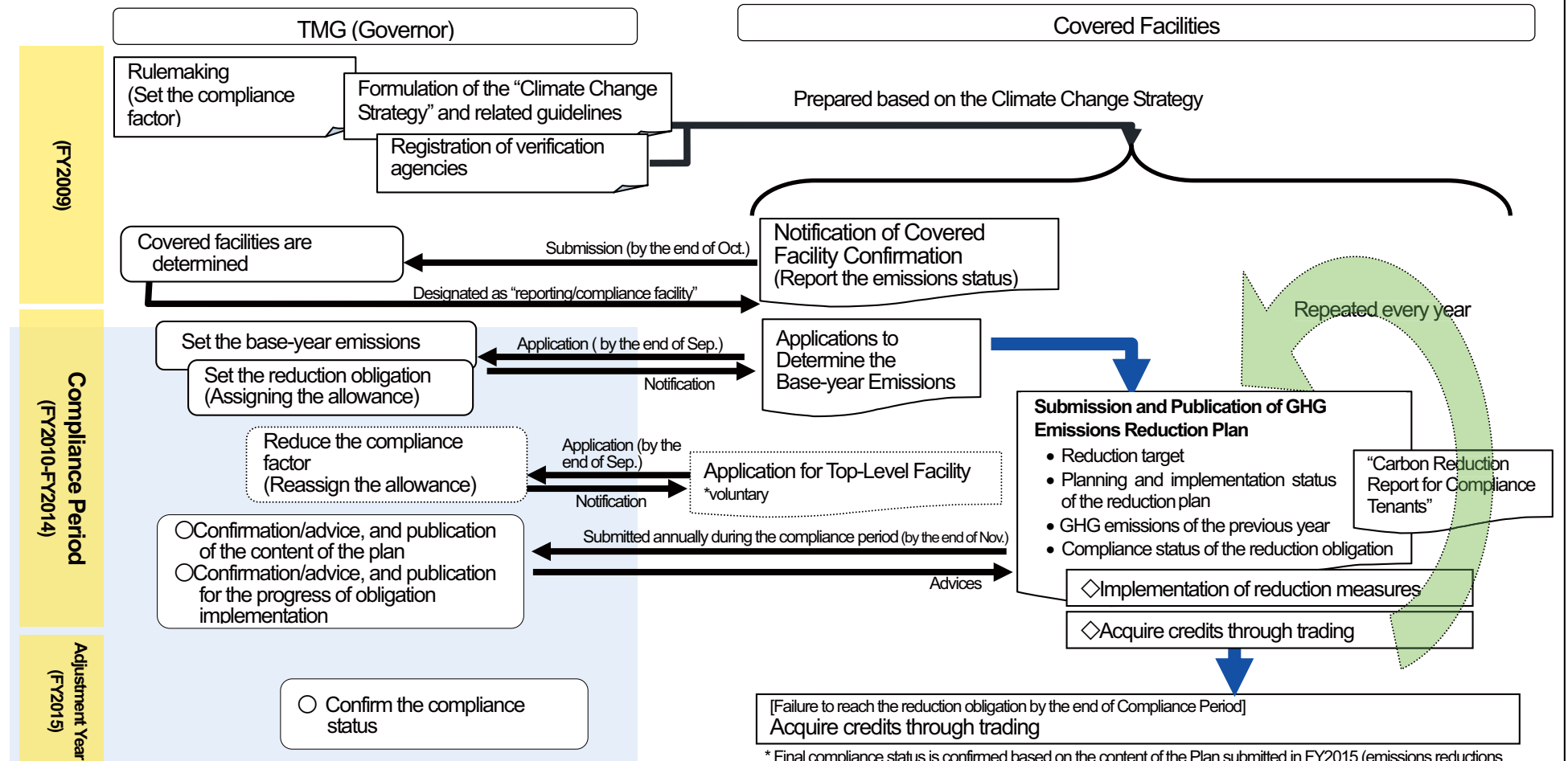
### Related Program for Small and Medium-sized Facilities

	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 *	<ul style="list-style-type: none"> <li>• Submission of “Carbon Reduction Report”</li> <li>• Promotion of energy saving measures by the facilities</li> </ul>

\* 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) Flow of the Tokyo Cap-and-Trade Program

1st compliance period: 5 years (from FY2010 to FY2014)



\* Final compliance status is confirmed based on the content of the Plan submitted in FY2015 (emissions reductions by FY 2014) and the trade record (record of the registry in the end of Mar.2016)

### Deadline of obligation implementation

In case of non-compliance

**Order for Action** Reduction of 1.3 times the shortage

### Deadline of order implementation

In case of violation of the order

Publication of the fact of violation

Governor purchase the credits in shortage with payment cost charged to the violating facility

Monetary fine (up to 500 thousand yen)

### 3 (1) 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>)"

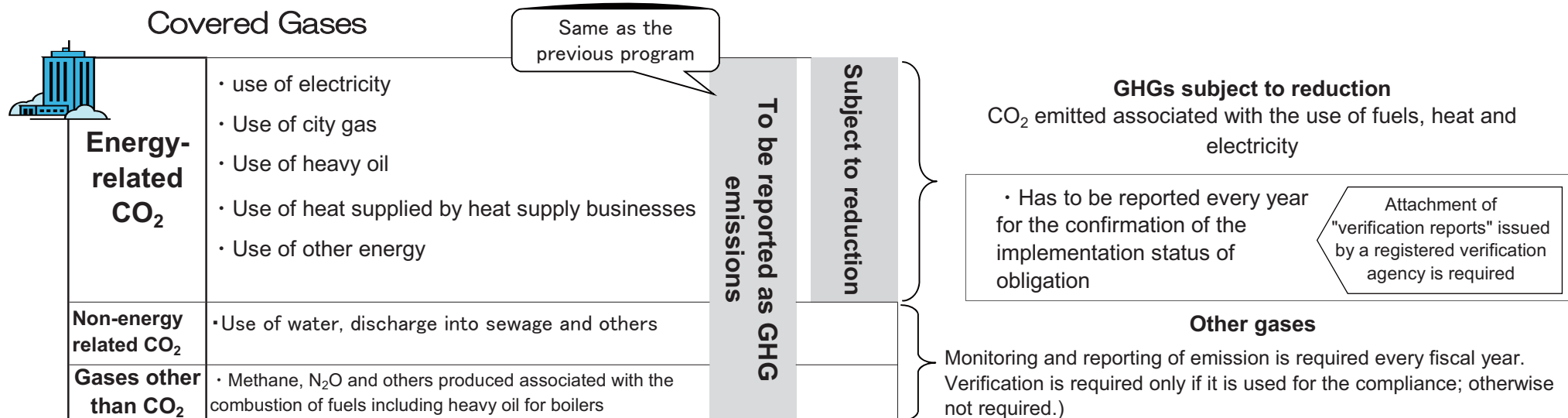
Excluding those used for residential purposes

⇒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": 6 gases (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, PFC, HFC and SF<sub>6</sub>) (same as the previous program)

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



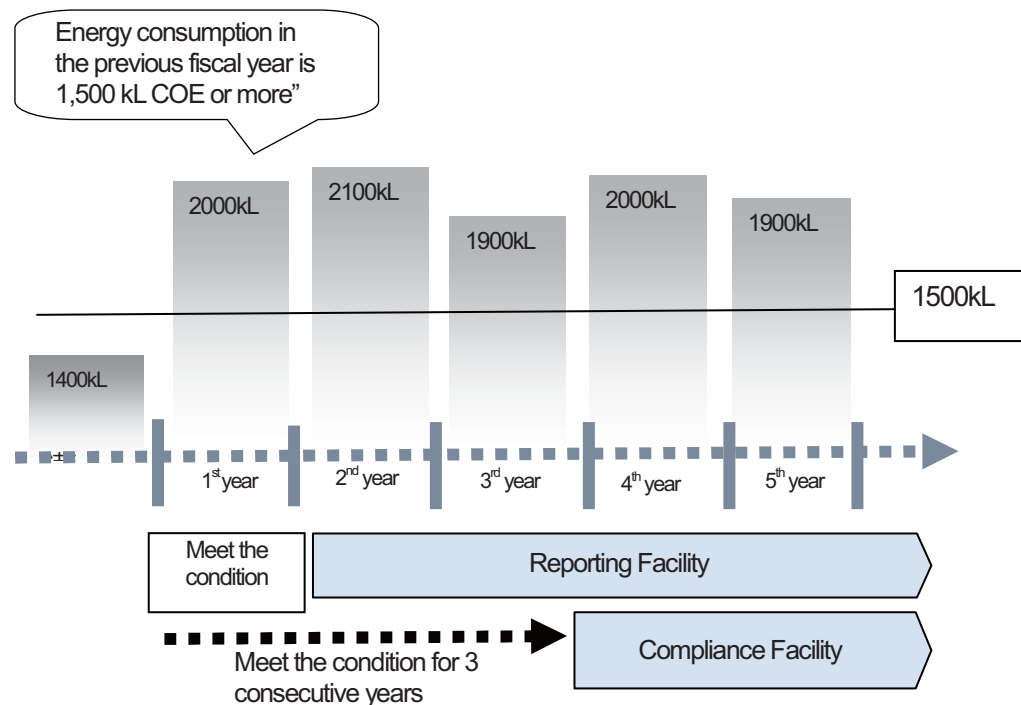
#### Emissions from vehicles

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 * <sup>1</sup>	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

\* 1 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(2) 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 CO<sub>2</sub> 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(3) Scope of Covered Facilities

● **Scope of covered facilities (In the case where multiple facilities are regarded as a single facility)**

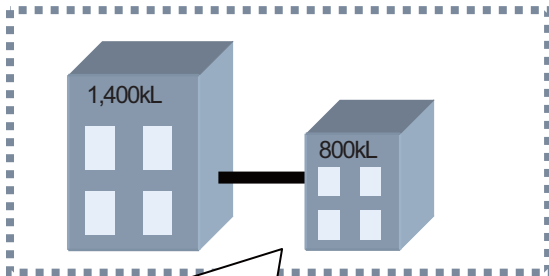
Refer to the “Guideline for Monitoring and Reporting Energy Related CO<sub>2</sub> Emissions” for details.

**(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.)**

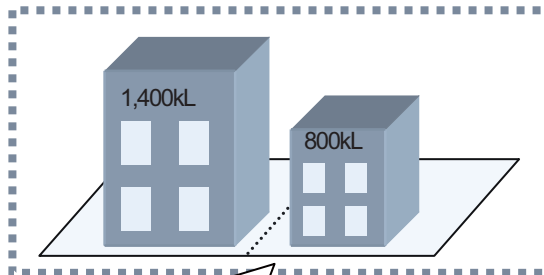
Except for those served as residents.

**(1) Facilities with integrated energy management**



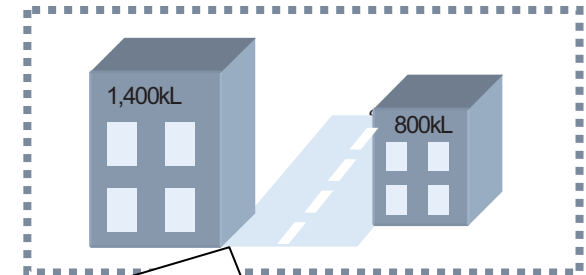
Regarded as a reporting facility if their total energy consumption is 1,500 kL COE or more. (The two buildings are considered as a single facility.)

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



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.)

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

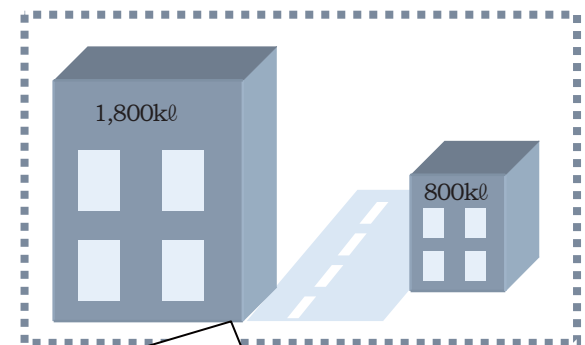
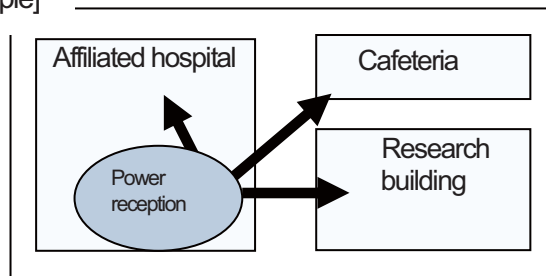


Not regarded as a reporting facility since there is no core building with energy consumption of 1,500 kL COE or more.

**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]



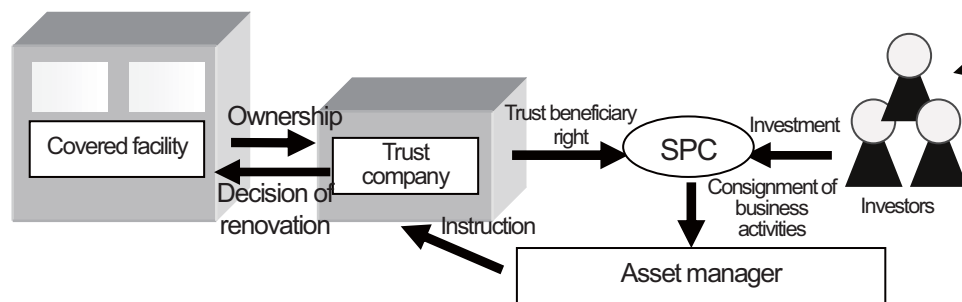
Regarded as a reporting facility since there is a core building with energy consumption of 1,500 kL COE or more. (The two buildings are considered as a single facility.)



### 3 (4) 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)

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



**[Persons subject to reduction obligations]**  
 In principle: Trust company (the owner)  
 Followings may assume the obligation if notification is made:  
 1) SPC, the beneficiary  
 2) Asset managers entrusted with the instruction right

#### ■ 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 (5) Change in Ownership of the Covered Facilities

Notification is required for the following changes;

**1) Change in ownership of covered facilities**

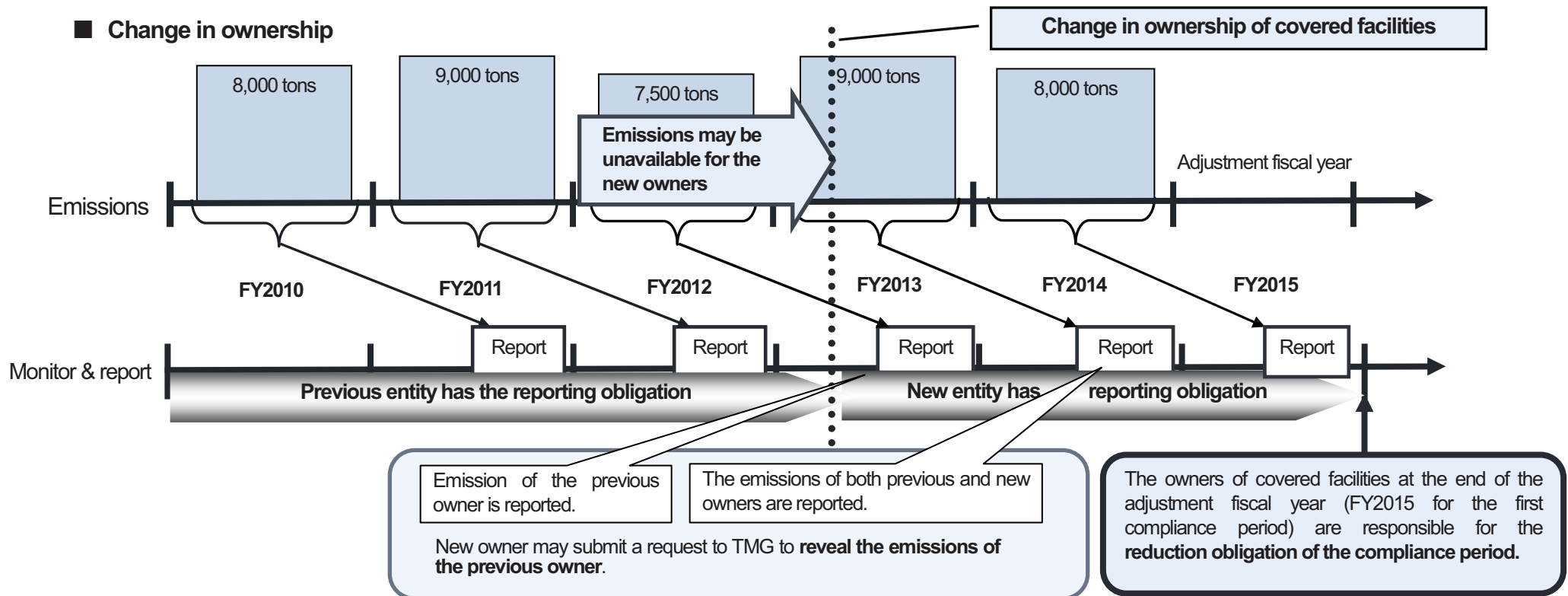
- ⇒ New owner: Submit "Notification of Ownership Change in Covered Facilities" (No later than 30 days from the day of the change)  
 Submit "Request for the Emissions Report of the Previous Owner" (Voluntary\*) (No later than 60 days from the day of the change)
- ⇒ Previous owner: Submit "Emissions Report" (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 fiscal year (FY 2015 for the first compliance period) are responsible for the reduction obligation of the compliance period)

**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)

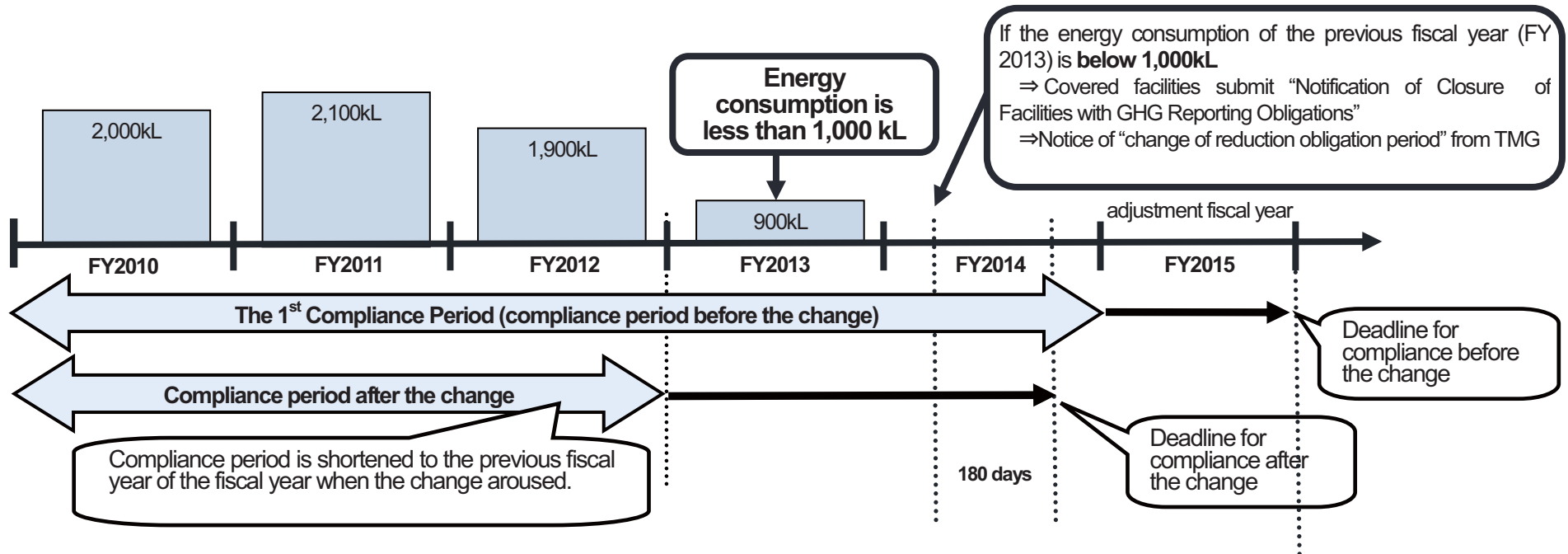
\*An application can be made only when emissions of the previous owner is unavailable to the new owner.



### 3 (6) Revocation of Designation Part 1

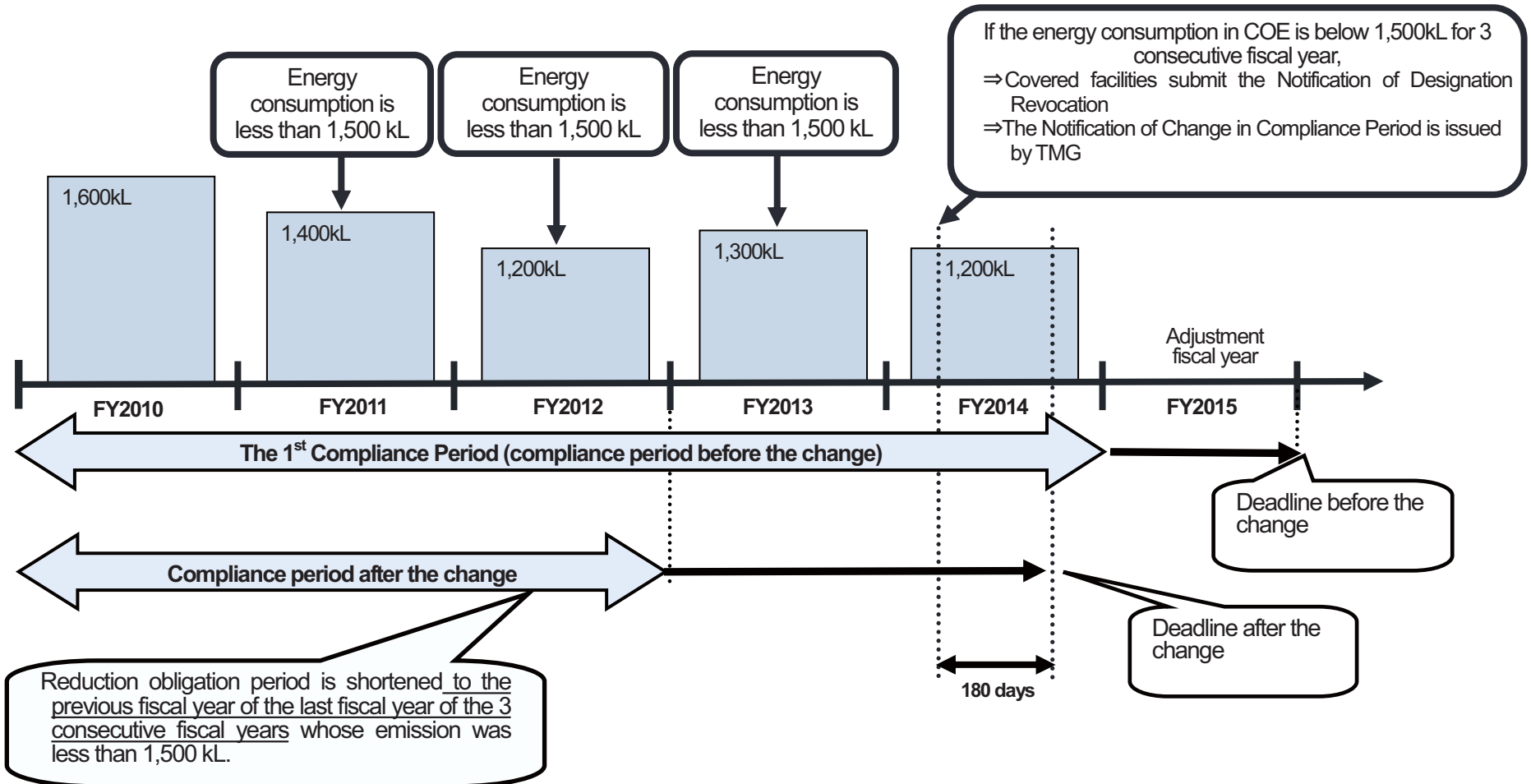
- If following conditions are met, covered facilities must submit “Notification on the Revocation of Designation” to TMG.
  - 1) Energy consumption in COE of the previous fiscal year was below 1,000 kL. (Has to be notified by the end of Nov. of the relevant fiscal year)
  - 2) Energy consumption in COE was below 1,500 kL for the past 3 consecutive fiscal years. (Has to be notified by the end of Nov. of the relevant fiscal year)
  - 3) Cessation or suspension of facility operation (Has to be notified no later than 30 days from the date of cessation or suspension)
- Change in compliance period for compliance facilities
  - If any of the conditions listed above is met, compliance period is shortened to the previous fiscal year of the fiscal year when the change arose. (Compliance fulfillment within the shortened period is required)
  - When the compliance fulfillment is confirmed, the designation as a compliance facility is revoked.
- The deadline for compliance is within 180 days from the day after the “Notification of Change in Compliance Period and Allowance” is issued by TMG.

#### ■ Revocation of designation: Example 1 (Energy consumption during the previous year is less than 1,000 kL)



### 3 (7) Revocation of Designation Part 2

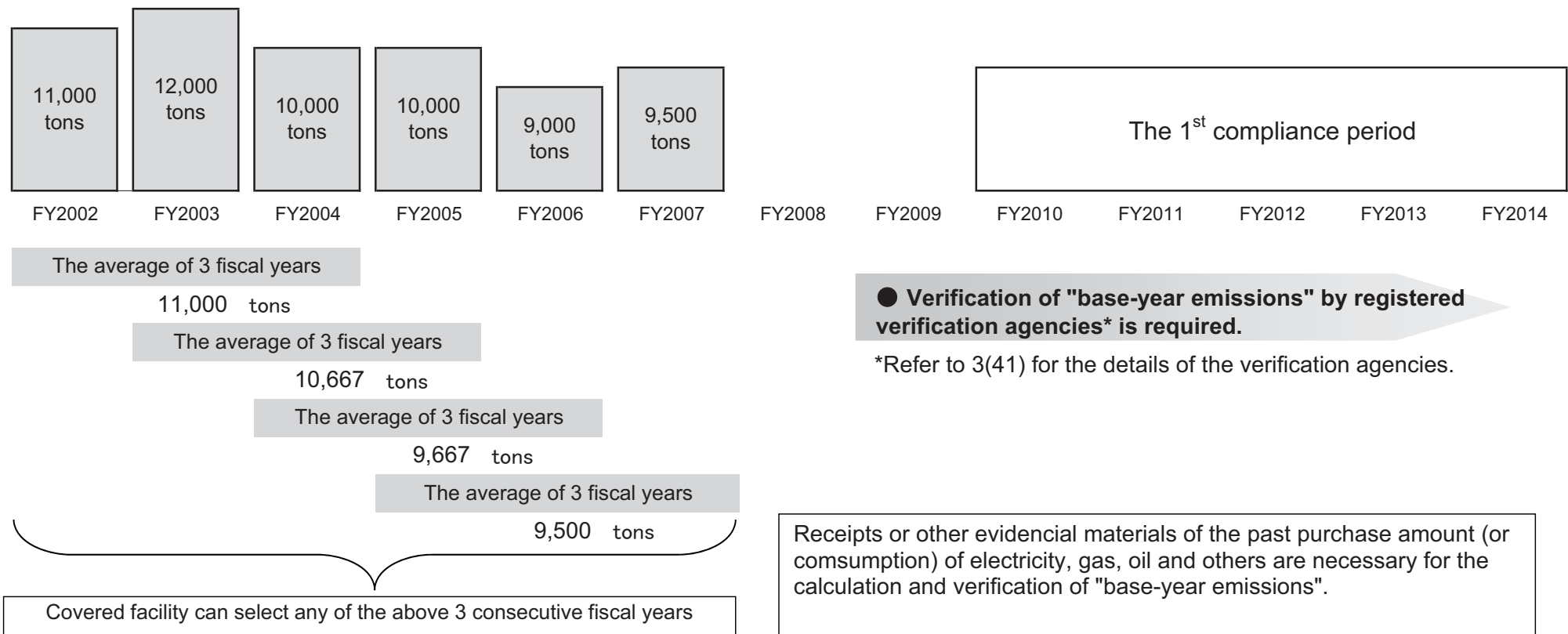
#### ■ Revocation of designation: Example 2 (Energy consumption is less than 1,500 kL for 3 consecutive years)



### 3 (8) Base-Year Emissions

- **Base-year emissions is the emissions amount to be used as a basis to assign the allowance**
  - Calculated based on the amount of CO<sub>2</sub> emitted with the use of fuels, heat and electricity. Gases other than CO<sub>2</sub> like methane are not included.
  - Calculated based on the average of selected 3 consecutive fiscal years between FY2002-FY2007\*
  - \*If the facility took early actions, it can use the average of earlier fiscal years (i.e. FY2002-2004).
- **Compliance facilities select 3 consecutive fiscal years and calculate the base-year emissions by themselves ⇒ Compliance facilities**
  - submit the application to determine base-year emissions with the verification report to TMG.
- **TMG confirm the submitted application, set the base-year emissions and notify the base-year emissions to each facilities.**

#### ● Example of "calculation of base-year emissions"



### 3 (9) Base-Year Emissions for New Entrants

**● Calculation methods of base-year emissions for new entrants: "method based on past emissions" or "method based on emission intensity standards"**

- Facilities promoting climate change measures above a certain level can select "method based on past emissions" (or method based on emission intensity standards")
- Other facilities are required to take the "method based on emission intensity standards"

**■ New Entrants**

- 1) A facility whose energy consumption is 1,500 kL in COE or more in FY2007 or later.
- 2) A facility that started operation in FY2006, and energy consumption of that fiscal year is 1,500 kL in COE or more.

**[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\*.

- Has 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.

\*The reason "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 based on emission intensity standards]**

**Emission activity index (floor area) x emission intensity standard\***

\*Emission intensity standards are shown in the right table (Refer to Guideline for Monitoring and Reporting Energy-Related CO<sub>2</sub> Emissions. Emission intensity standards were generated based on covered facility data (2005-2007) in the previous Carbon Reduction Reporting Program.)

<Operation management items for the commercial sector method (buildings)>

Operation management items		Operation management conditions
Heat source and heat delivery equipment	1	To start up heat source equipment no earlier than 1 hour before the earliest start-up time of air-conditioning equipment in the supply destination, and stop heat source equipment before the last stopping time of air-conditioning equipment in the supply destination
	2	To start up air-conditioning pump no earlier than 1 hour before the earliest start-up time of air-conditioning equipment in the supply destination, and stop air-conditioning pump before the last stopping time of air-conditioning equipment in the supply destination
Air-conditioning and ventilation equipment	6	To start up air-conditioning equipment no earlier than 1 hour before starting use of the room, and stop air-conditioning equipment before finishing use of the room
	7	To make the air-conditioned room temperature or the setting no lower than 26°C when cooling and no higher than 22°C when heating
Lights and electrical equipment	10	To turn on and off the illumination according to the time of room use

<Emission intensity standards by classification of use\*>

Classification of use	Emission activity index (unit)	Emission intensity standards
Office	Floor area (m <sup>2</sup> )	85 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Office (public office buildings)	Floor area (m <sup>2</sup> )	60 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Information-communication	Floor area (m <sup>2</sup> )	320 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Broadcasting station	Floor area (m <sup>2</sup> )	215 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Commercial	Floor area (m <sup>2</sup> )	130 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Accommodation	Floor area (m <sup>2</sup> )	150 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Education	Floor area (m <sup>2</sup> )	50 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Medical	Floor area (m <sup>2</sup> )	150 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Cultural	Floor area (m <sup>2</sup> )	75 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Distribution	Floor area (m <sup>2</sup> )	50 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Parking lot	Floor area (m <sup>2</sup> )	20 (kgCO <sub>2</sub> /m <sup>2</sup> year)
Factory and others		95% of past emissions

\*Refer to the related guideline for more details on the purpose of use of the facility



### 3 (10) Base-Year Emissions (Calculation in Special Cases)

- Base-year emissions is the average emissions of the past 3 consecutive fiscal years (between FY 2002 - FY 2007) selected by the compliance facilities.
- There are cases, however, where facilities may exclude a particular year that is certified by TMG as atypical, and take the average of emissions emitted in the remaining 2 fiscal years from the selected past 3 consecutive years.

#### <Conditions where a particular year is considered atypical by TMG>

Both conditions I. and II. below must be met.

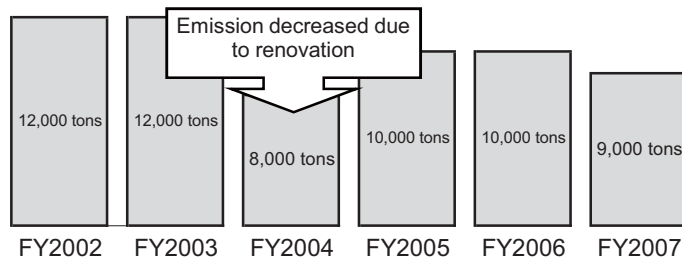
I. Facilities must meet one of the following conditions;

- 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 emission is still extremely low. (Ex. Newly built buildings and start-up of data centers)
- 3) Emissions reduction of a particular year was due to the reduction measures implemented during the start of the facility operation to the 4th fiscal year. (Limited to the cases where past 3 consecutive years are selected from the first 4 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 3 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) The emissions is less than 6% when compared with the average emissions of the remaining 2 years.
- 2) The emissions is less than 6% when compared with the most emitted fiscal year among the selected past 3 fiscal years (Only when 2 or more fiscal years meet the conditions listed in I.)

#### ● Example of calculation of base-year emissions in special cases



#### Period of base-year emissions calculation

Average of 3 fiscal years

10,667 tons

Average of 2 FYs

12,000 tons

Average of 2 FYs

11,000 tons

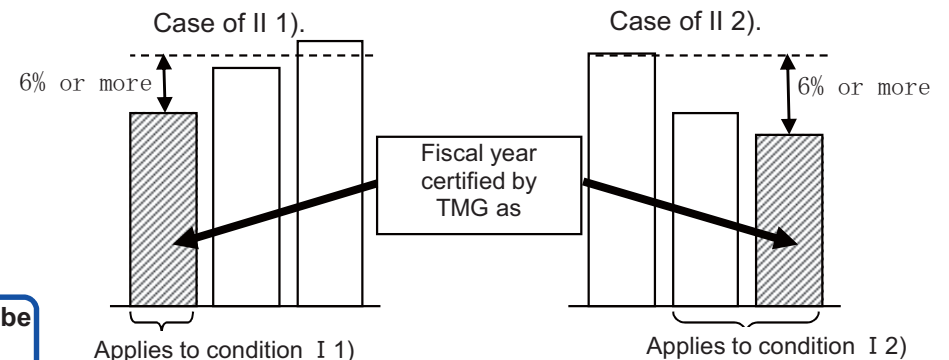
Consecutive 2 fiscal years alone can be chosen

Inconsecutive 2 fiscal years can be chosen

The fiscal year when emissions extremely decreased due to renovation may be excluded. ⇒ A mechanism to avoid disadvantage for compliance facilities

- Emissions data during the past 3 fiscal years must be submitted even if the facility hopes to choose the calculation method of 2 fiscal years average.
- If a facility would like to exclude a particular year, indication must be made when applying for the determination of the base-year emissions  
⇒ 2 fiscal years can only be selected if TMG certifies the application
- The two fiscal years does not necessarily have to be consecutive (the first and third fiscal

#### <A particular fiscal year that is certified as atypical by TMG>



### 3 (11) 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:** Fluctuation in floor space of heating supply destinations is equal to or more than 6%.

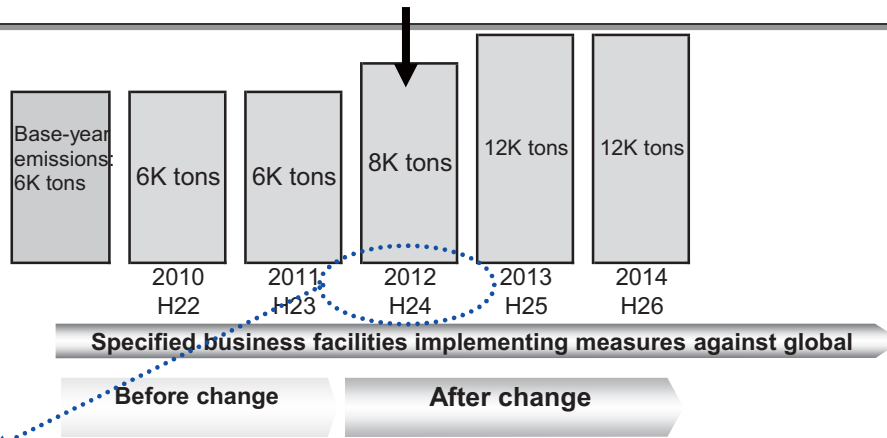
#### ● Example of base-year emissions change (Non-heating supply companies)

##### ■ 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



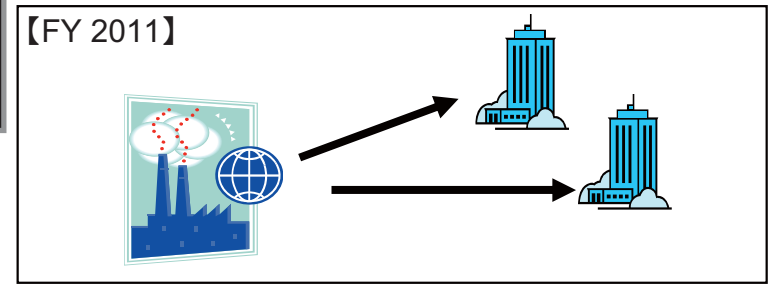
The baseline of the fiscal year when change occurs is calculated by the month

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)

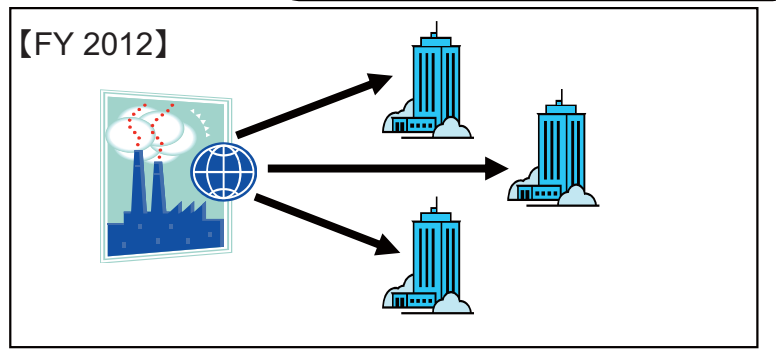
#### ● Example of base-year emission change (Heating suppliers)

##### ■ Causes of base-year emission change:

A change in floor space of heating supply destinations is equal to or more than 6%



Floor space of supply destinations increases 6% or more (i.e. energy supply is increased)



##### ■ Methods for calculating new base-year emissions ✕ Business 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 (12) 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 have changed.)

#### <Examples of how to ascertain>

\*DC: Data Center

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

Change in amount of emissions

CO<sub>2</sub> 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 CO<sub>2</sub> 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 CO<sub>2</sub> 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

CO<sub>2</sub> 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 (13) 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 for the 1<sup>st</sup> compliance period (Average for FY 2010 to FY 2014)

Group		Compliance factor (compared to base-year levels)
I - 1	Office buildings , other facilities* <sup>1</sup> and district heating and cooling plants (except facilities falling under “Group I-2”)	8%
I - 2	Facilities* <sup>1</sup> belonging to “Group I”, which use large amounts of district heating and cooling* <sup>2</sup>	6%
II	Business facilities other than Group I-1 or I-2 (factories and others* <sup>3</sup> )	6%

\*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 CO<sub>2</sub> 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 CO <sub>2</sub> 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 plants

- 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 (14) 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.**
- **Compliance assessment will be held on a regular basis after acquiring certification.**

■ **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.

Evaluation items	Group I (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	23	4	1	23	3	1	22	6	1	22	6	1	22	6	1	22	6	1
II. Energy performance of building and equipment	26	39	45	22	31	30	16	50	124	14	29	92	18	42	93	16	33	97
III. Energy management	25	56	9	23	47	9	35	61	49	25	49	31	25	48	34	26	42	31
Subtotal	74	99	55	68	81	40	73	117	174	61	84	124	65	96	128	64	81	129
Total (mandatory + general)	228(173)			189(149)			364(190)			269(145)			289(161)			274(145)		

M: Mandatory G: General A: Additional

■ **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 CO<sub>2</sub> reduction for business facilities under the respective sectors.

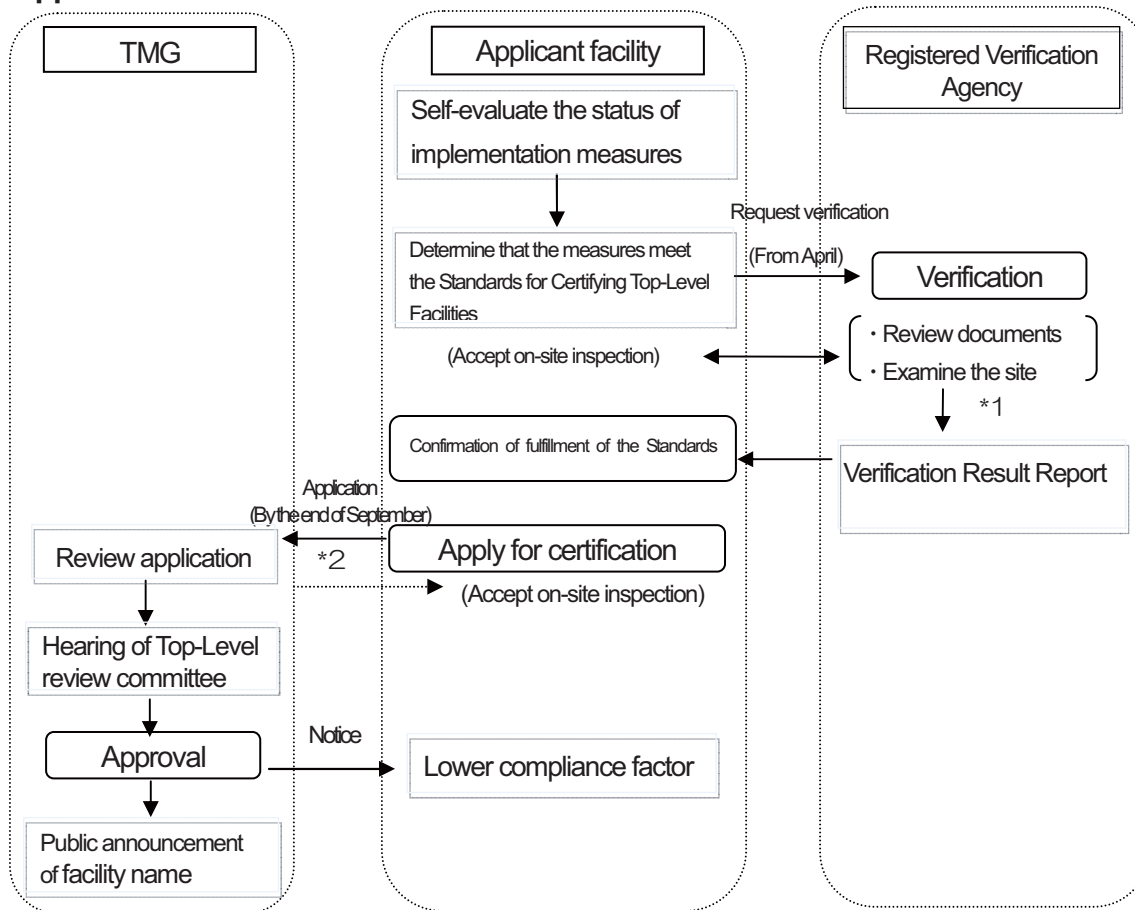
Qualified Energy Manager, MEP Design 1st-class kenchikushi, Building Mechanical and Electrical Engineer or Professional Engineer in the following fields; Electrical and Electronics Engineering, Mechanical Engineering, or Public Health Engineering)

### 3 (15) 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.

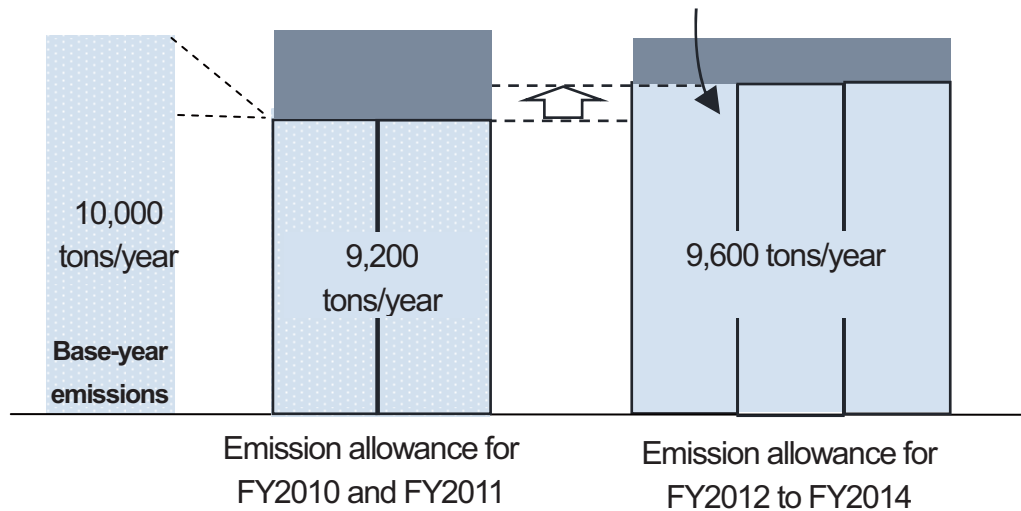


### 3(16) Top-Level Facilities Part 3

- 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

The compliance factor will be reduced to 1/2 effective from the fiscal year 2012. (Effective during the first compliance period)



#### <Total emissions reduction obligation>

- Base-year Emissions : 10,000 tons/year ● Normal compliance factor: 8%
- (1) FY2010-11 (2 years): 18,400 tons (9,200 tons/year (10,000 tons/year×8%) × 2 years)
- (2) FY2012-14 (3 years): 28,800 tons (9,600 tons/year (10,000 tons/year×4%) × 3 years)
- ⇒ Emission allowances for 5 years: 47,200 tons (The allowances become 47,200 tons from 46,000 tons)

#### ■ To continue, downgrade, or cancel from the 2<sup>nd</sup> fiscal year

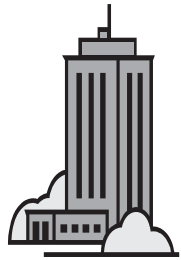
In every fiscal year from the 2<sup>nd</sup> fiscal year (fiscal year following facility certification), a certified facility must report on its compliance to the standards to TMG (verification from a registered agency is not necessary). One of the following actions will occur to the facility based on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

Total score / Evaluation of conditions*	Upgrade: Improves to "80 points or higher" from "70 to 79 points"	Same level: (1) Stays at "70 to 79 points" (2) Stays at "80 points or higher"	Downgrade: (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	will apply if no efforts are made and the total score declines into a lower level.		Downgrade to a near-top-level facility, or cancel the certification

\*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.

# 3 (17) Compliance Part 1

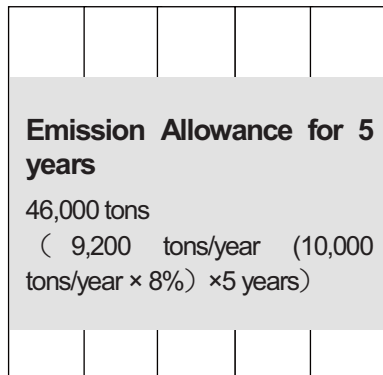
- Example of a business facility with a compliance factor of 8% for the first compliance period.



(Example)

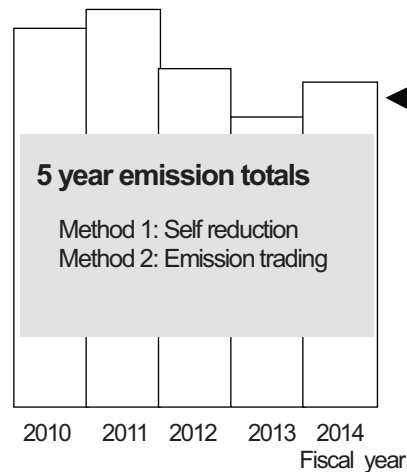
- Base-year emissions: 10,000 tons/ year (defined based on emissions of three consecutive years between the fiscal year 2002 and the fiscal year 2007).
- Compliance factor for the first compliance period: 8%

## <Emissions Reduction Obligation>



(Reduction period: 5 years)

All Reduction obligation



## 1. Self reduction

- By installing energy efficient equipment and promoting measures for emissions reduction (measures aiming to reduce fuel, heat, and electricity consumption)
- In the case of reducing **emissions of greenhouse gases other than energy-related CO<sub>2</sub>\*** to fulfill reduction obligation, a verification report issued by a registered agency must be attached.

**\*Reducing emissions of other gases:** Reducing emissions of greenhouse gases other than energy-related CO<sub>2</sub>, such as methane (CH<sub>4</sub>), by reducing water consumption or waste water discharge.  
(Only 1/2 of emissions reduction of these gases can be included to fulfill the obligation.)

## 2. Credits for emission trading

- (1) Excess Emission Reductions (Exceeding Credits):  
Emission reductions exceeding the obligation derived from other compliance facilities.
- (2) Emission Reductions from Small and Midsize Facilities in Tokyo (Small and Midsize facility Credits):  
Emission reductions achieved through energy-saving measures by small and midsize facilities within the Tokyo area.
- (3) Renewable Energy Credits:  
Environmental value of renewable energy.
- (4) Emission Reductions Outside the Tokyo Area (Outside Tokyo Credits):  
Emission reductions achieved through energy-saving measures by large facilities outside Tokyo area.
- (5) Saitama Credits

Validity of excess reductions and credits:

Excess emission reductions and other credits obtained during the first compliance period can be banked until the end of the second compliance period (they cannot be banked to the third period).

### 3 (18) 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 2010	H23 2011	H24 2012	H25 2013	H26 2014	H27 2015	H28 2016	H29 2017	H30 2018	H31 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 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.

carry over the excess reductions

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.

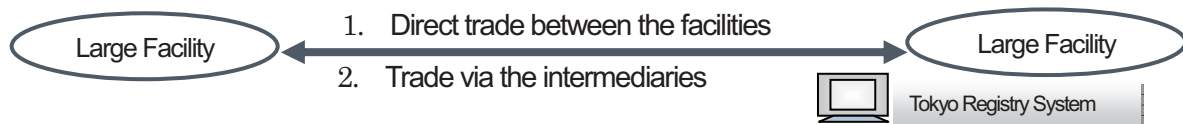
- Fulfill the obligation through updates.

carry over the excess reductions

### 3 (19) 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

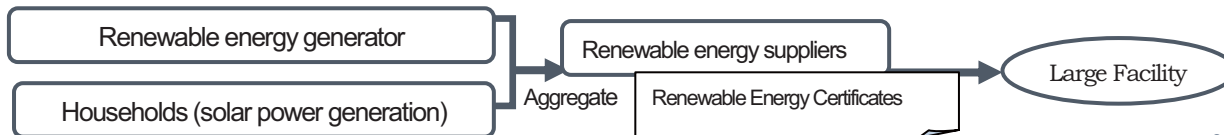


2. Trade via the intermediaries

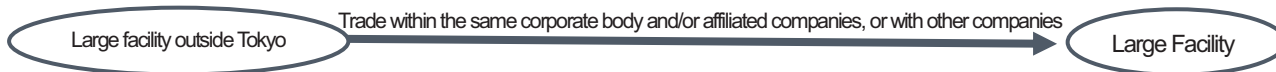


Only large facilities (buildings or factories) are covered by the Tokyo Cap-and-Trade Program. However, recognition of offset credits to encourage comprehensive emission reduction measures to be undertaken within the same corporate body and/or affiliated companies (who owns multiple facilities such as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

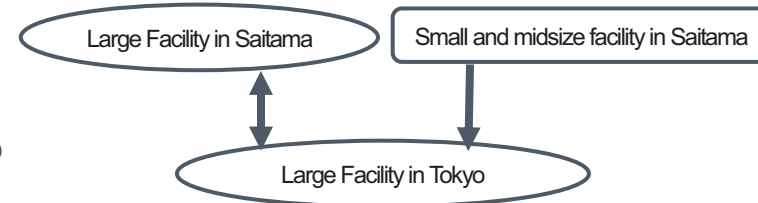
#### 3. Renewable Energy Credits



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



#### 5. Saitama Credits



## 3 (20) 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. However, in the adjustment fiscal year, issuable Excess Credits will be automatically issued to the facility's account by TMG after the overall emissions of the compliance period are determined.
- To issue offset credits, facilities must file an application for certification of the reduction amount and an application for credit issuance to TMG.

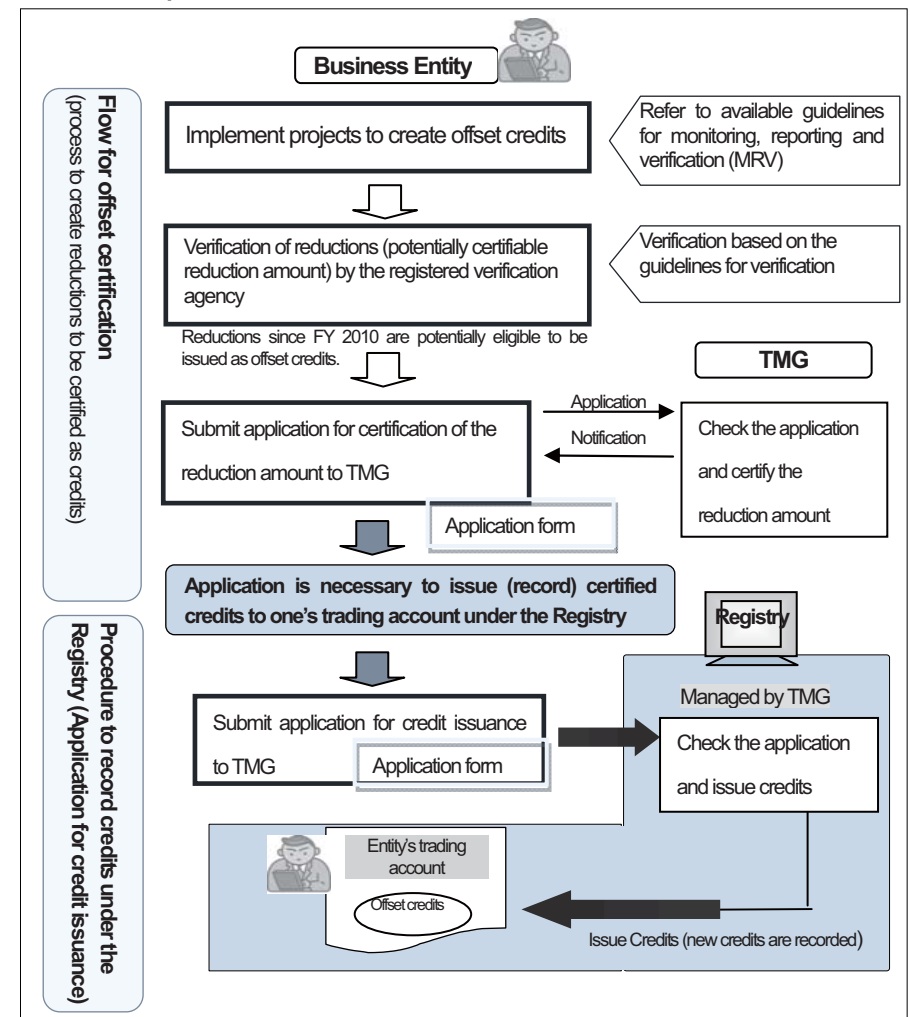
### Credits for emissions trading

Credit Type	Potentially Eligible Reductions	Credit Issuance
Excess Emission Reductions (Excess Credits)	Emissions reductions since FY 2010	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	
	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	
	Renewable Energy Certificates	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.
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 (only credits that are not used for compliance under the RPS Law and are deleted from the record*))	
Emission Reductions Outside Tokyo Area (Outside Tokyo Credits)	Emission reductions since FY 2010	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	Emission reductions since FY 2010	From FY 2011 (Small and Midsize Credits) In FY 2015 (Excess 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 to the third compliance period (FY 2020 to 2024).

### Basic process to issue offset credits



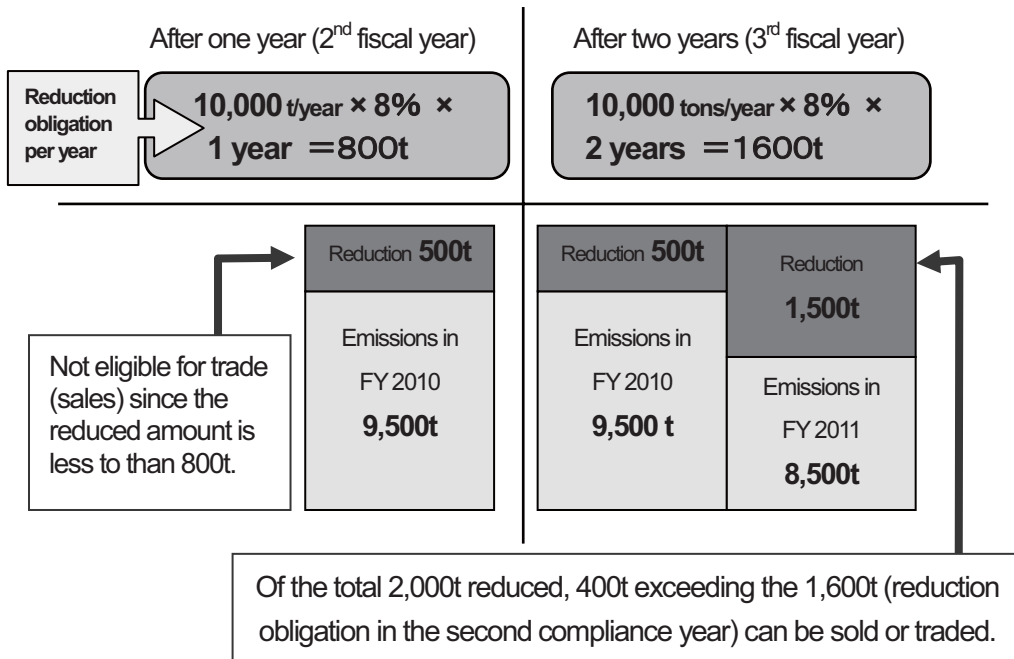
### 3 (21) Excess Credits

- 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.

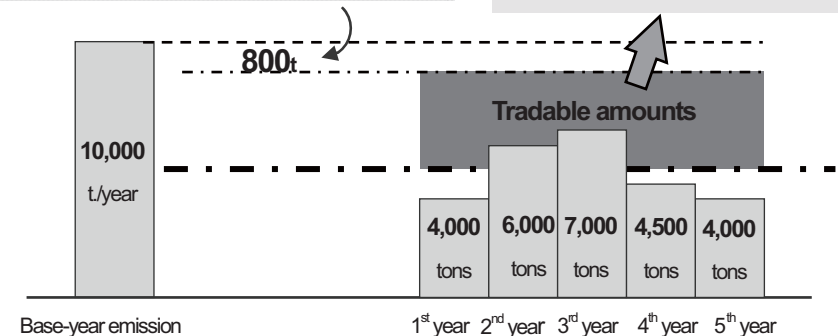
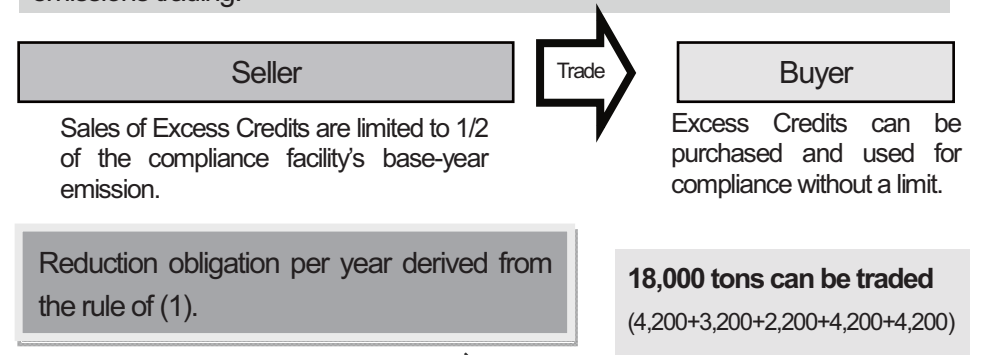
A system which enables entities who achieve emission reductions exceeding a certain amount of their obligations every fiscal year to sell the amount reduced before the end of the compliance period.

(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.



(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.



\* **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 (22) Small and Midsize Facility Credits (Overview)

- Small and Midsize Facility Credits is an offset system that encourage small and midsize facilities to participate in the emissions trading system with simplified monitoring, reporting and verification procedure.
- Small and midsize facilities in Tokyo can facilitate their reduction programs by updating to energy-efficient equipment following certification standards set by TMG.

#### <Conditions for Applicants>

1. The applicants are required to submit the GHG emissions report.
2. In principle, emission reduction projects are implemented with a building threshold. However, application with a tenant threshold or with a condominium ownership threshold is also allowed (in that case, overlapping applications are prohibited).

Applicants must have the authorization to upgrade equipments in the facility or must be given the consent from the person who has such authority

Only small and midsize facilities in Tokyo are eligible to apply for Small and Midsize Facility Credits, in order to put priority on the emissions reductions within Tokyo.

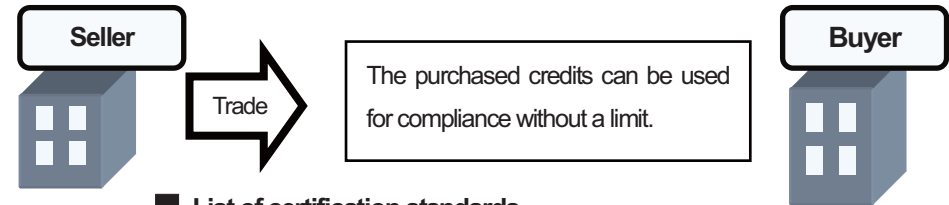
#### <Setting the Base-year Emission>

- Facilities under the program select one fiscal year out of the most recent three consecutive fiscal years before the reduction measures are implemented (The fiscal year that emissions reduction measures will complete cannot be picked). The years selected becomes their base-year and the amount of energy-related CO2 emissions in that year are set as the base-year emission. (The calculation method is based on the Guideline for Monitoring & Reporting Energy-Related CO2 Emissions for the large facilities)

#### <Issuance Period of Credits>

- The issuance period of credits is five years from the fiscal year when emission reduction measures were undertaken (limited to measures completed\* from FY 2005) or from the following fiscal year. However, because reduction amounts expected from this program will be calculated from fiscal 2010, the issuance period of the credits for measures undertaken before the fiscal year 2010 may be shorter than five years.

\*defined as the date when the renovated part is first used, and the fiscal year in which this date falls is defined as the fiscal year of completion.

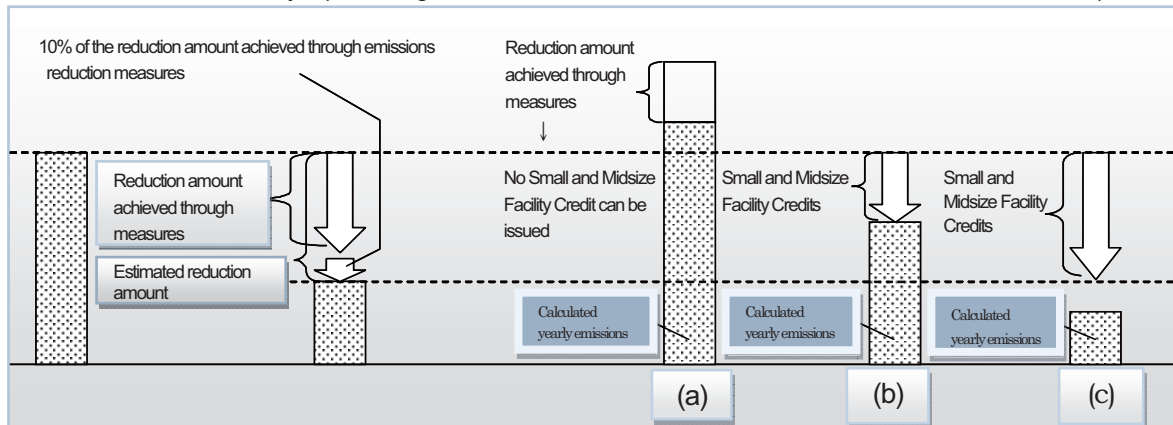


#### List of certification standards

Category	Emissions Reduction Measures	Category	Emissions Reduction Measures
1. Heat generating and distributing system	Installation of high-efficiency heating equipment (1.1)	3. Lighting and electrical equipment	Installation of high-efficiency lighting (3.1)
	Installation of high-efficiency cooling-tower (1.2)		Installation of high-intensity evacuation lighting (3.2)
	Installation of high-efficiency pumps for air-conditioner (1.3)		Installation of high-efficiency transformer (3.3)
	Installation of variable flow controller for air conditioning pumps (1.4)		Installation of energy-saving lighting control system (3.4)
2. Air conditioning and ventilation system	Installation of high-efficiency packaged air conditioning system (2.1)	4. Other	Installation of high-efficiency hot water supply system (4.1)
	Installation of high-efficiency air conditioning system (2.2)		Installation of energy-saving control system for elevator (4.2)
	Installation of total heat exchanger (2.3)		Installation of high-efficiency air compressor (4.3)
	Installation of high-efficiency air conditioning fans and ventilation fans (2.4)		Installation of other high-efficiency pumps, blowers and fans (4.4)
	Installation of energy-saving air conditioning control system (2.5)		Installation of high-efficiency freezing and refrigerating system (4.5)
	Installation of energy-saving ventilating control system (2.6)		Installation of high-efficiency industrial furnace (4.6)
			Installation of high-performance glass and other equipments (4.7)

For further detail, please refer to the guideline for monitoring and reporting credits from small and midsize facilities in Tokyo

#### Calculation Methods of Small and Midsize Facility Credits (In principle, it is the total amount of emissions reduction achieved by implementing the emissions reduction measures indicated in the certification standards)



#### Calculation Methods of Small and Midsize Facility Credits

The credits will be calculated every fiscal year based on whichever is smaller;

- Amount after subtracting the calculated yearly emissions from the base-year emission (calculated yearly reduction).
- Total reduction amount achieved through each item under emissions reduction measures + 10% (estimated reduction amount).

#### Calculation Methods of Reduction Amounts

- When the calculated yearly emissions is higher than the base-year emission after the emissions reduction measures are undertaken, no Small and Midsize Facility Credits can be received because there is no calculated yearly reduction (refer to (a) in the chart).
- When the calculated yearly reduction is less than estimated reduction amount, the calculated yearly reduction will be the amount eligible to be received as Small and Midsize Facility Credits (refer to (b) in the chart).
- When the calculated yearly reduction is more than estimated reduction amount, the estimated reduction amount will be the amount eligible to be received as Small and Midsize Facility Credits (refer to (c) in the chart).

### 3 (23) 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 a building threshold. However, application with a tenant threshold or with a condominium ownership threshold 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. Threshold for application

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

Communal space	Tenant	Tenant
	Tenant	Tenant
	Tenant	Tenant

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

(Example: leased building)

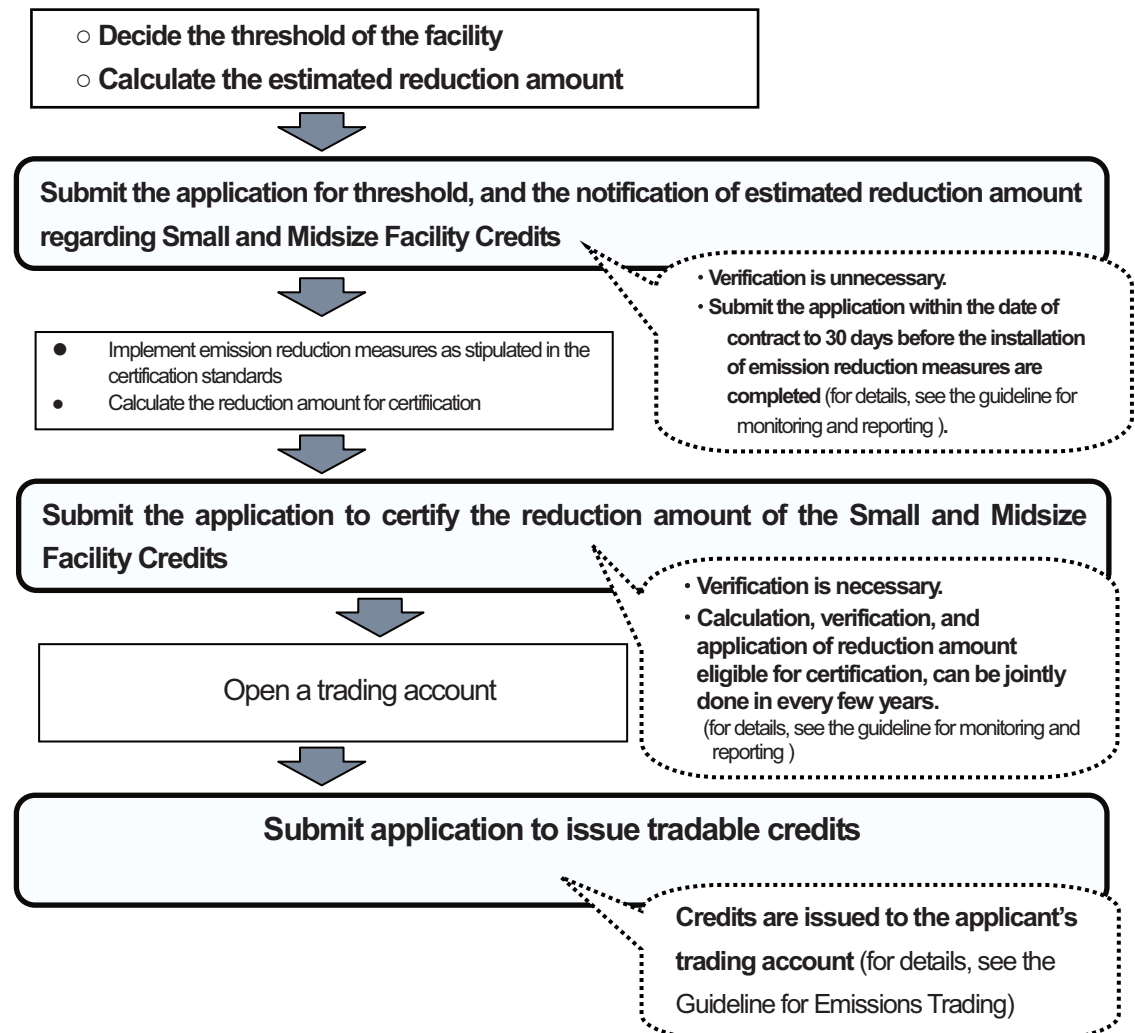
(2) If energy usage can be monitored separately, application with a tenant threshold or a condominium ownership threshold is possible.

Communal space	Tenant	Tenant
	Tenant	Tenant
	Tenant	Tenant

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

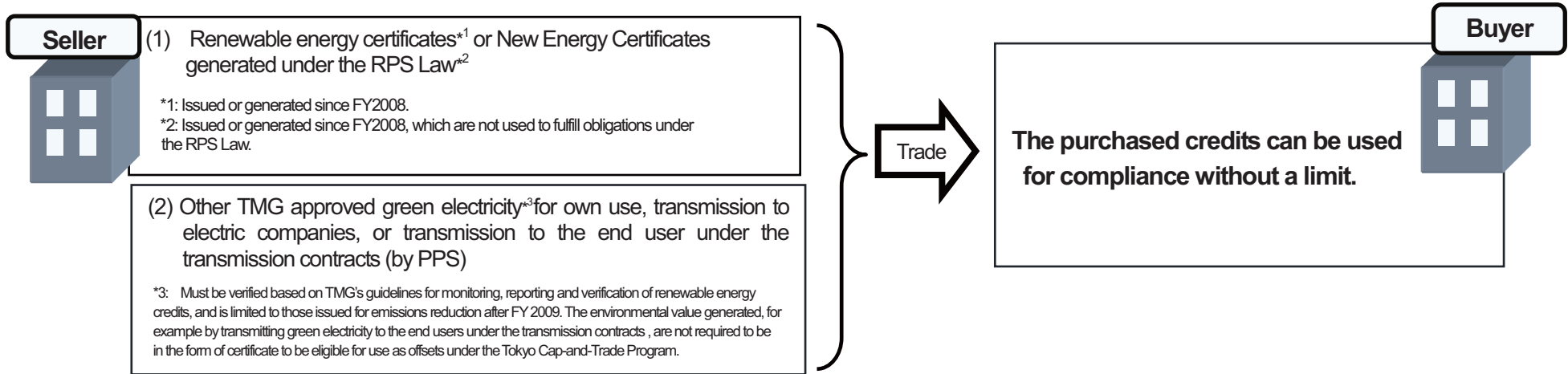
(Example: leased building)

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



### 3 (24) 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. 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 and II apply to (1) above, I, II and III apply to (2) above)

<p><b>I. Solar light (heat), wind power, geothermal power, hydro power (under 1,000 kW)</b></p>	<p><b>1.5 times</b></p>	<p>(Example) 1,000 kWh of electricity generated by solar light:</p> <ul style="list-style-type: none"> <li>● In general 1000kWh × CO<sub>2</sub> emission factor for electric power (0.382kgCO<sub>2</sub>/kWh) = 382kgCO<sub>2</sub></li> <li>● Renewable energy credits issued under Tokyo Cap-and-Trade Program 1000kWh × CO<sub>2</sub> emission factor for electric power (0.382kgCO<sub>2</sub>/kWh) × 1.5 = 573kgCO<sub>2</sub></li> </ul>
<p><b>II. Biomass (1. Biomass energy ratio of electricity production must be 95% or more. 2. Black liquor is excluded)</b></p>	<p><b>1.0 time</b></p>	
<p><b>III. Hydro power* (1,000 kW to 10,000 kW)</b></p> <p>Hydro power combined with electricity categorized as "I" or electricity from both "I" and "II" according to the guidelines for monitoring, reporting and verification of renewable energy. The electricity from "I" must supply more than 1/2 of the entire amount.</p> <ul style="list-style-type: none"> <li>● In the case of unavoidable incidents during power plant operation, such as unpredictable disasters certified by TMG, electricity other than I, II or III can be included (see the guideline for monitoring and reporting).</li> </ul>	<p><b>1.0 time</b></p>	

\*Hydro power is limited to dam type or dam and conduit type dependent power generation, and conduit type power generation

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

- 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 (25) 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 (26) 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.

#### <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.
- Power Producer and Supplier (PPS) who provides electricity to covered facilities.

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

### 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>

- 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 verifying.)

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 (27) 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 2010: 1,000,000 kWh (382t-CO<sub>2</sub>)
- Electricity supplied by outside party in FY 2010: 10,000,000 kWh (3,820t-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:

**3,820t-CO<sub>2</sub>**

○ Amount of Renewable Energy Credits issued:

**191t-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:

**3,629t-CO<sub>2</sub> (3,820t-CO<sub>2</sub> - 382t-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:

**4,202t-CO<sub>2</sub> (3,820t-CO<sub>2</sub> + 382t-CO<sub>2</sub>)**

○ Amount of Renewable Energy Credits issued:

**573t-CO<sub>2</sub> (382t-CO<sub>2</sub> × 1.5)**

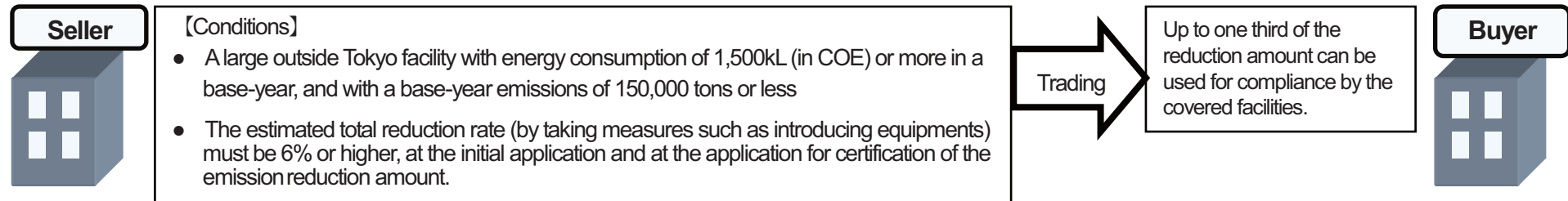
All three patterns result in **“amount of energy-related CO<sub>2</sub> emissions” – “amount of renewable energy credits issued” = 3,629t-CO<sub>2</sub>.**



## 3(28) Outside Tokyo Credits

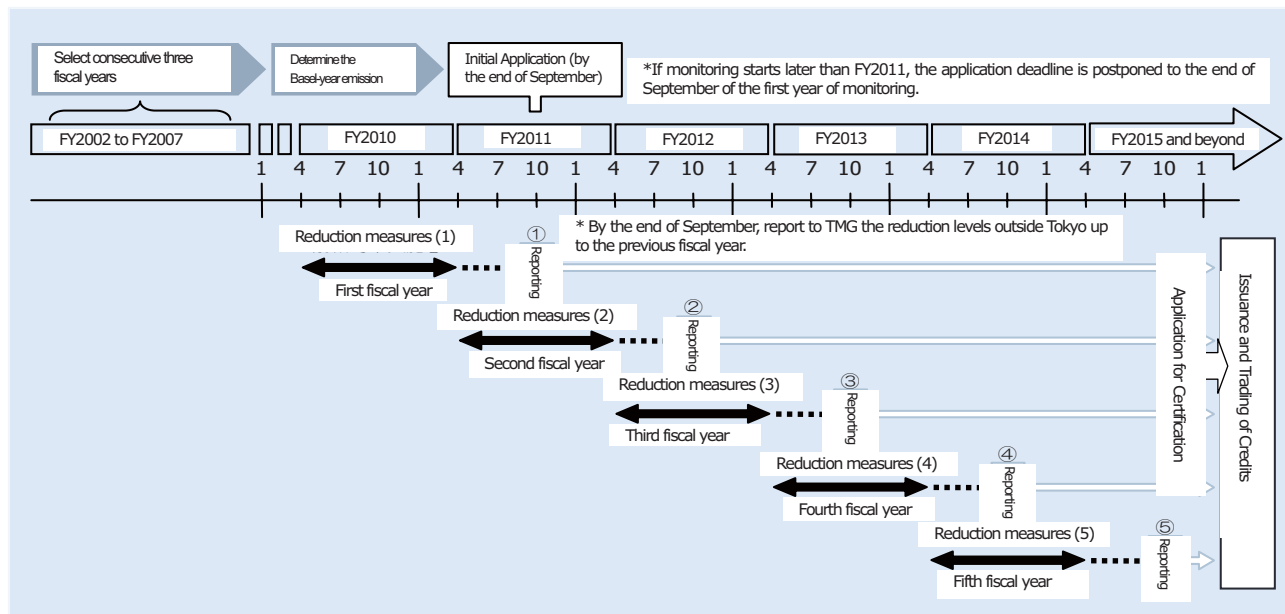
- Considering the efficiency of businesses investing into energy-saving measures nationwide in a planned manner, the emission reductions achieved from an outside Tokyo facility (which is equivalent in the size of the facility in scope of the Tokyo Cap-and-Trade Program) can be used for compliance, to 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 16% of the base-year emissions per fiscal year) that exceeds the compliance factor (8%).



### <Credit Issuance Procedure>

- Entity must submit the initial application by the end of September 2011 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 FY2015. (The application for certification of reduction amount and the application for credit is required.)



## 3(29) 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



- 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



The purchased credits can be used for compliance without a limit.



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



Small and Midsize Facility Credits issued by the Saitama Prefecture



The purchased credits can be used for compliance without a limit.



### 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: 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(30) Relationship with National Schemes

- Schemes implemented by the national government do not include emissions reduction obligation with a penalty attached. Therefore, trading of emission reductions within these national schemes does not affect the amount of emissions and reductions to be calculated under the Tokyo Cap-and-Trade Program.
- In the future, when the national government introduces a scheme that includes reduction obligation with a penalty attached, TMG will make necessary adjustments regarding the Tokyo Cap-and-Trade Program and will determine how the credits from the national scheme are handled.

### ■Notes■

- A large facility in Tokyo, which has transferred credits from the national schemes to another facility, is not required to add the transferred amount to its own emissions when calculating its emissions under the Tokyo Cap-and-Trade Program.
- The reduction amount certified under the national scheme cannot be used directly in the Tokyo Cap-and-Trade Program. A separate verification based on the monitoring/verification rules set under the Tokyo Cap-and-Trade Program is required.
  - \* This is because the monitoring/verification rules are largely different between the national scheme and the TMG program.
- The environmental value gained from the use of renewable energy cannot be used in both the national scheme and the TMG program.

### 3 (31) 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 amount 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 (32) 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.
- The selling price of the offset credits offered by TMG for sale shall not restrict the carbon price negotiation between the market participants.

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

#### ■ 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 through the project to promote solar energy equipments to households)
- Small and Midsize Facility Credits transferred to TMG through the project to promote energy-saving and creation of carbon credit for small and midsize facilities

##### Method of Sale

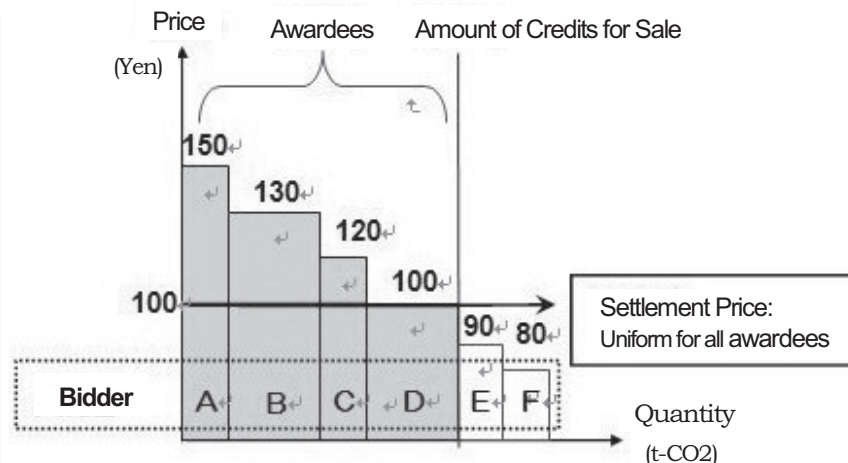
- Credits offered by TMG or the Tokyo Environmental Public Service Corporation may be sold by a uniform price auction or at a fixed price.
- When selling at a fixed price, the price will be determined by TMG with a reference to the market price of offset credits.

#### ■ 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 to prevent cornering may be taken.

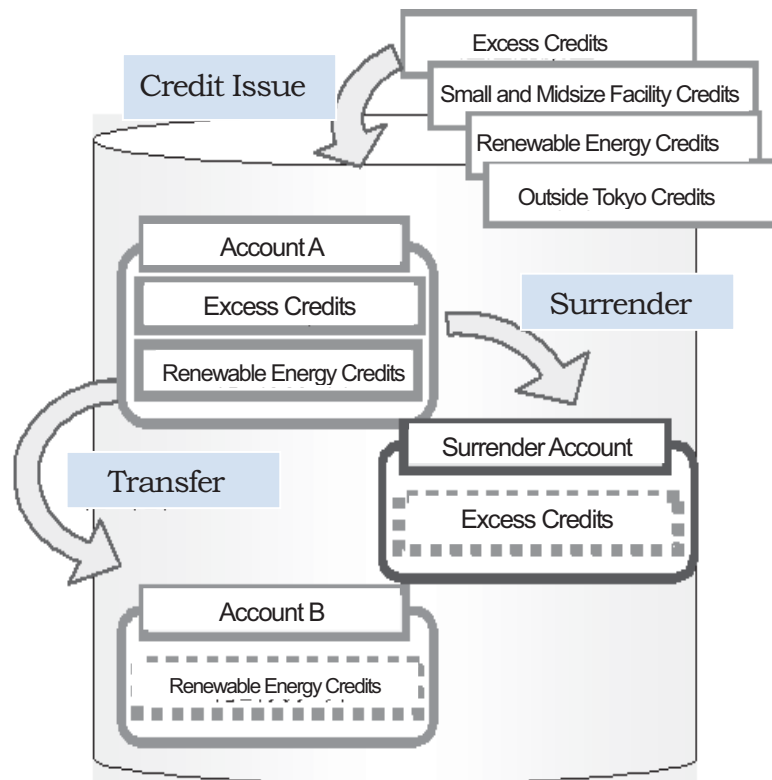
### 3 (33) Registry (Overview)

#### 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 (34) 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 the 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**

- Covered facilities and account managers: Free
- Market participants other than above: 13,400 yen per account  
(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.

### 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 fiscal year of the first compliance period, without an application for renewal. Accounts renewed can be used for another five years thereafter. Accounts that have not been renewed will be closed.

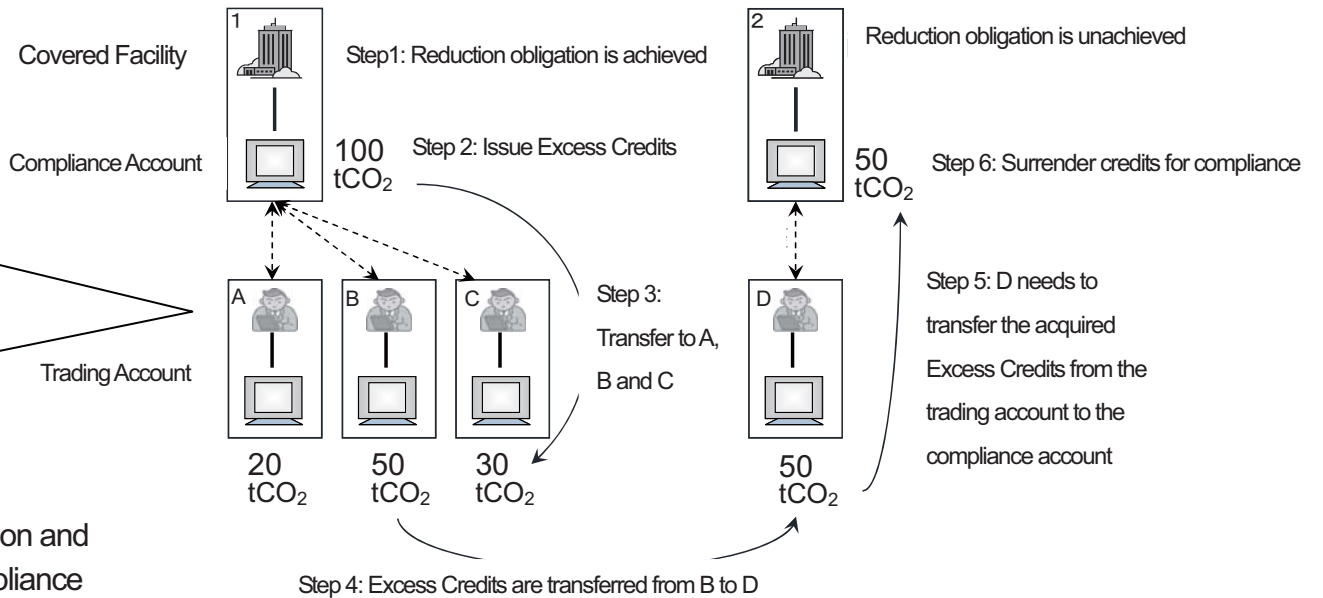
### 3 (35) Registry (Transactions)

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 (36) 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 entity
- Amount of Excess Credits and offset credits held in the account

- A serial number will be associated with each carbon ton 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 (37) 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.

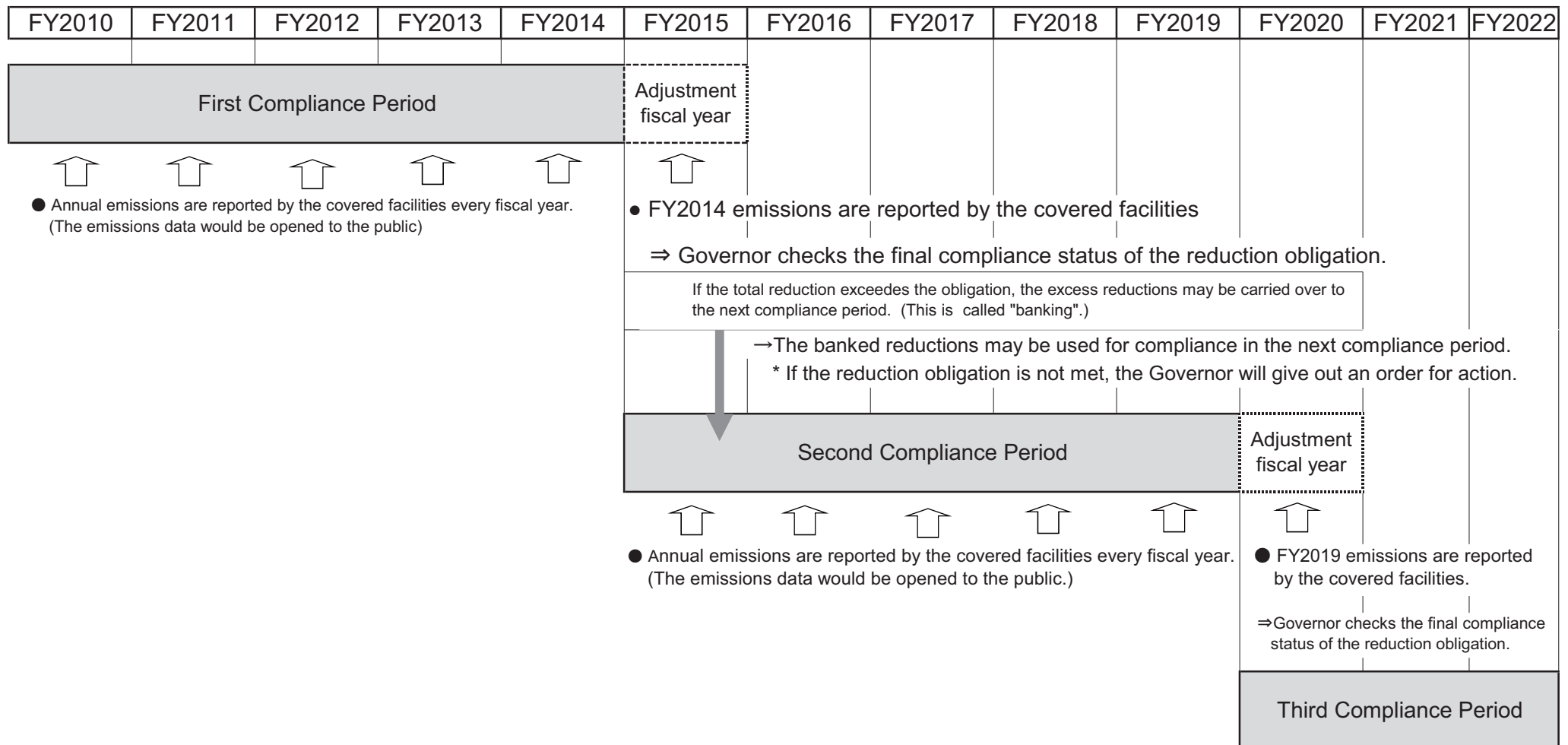
## 3(38) Compliance Period

● **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 6th fiscal year.**

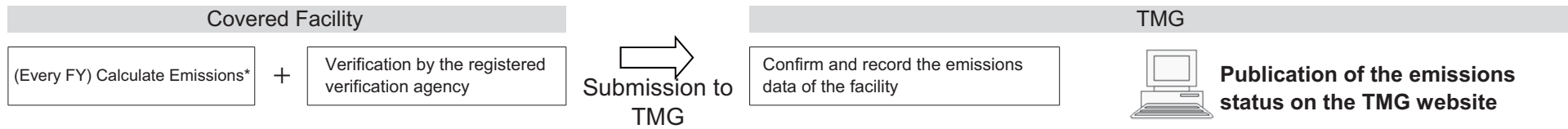
● **During the compliance period, covered facilities must report the annual GHG emissions every fiscal year to TMG.**

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

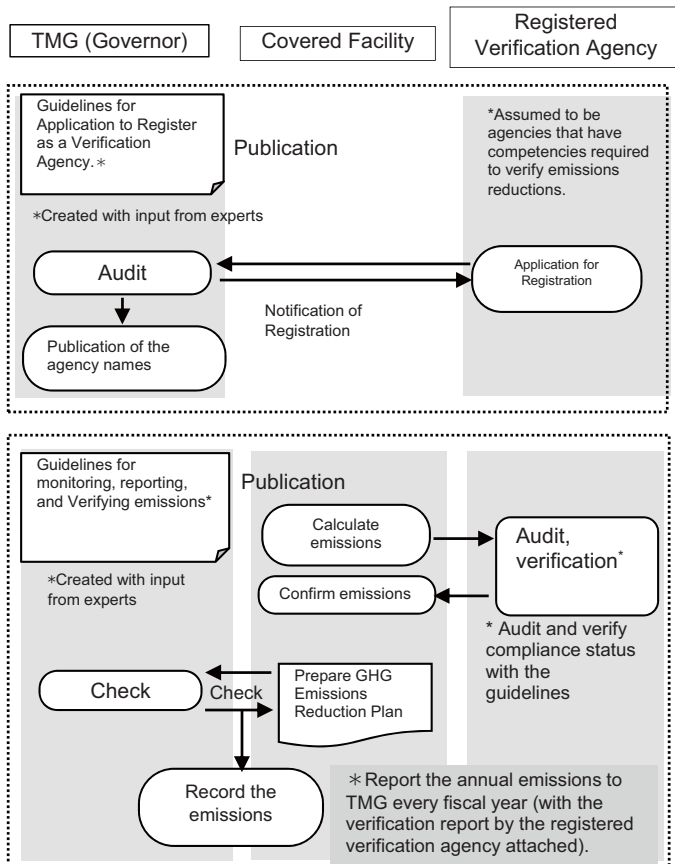


# 3(39) Calculation and Verification of Annual Emissions

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

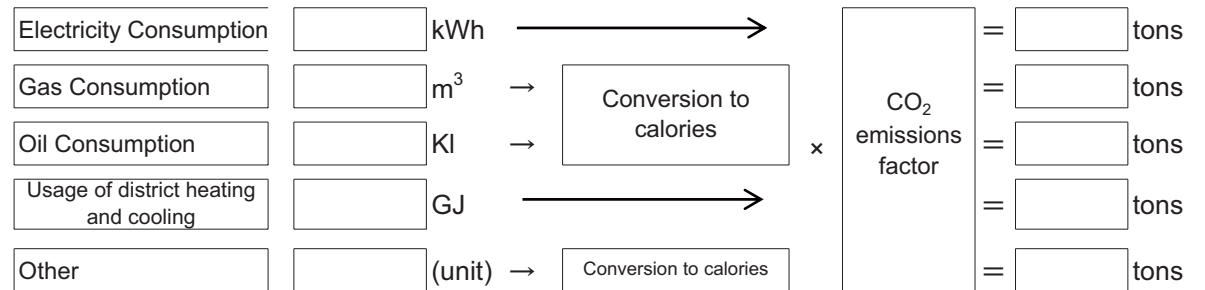


## Annual Reporting Flow of GHG Emissions



## 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(40) 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>	<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: 5px; width: fit-content; margin: 5px auto;">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(41) 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.)

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

#### **Class 1: Verification of base-year emissions, energy-related CO<sub>2</sub> 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 energy-saving diagnostic work, ISO14001 audit, CDM activation audit/verification work, or verification work for Emission Trading Trial Scheme, National Credit Scheme, JVETS, or J-VER

#### **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 energy-saving diagnostic work, ISO14001 audit, CDM activation audit/verification work, or verification work for Emission Trading Trial Scheme, National Credit Scheme, JVETS, or J-VER, or one-year or longer experience in diagnosis, consulting, or commissioning work for energy-saving and/or CO<sub>2</sub> 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 ISO14001 audit or CDM activation audit/verification work (concerning projects to reduce emissions of gases other than CO<sub>2</sub> 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, National Credit/JVER verification work (concerning any project including projects to utilize renewable energy.)

#### **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 CO<sub>2</sub> 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))

#### **Provisional Class 7: A provisional class that arose from the revision in April 2010 and will expire after July 31, 2013. Enabled to verify baseline emission (of existing facilities in scope only), and specified GHG emissions of every fiscal year. (Requirements are the same as those for Class 1.)**

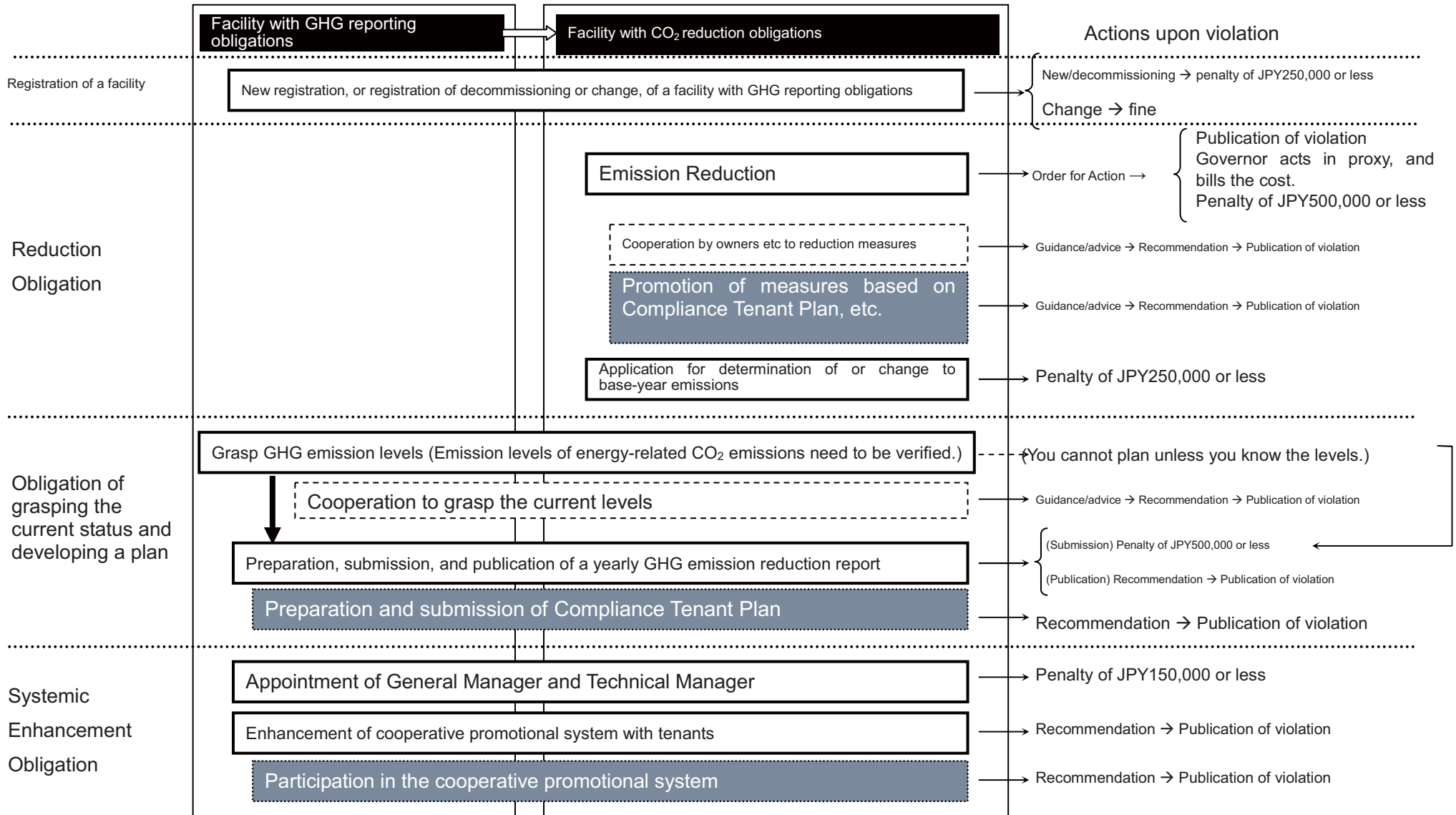
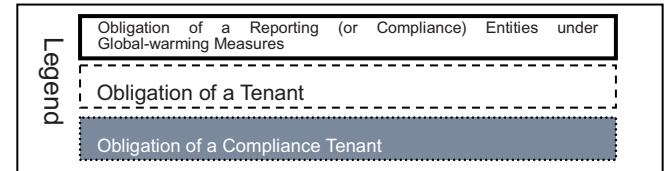
\*Provisional Class 7 is a temporary arrangement that will expire after July 31, 2013. (That is, it will expire on the registration deadline of the former Class 1 Lead Verifier.)

### ● 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)

# 3(42) Main Obligations and Actions against a Violation Part 1

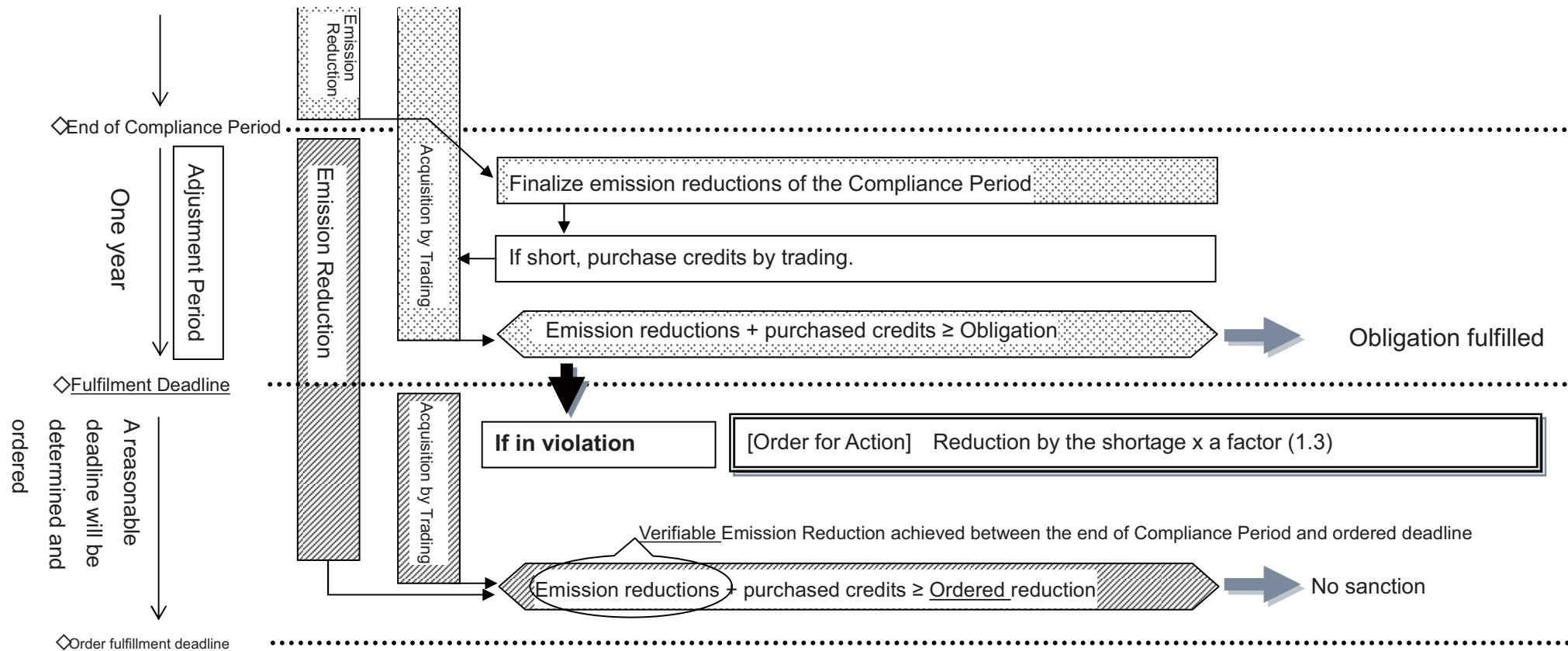
- A violation by an owner etc may incur a penalty payment.
- A violation by a tenant will lead to a recommendation to the tenant, and public announcement of the violation by the tenant.





### 3(43) 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

Penalty 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(44) 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**

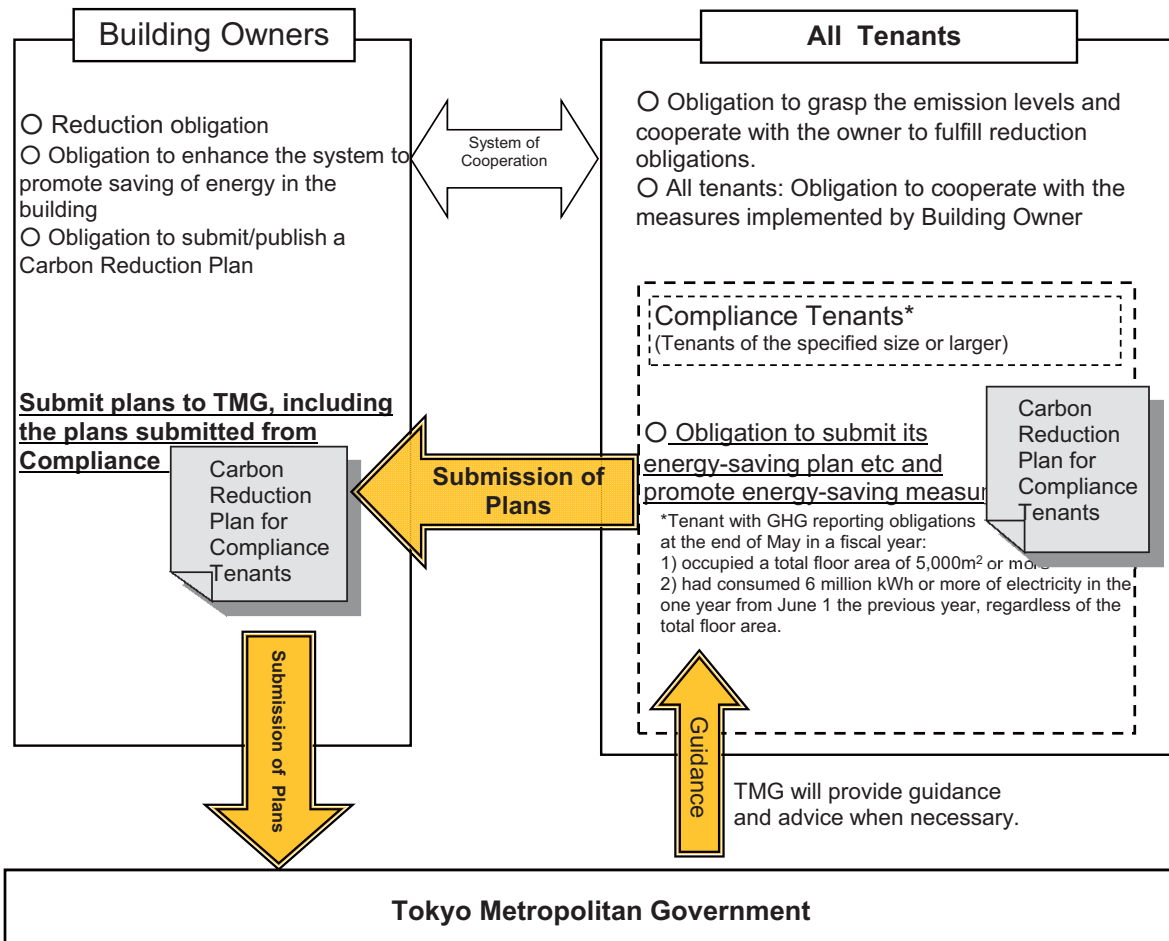
1) **All Tenants will have the obligation to cooperate with the owner to fulfill its reduction obligation.**

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 tenant, and submit it to TMG via the Building Owner, in addition to the obligation of cooperation with the owner to fulfill its reduction 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.)

### ■ 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 compliance 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(45) Leased Buildings Part 2

### Examples of Actions/Measures Expected of Building Owners

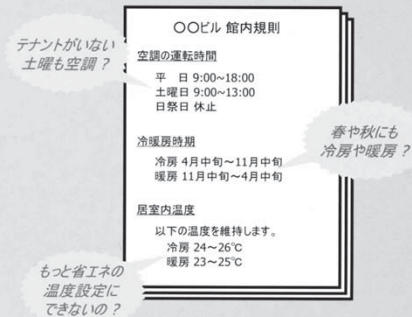
#### Energy-saving Measure Meetings

- ◆ Talk about energy-saving measures regularly



#### Revision of House-keeping Rules

- ◆ Revise rules that would lead to



#### Inclusion of Energy Consumption Figures in the Invoice

- ◆ Building Owner should provide the tenants' energy consumption data so they may know their own energy consumption levels.

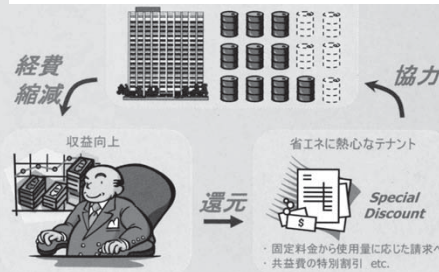
##### Contents

1. 今月のエネルギー消費量
  - ・ 電力量
  - ・ 空調時間
  - ・ 前月比、前年同月比
2. 当ビル他テナントとの比較  
(例) 賃借面積あたりのエネルギー消費  
18.0 kWh/m<sup>2</sup>  
※ 当ビル平均より 1.1 kWh/m<sup>2</sup> 多い
3. 省エネルギーに向けたアドバイス



#### 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

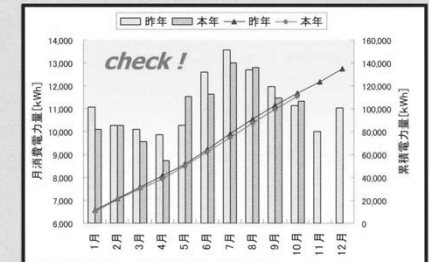
#### <Check Methods>

- ◆ Check the energy consumption, if that information is included in the monthly invoice.
- ◆ If the energy consumption is not included, ask the Building Owner to provide the data.

請求書			
請求金額 XXX,XXX 円			
(内訳)	単価	数量	金額
賃料			XXX,XXX 円
共益費			XX,XXX 円
電気使用料	XX 円	X,XXX kWh	XX,XXX 円
空調延長料	XX 円	X.X h	XX,XXX 円
エネルギー 使用量			

#### <Check for Wasteful Use>

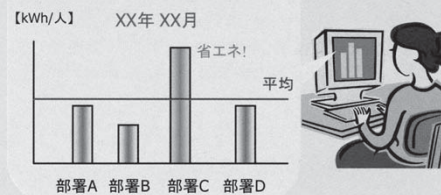
- ◆ Check if energy consumption has increased from the level last month or same month last year.
- ◆ If there is a significant increase, identify the cause. Ask the Building Owner to help the investigation.



#### <Raise Energy-saving Awareness of Employees>

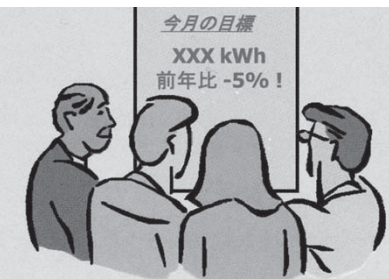
- ◆ Explain your energy consumption status to your employees and ask them to save energy.
- ◆ Obtain the consumption data of each meter from the Building Owner, if there are multiple meters in your premises.

##### 部員一人あたりのエネルギー消費



#### <Target Setting and Verification>

- ◆ Having a defined target will motivate energy-saving effort.
- ◆ Have each of your employees understand the target and make effort to save energy.
- ◆ It is also important to verify the results.



\*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(46) Leased Buildings Part 3

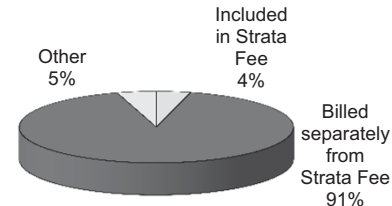
The energy consumption from the area occupied and used by tenants is about 60% of the energy consumption of the whole building.  
(This is in the case where the rentable area ratio (rentable area/total area) is 52.6%; from a brochure by the Energy Conservation Center, Japan.)

In order to promote measures to reduce CO<sub>2</sub> emission from leased buildings, it is essential to have tenants implement their own measures, in addition to active promotion of measures by the Building Owner.

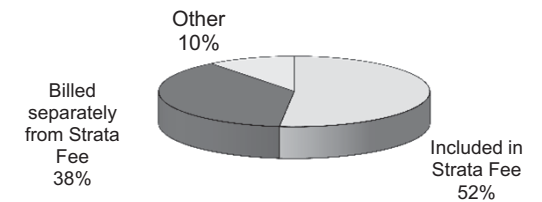
### [Reference Information] Results of a Questionnaire Survey of Leased Buildings (Overview)

(A questionnaire survey of large facilities in Tokyo (leased buildings); A survey by the Bureau of the Environment, Tokyo Metropolitan Government in 2007)

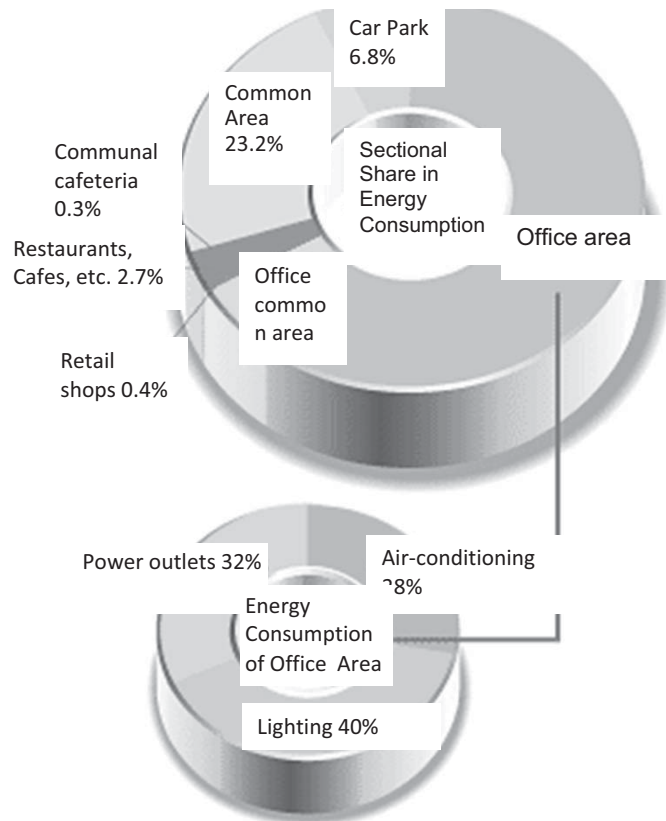
#### ■ Billing method of electricity charge used in the tenanted space.



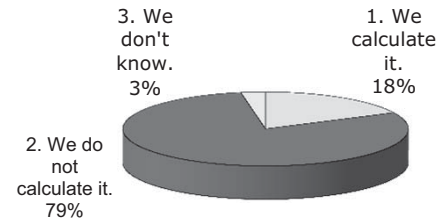
#### ■ Billing method of air-conditioning cost used in the tenanted space.



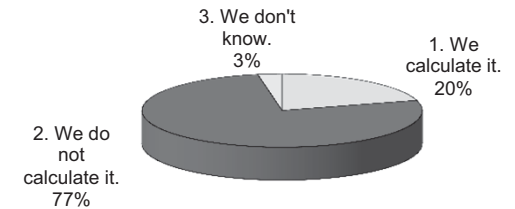
### Sectional Share in Energy Consumption



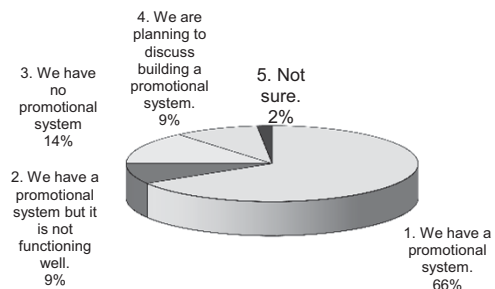
#### ■ Calculation of electricity charge (yen/m<sup>2</sup>) used in the tenanted space per m<sup>2</sup>.



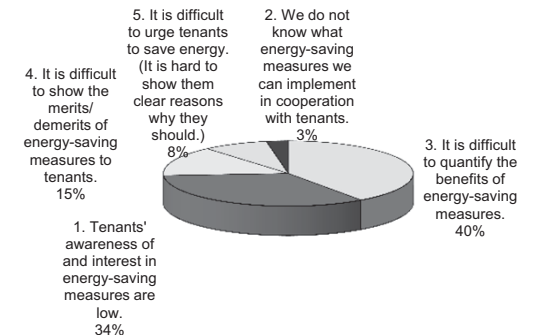
#### ■ Calculation of air-conditioning cost (yen/m<sup>2</sup>) used in the tenanted space per m<sup>2</sup> per hour.



#### ■ Building-wide system including tenants to promote energy-saving measures



#### ■ Issues in promoting energy-saving measures in coordination with tenants





## 3(47) 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.

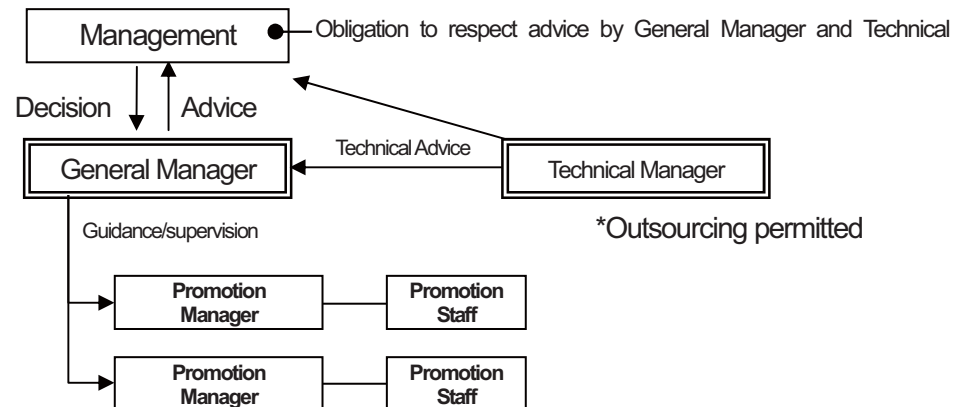
### (2) Technical Manager

(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) )

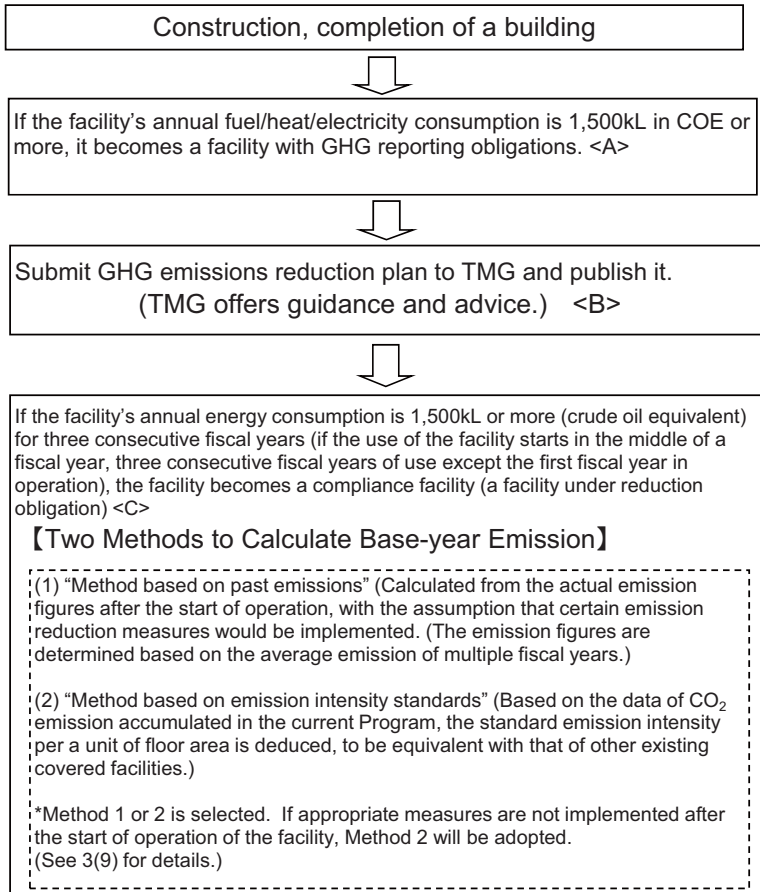
- (2) Must have the skills to perform an energy conservation diagnosis.
- (3) Must complete the training as specified by TMG.

# 3(48) 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 Global-warming Measure Plan, submit it to TMG and publish it, and make efforts to implement the measures. (TMG will offer guidance and advice.)

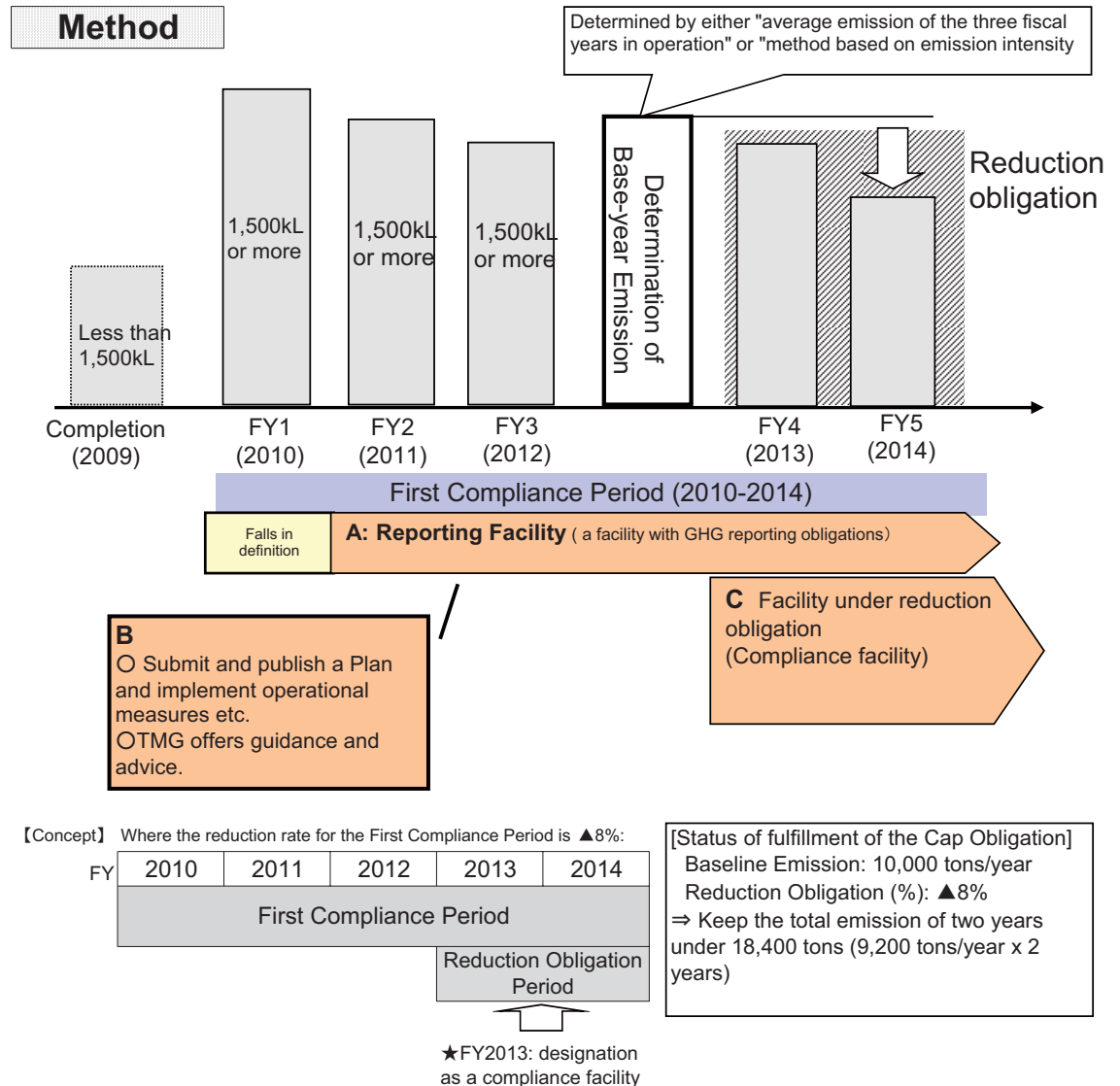
\*Definition by the scale: The annual consumption of fuel, heat, and electricity of the previous fiscal year is 1,500kL or more (crude oil equivalent).

●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 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).



**\* 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.



## 3(49) 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)</li> </ul> <p>Designation as a compliance facility . . . . &lt;reduction obligation&gt;</p>	

\*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>**

Emission Cap and Trade Section

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