



20141211 COP20 in Lima

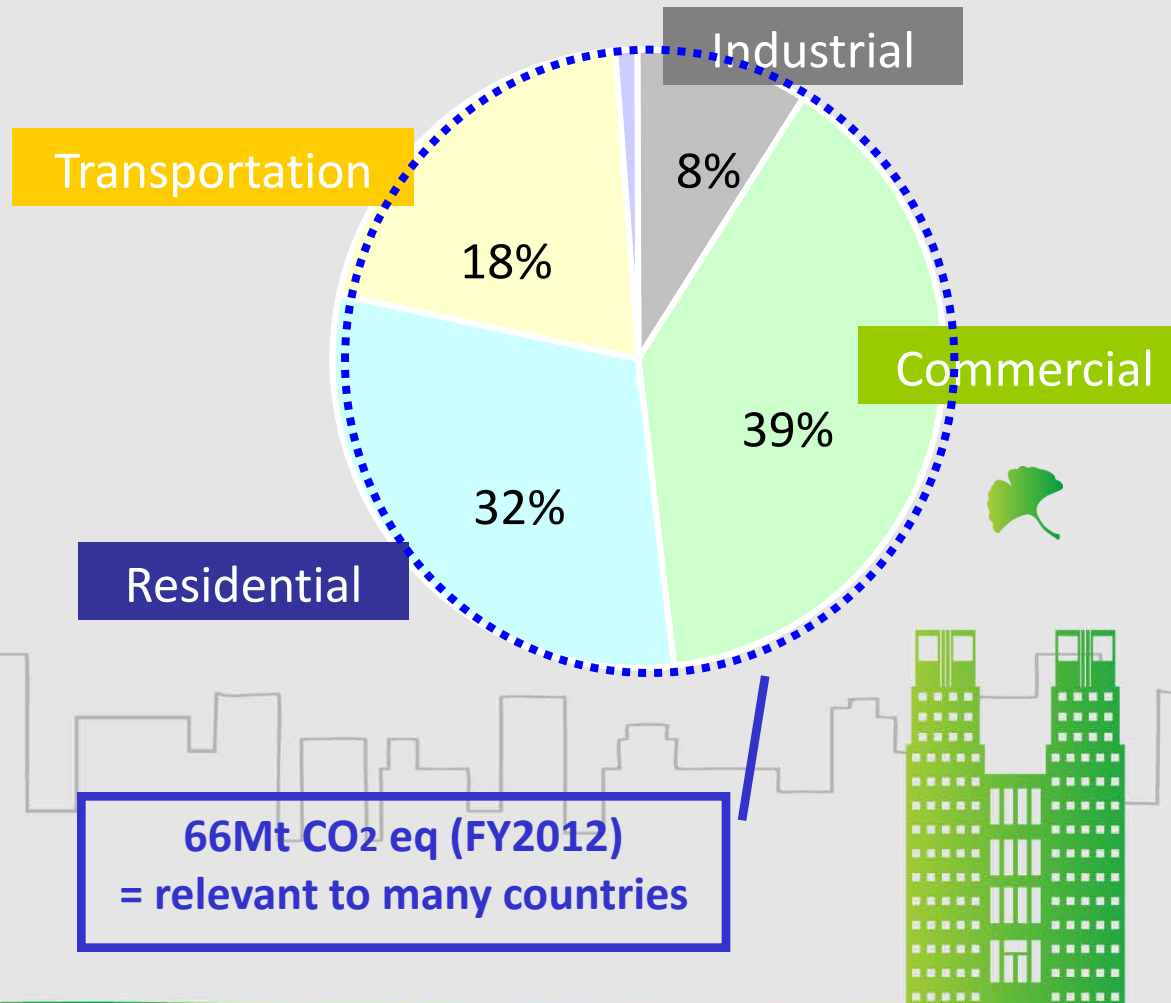
Low Carbon Initiative
Tokyo , Japan

Yuko Nishida Tokyo Metropolitan Government

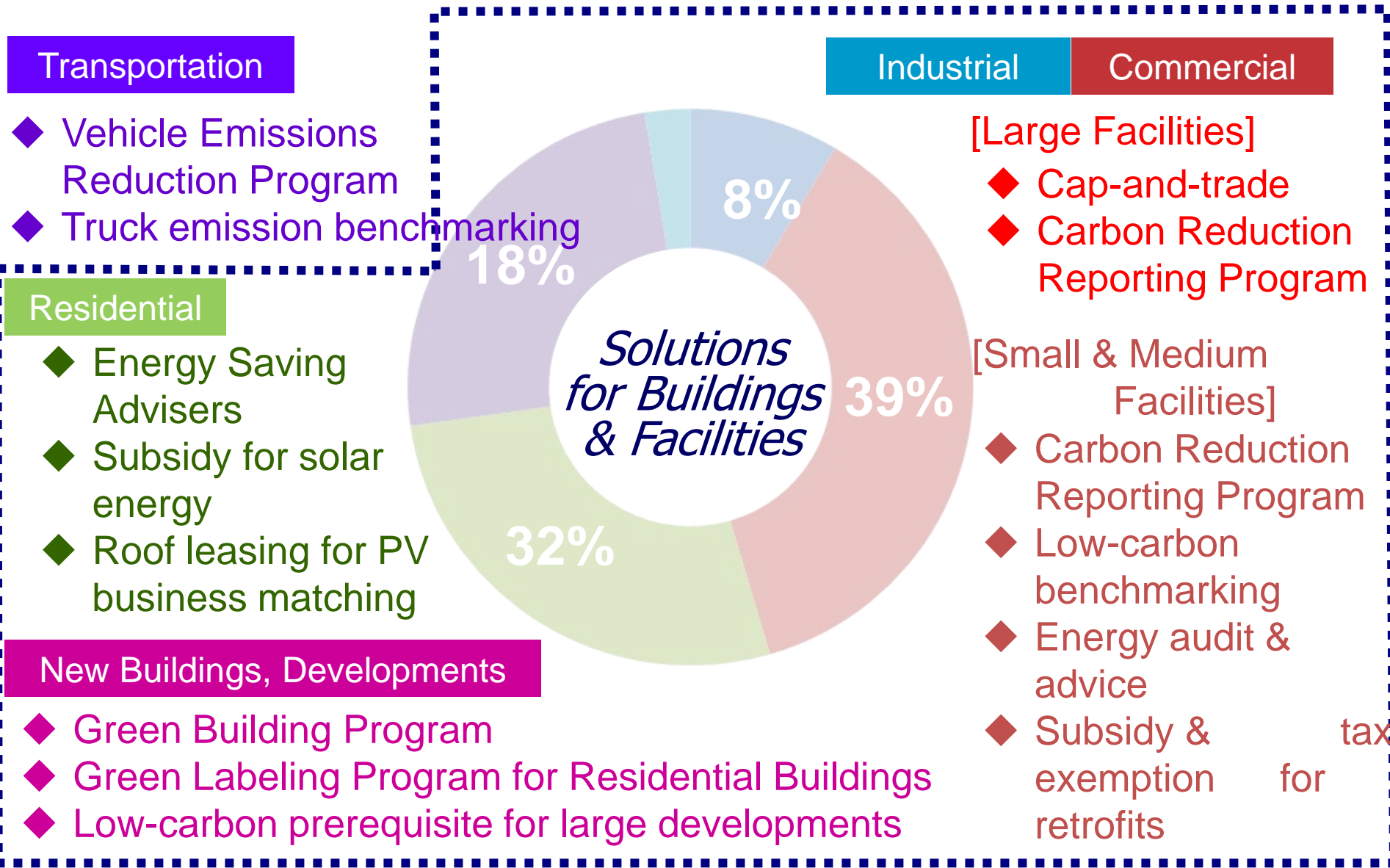
Tokyo and its carbon emissions



CO2 Emissions by Sector in Tokyo



Tokyo's Low Carbon Actions: Potofolio



Transportation

- ◆ Vehicle Emissions Reduction Program
- ◆ Truck emission benchmarking

Residential

- ◆ Energy Saving Advisers
- ◆ Subsidy for solar energy
- ◆ Roof leasing for PV business matching

New Buildings, Developments

- ◆ Green Building Program
- ◆ Green Labeling Program for Residential Buildings
- ◆ Low-carbon prerequisite for large developments

Industrial

Commercial

[Large Facilities]

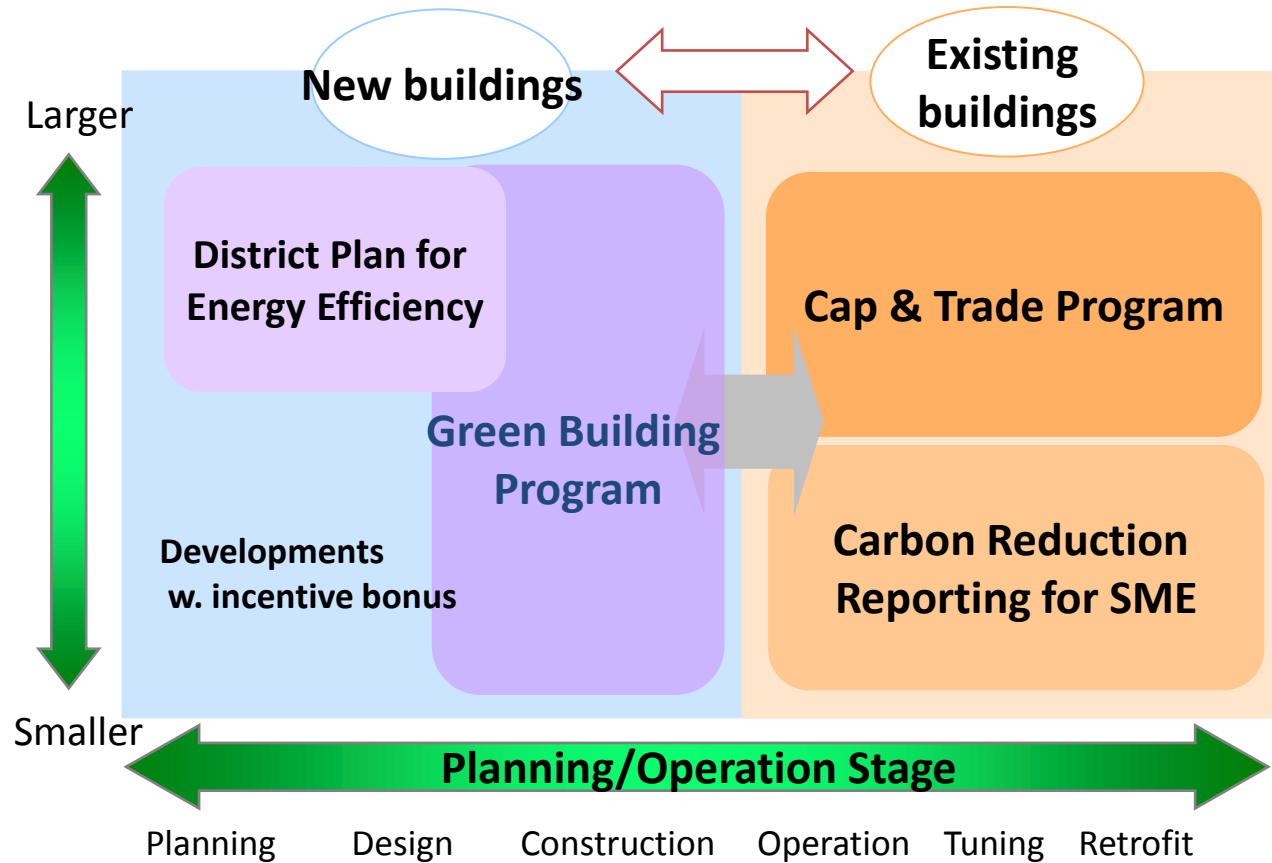
- ◆ Cap-and-trade
- ◆ Carbon Reduction Reporting Program

[Small & Medium Facilities]

- ◆ Carbon Reduction Reporting Program
- ◆ Low-carbon benchmarking
- ◆ Energy audit & advice
- ◆ Subsidy & tax exemption for retrofits

Policy Framework

Policy Linkages & Policy Developments



Policy Development

2002

2005

2008

2010

Existing buildings

Carbon Reduction Reporting (for Large)

● 2002 Start

● 2005 Revise

● 2008 Enact

● 2010 Start

Tokyo Cap & Trade

Carbon Reduction Reporting for SMEs

New builds

Green Building Program

● 2002 Start

● 2005 Revise

● 2010 Revise

Green Labeling Program for Residential Buildings

District Plan for Energy Efficiency



Outline of programs

Tokyo Cap-and-Trade Program

Tokyo Green Building Program

Carbon Reduction Reporting



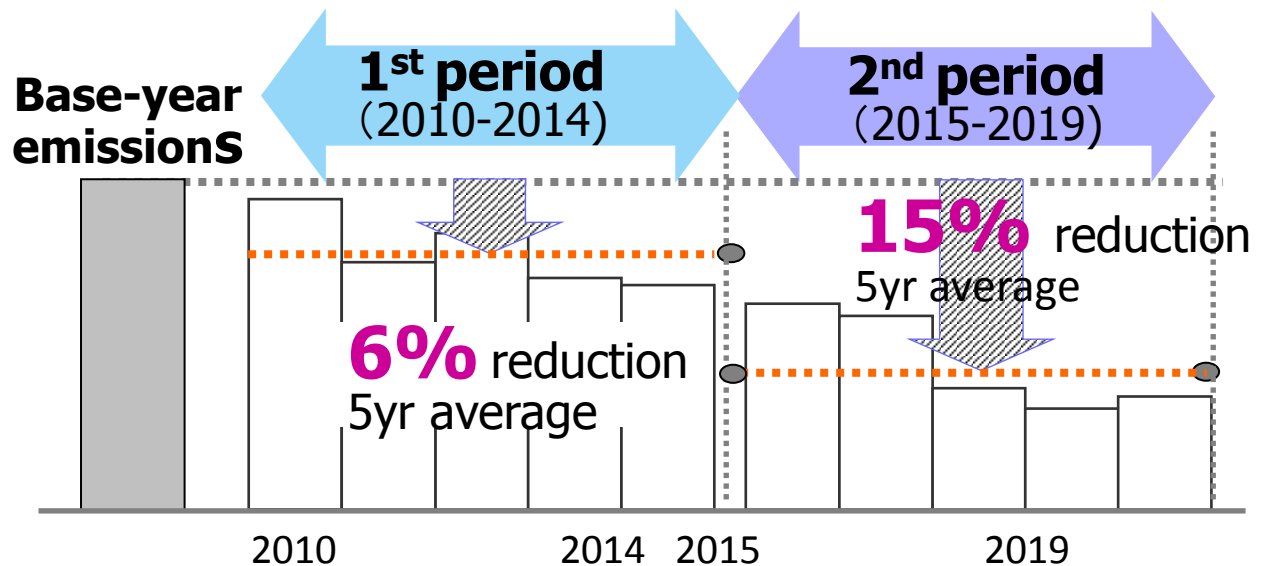
Tokyo Cap-and-Trade 1

Cap, Covered Facilities, Cap Settings

Cap (Total emissions allowed for the covered sector) was designed to enable Tokyo to achieve "-25% by 2020" emission target

Setting cap on emissions from **1,400** facilities (Mainly commercial bldgs.), accounting for **20%** of Tokyo's total emissions

Under the cap, each building is obligated to reduce emissions by **6 or 8 %** (first period) and **15 or 17%** in the second period



Tokyo Cap-and-Trade 2

Trade and Offset

Emission Trading:

Trade scheme can be utilized by owners to fulfill their obligations
Tradable allowances are limited to the excess reductions over compliance obligations

MRV: Monitoring and annual reporting are required

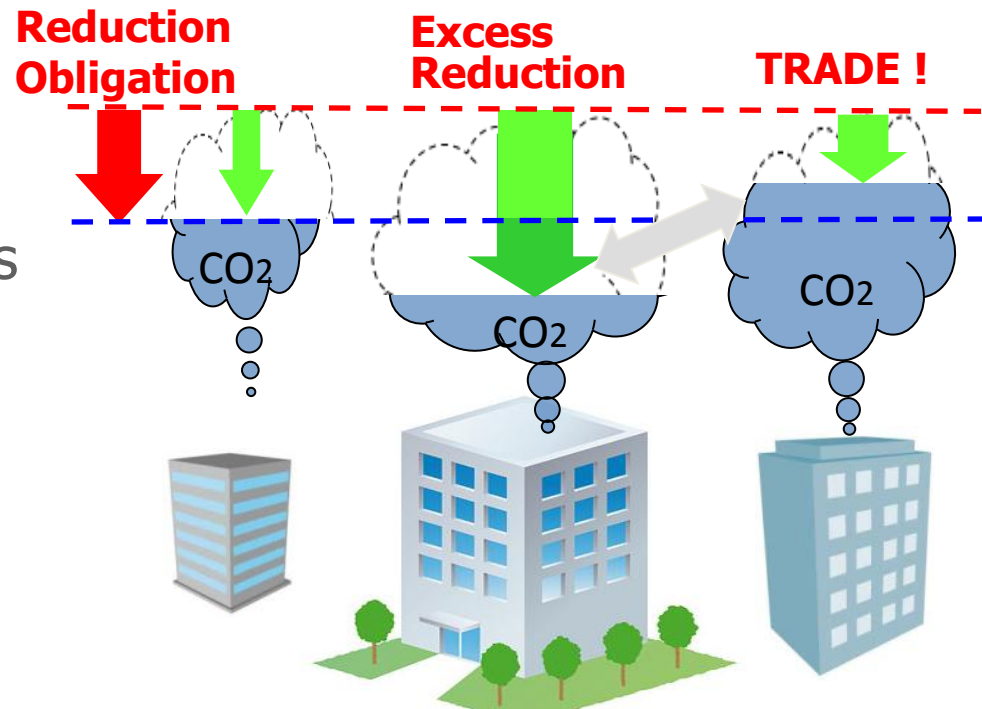
Verification system established for the program

Offset systems:

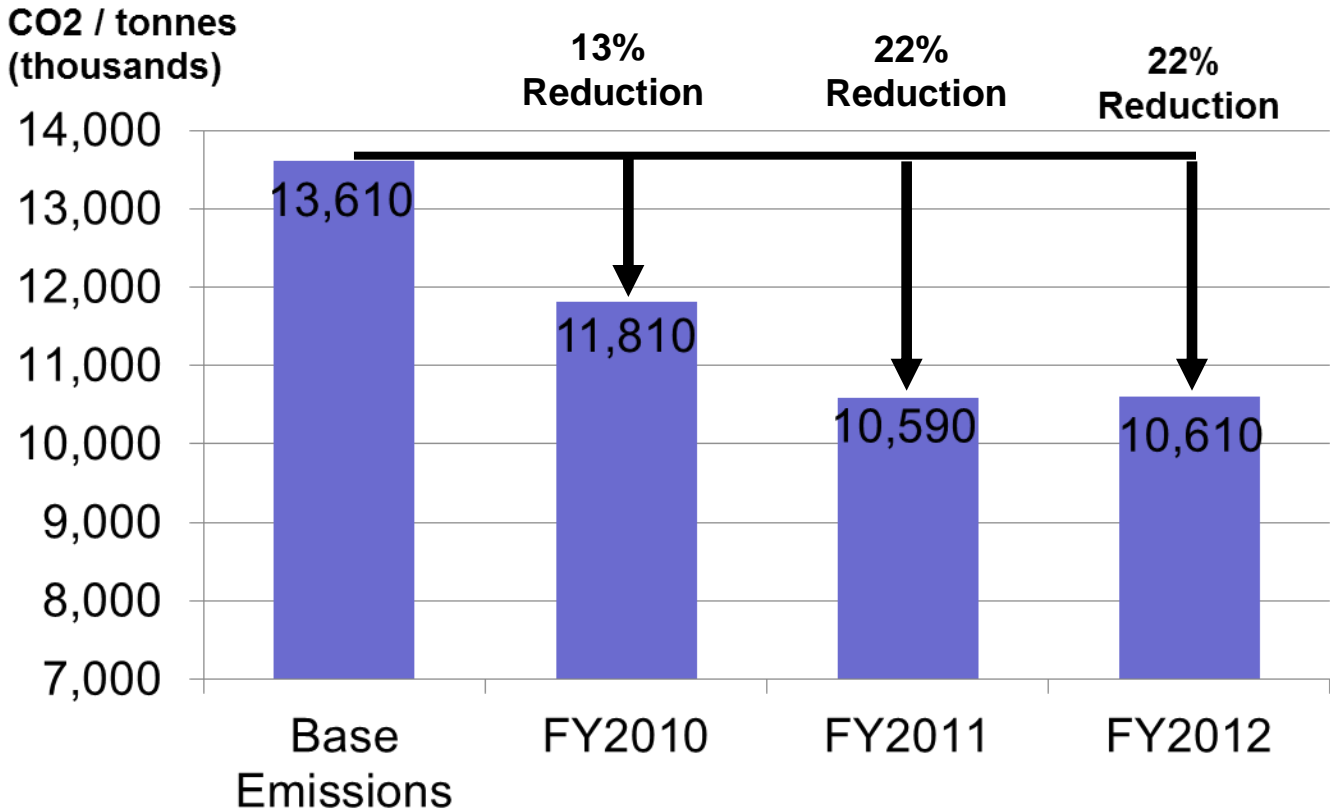
Renewables, emission reductions in small facilities, etc.

Linkage:

Link with the C&T of an adjacent prefecture



Tokyo Cap-and-Trade: Results to Date



Tokyo Green Building Program

Rating and disclosure system for sustainable design

Coverage: Covering 40% of **new buildings**

Newly planned large buildings (over 5,000 sq. meters)

Requirement: **Mandatory reporting, Minimum energy standard**

Submit sustainable design plan with its ratings

Satisfy Tokyo's energy standard (higher than the National)

Rating & Disclosure:

12 items in 4 categories including "Energy, Natural Environment, Water/Material, and Heat Island category"

Rated results are disclosed on the TMG website



Labeling and Energy Efficient Certificate Programs

have been developed based on this GB program

Incentive system in the urban planning is effectively working



Carbon Reduction Reporting for Small and Medium Facilities

Target:

Small & medium emitters not covered by the Tokyo C&T

Requirement: Mandatory reporting

Reporting annual CO₂ emissions & their plan for reductions

Disclose on the TMG website

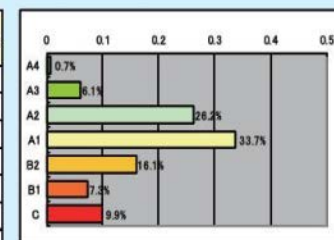
Over 34,000 facilities are reporting including 10,000 volunteers

Launched Voluntary Benchmarking Program

22 building-use categories in 7 ratings

2. Medium-sized Buildings for Rent (3,000 m² or larger but smaller than 10,000 m²)

Range	Basis	Emission Intensity (kg / m ²)	Number of Facilities	Percentage	Average Floor Area		
A4	0.25 or less	19.6 or less	7	0.7%	4988.83		
A3	More than 0.25 but 0.50 or less	More than 19.6 but 39.1 or less	58	6.1%	5063.63		
A2	More than 0.50 but 0.75 or less	More than 39.1 but 58.6 or less	250	26.2%	5526.83		
A1	More than 0.75 but 1.00 or less	More than 58.6 but 78.1 or less	321	33.7%	5444.23		
B2	More than 1.00 but 1.25 or less	More than 78.1 but 97.7 or less	153	16.1%	5930.80		
B1	More than 1.25 but 1.50 or less	More than 97.7 but 117.2 or less	70	7.3%	5981.22		
C	More than 1.50	More than 117.2	94	9.9%	5537.81		
Average intensity			78.1	Total	953	100%	5566.20



For the Steps Forward...



**Collaborative work among cities
Toward Low Carbon Cities**



Collaborative work among cities

I.C.L.E.I Local Governments for Sustainability

Lima Communiqué

- 1 Latest Science: A point of no-return
- 2 Inclusive and ambitious climate regime
- 3 Further enhancement of financial mechanism and regulatory frameworks for local governments
- 4 Partnership with all actors to scale up climate action
- 5 Accelerate advocacy and raise our ambition



**Local Government
Climate Roadmap**



Collaborative work among cities

The C40 Cities Climate Leadership Group
Network of the world's megacities committed
to addressing climate change

C40CITIES
CLIMATE LEADERSHIP GROUP

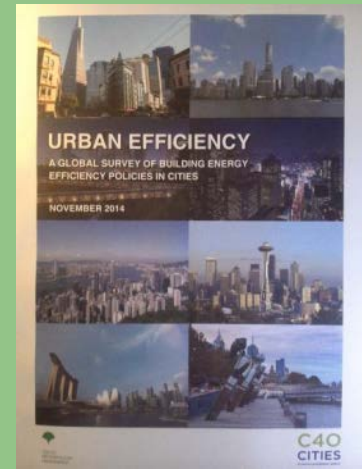


Subject-specific network Private Building Efficiency Network in C40 City

"Urban Efficiency"

A Global Survey of Building Energy Efficiency Policies in Cities

Highlighting various BEE policies in cities
to serve as a resource for city officials
Success factors and key challenges



Bilateral Cooperation : PUTRAJAYA

Tokyo's Experience on Carbon Reduction Reporting

Reporting Program for Existing Buildings

KEY Reporting Elements

- Annual CO₂ emissions & energy consumption
- Plan for reductions



Bilateral Cooperation: ISKANDAR

Tokyo's Experience

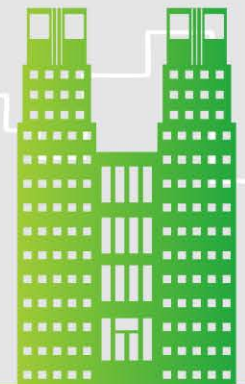
on New Building Program

Reporting Program for New Buildings/Developments



KEY Elements

- Sustainable design requirement
- Energy efficiency standards
- Green buildings ratings



Introducing Reporting Program

Key Factors for Program Design

Program Coverage:

Public and/or Private? Commercial/Industrial/Residential?
Large/Medium? Including tenants?

Reporting Contents:

Energy consumption/CO2 emissions/Water usage/
Reduction plan? Equipment facilities status? Design preperformance?

Budgeting & Capacity Building:

How & Who will check reports? Capacity building for administration,
Capacity building for staff in reporting entities

Disclosure:

Disclose? If not, when? Disclosing contents? Disclosing media?

Rating/Benchmarking?:



Hop, Step & Jump!

Program design and development

2002

Hop

2005

Step

2010

Jump!

Mandatory Reporting

Revised Reporting

**Mandatory Reduction
Tokyo Cap-and-Trade**

Reporting

Self-reporting

Reporting with **rating**

Reporting with **verification**

Disclosure

On request

On **TMG website**

Measures

Building inventory

Introducing **low-cost measures**

Reductions integrated into **long-term business plan**

Involvement

Staff level
Operators

Facility managers
In-house engineers

Corporate decision makers
Consulting/Engineering firms

Action! toward a Low Carbon City



References

TMG Website: www.kankyo.metro.tokyo.jp/en

TMG Facebook: www.facebook.com/Environment.TMG

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