Tokyo Metropolitan Government

Tokyo Sustainable Energy Policy

Tokyo Climate Change Strategy to Ensure Sustainable Development

Bureau of Environment
Tokyo Metropolitan Government

Tokyo Cap-and-Trade

World's First Urban Cap & Trade Program to Cover Office Buildings

（2008 July Revised → 2010 Apr. Enacted）

Target: Facilities that consume 1,500 kl or more per year (crude oil equivalent) of fuel, heat, electricity

1,300 facilities

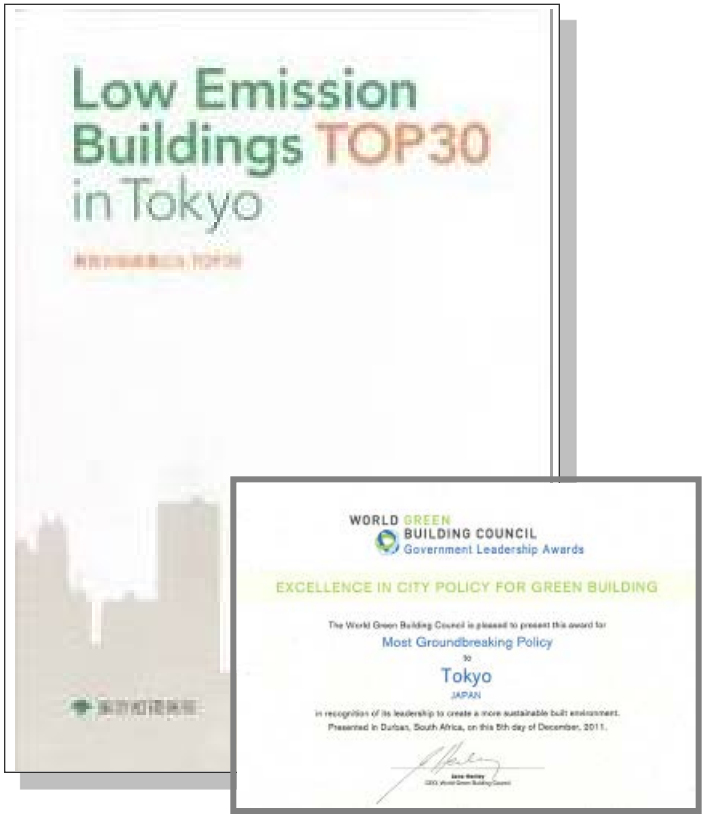
- 1,100 Office buildings, educational facilities and others in Commercial sector
- 200 Factories and other facilities in Industrial sector

Accounting for **40%** of Commercial & Industrial sectors' emissions

※Results of the first Fiscal Year of Operation FY2010

Reduced by **13%**: **1.44million** t-CO2

Green Building Era in Tokyo



- **Energy efficiency, Low energy:** LED lighting, Energy efficient air conditioning, Double glazed windows, Natural lighting, Natural ventilation
- **Use of Renewable Energy:** PV panels, Use of Geothermal energy, Heat pump, etc.

Overcame Summer 2011 Power Shortages

（in TEPCO service area）

■Greater efforts **using existing knowhow** about saving energy

- **Rethinking about lighting luminosity**
  - Reduction from **previous practice of 750+ lux to 500 lux or lower**
- Using air conditioning to keep room temp. at 28℃
  - Major progress **in tenanted buildings** to use air conditioning at 28 ℃
- Many facilities began to **visualize and understand their electricity consumption**

Peak demand was reduced by **18％** （Down about 10mil.kW）

Similar efforts: Large & Small electricity consumers and households

■ Even after Fall 2011, **Reduction continues** at **about 10％**

Progress and Benefits of Smart (Rational) Energy-Saving Efforts

●Rethinking of lighting luminosity

Remove
1/2 of fluorescent lights

●Cooperate with tenants at office buildings

- Visualize and understand tenants' electricity consumption
- Lighting measures in tenanted areas as well as common space
- Peak shift operation of air conditioning

●Case Study: Benefits of Power-Saving efforts at a small-sized factory

Demand management by Visualizing in real time

Unique efforts led to Peak demand reduction of **33%**

Installed after the Disaster

Utility bills reduced 30% compared to summer 2010

Tokyo Climate Policy Program

strengthen energy saving measure

Useful for Business Continuity in a Disaster

At the same time, contributing to strengthening both sustainable energy management and GHG emission reduction

Tokyo Sustainable Energy Policy

☐Measures for supply-side

- Shift toward lower-carbon grid electricity
- Promotion of decentralized energy sources

  e.g. 1 million kW natural gas power generation project
- Spread of renewable energy

☐Measures for demand-side

- Energy-Saving efforts of electricity consumers which lead to ensuring reliable electricity

  （Further promotion of energy-saving buildings under Tokyo Cap & Trade program and other programs）

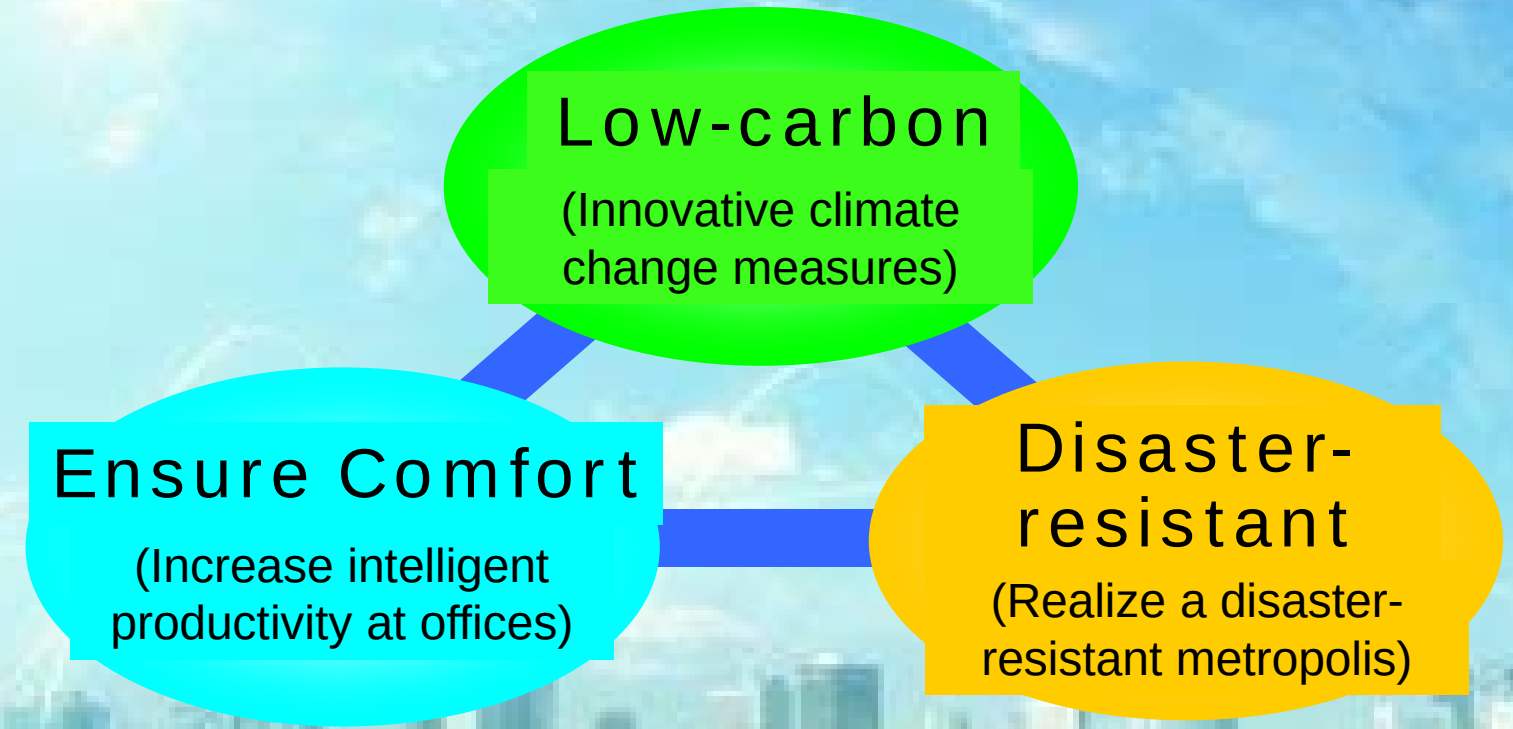
☐Measures for better use of energy from both electricity supply-demand sides

- Installation of energy management systems for effective use of electricity in some districts

Tokyo's Future Vision

A Smart Energy Metropolis

to achieve 3 goals at once



Tokyo will Contribute to the World and Cities in Asia

Tokyo Sustainable Energy Policy
with Innovative Climate Change Strategy
→ Ensure **Tokyo's Sustainable Development**

Share our experiences and know-how with the World

Tokyo Climate Change Strategy

Toward a “Smart Energy Metropolis”

http://www.kankyo.metro.tokyo.jp/en/climate/index.html