Tokyo’s Approach to Realization of Smart Energy City

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2030 GOALS

Tokyo will leap to be a sustainable city taking advantage of the Tokyo 2020 Games.

- Greenhouse Gas Emissions: 8.4% increase in 2014 preliminary, 30% reduction compared to 2000 level.
- Energy Efficiency: 19% reduction in energy consumption compared to 2000 level.
- Recycling Rate of Municipal Solid Waste: 23.2% in 2014, 37% reduction compared to 2012.
- Final Disposal Amount of Waste: 25%.
- Renewable Energy Target for Electricity Use: 8.7% in 2014, about 30%.
- Number of Participants in Field Work Programs: Approx. 2,200 in 2014, 50,000 from 2015-2030.
- Photochemical Oxidant Concentration in All Monitoring Stations: Less than 0.07 ppm.

TOKYO METROPOLITAN GOVERNMENT
Large facilities:
Facilities whose annual energy consumption is greater than or equal to 1,500 kL of crude oil equivalent

- Only 1,300 large facilities are responsible for approximately 40% of CO2 emissions from the industrial and commercial sectors.

Critical challenges for Tokyo include energy efficiency in buildings, including offices and condominiums.

Buildings account for more than 70% emissions from the energy-induced CO2 emissions in Tokyo.

Share of CO2 emissions from industrial and commercial sectors in Tokyo:
- Buildings account for more than 70% of emissions.
- Buildings account for 32.5% of emissions.
- Industrial facilities account for 8.5% of emissions.
- Commercial facilities account for 40.5% of emissions.
- Transport facilities account for 18.5% of emissions.

Introducing the cap-and-trade program for large facilities:

- Around 40% of industrial and commercial sectors in Tokyo.
- Only 1,300 large facilities are responsible for approximately 40% of CO2 emissions from the industrial and commercial sectors.

Large facilities: Facilities whose annual energy consumption is greater than or equal to 1,500 kL of crude oil equivalent.
Tokyo’s Three Programmes
Promoting Green Buildings

- **Carbon Reduction Reporting Program**
  - Existing Large facilities
  - Started in 2002
  - Enacted in 2000

- **Green Building Program**
  - New
  - Introducing Green Labelling for Condominiums
  - Started in 2002
  - Enacted in 2000

- **Tokyo Cap-and-Trade Program**
  - Small and medium facilities
  - Started in 2005
  - Revised in 2008
  - Started in 2010

- **Carbon Reduction Reporting Program**
  - New
  - Started in 2010
  - Started in 2014

- **Introducing evaluation and disclosure programme**
  - Started in 2005

- **Introducing mandatory reduction programme**
  - Started in 2010

- **Introducing Energy Performance Certificate**
  - Started in 2010
  - Expanding coverage
Effectiveness of the Cap-and-Trade

- Achieved certain and significant emissions reductions by imposing obligations equitably.
- CO₂ emissions intensity of covered facilities was also reduced significantly.
- Realized Reduction of energy consumption and city growth at the same time. (Decoupling)

Proved that the Cap-and-Trade program doesn’t prevent the economic growth.
International Environmental Cooperation

- **Linking with the Large Cities Climate Leadership Group**
  - Joined C40 in 2006 and actively leaded practices as a member of steering committee.

- **Support of policy formation and techniques for Asian cities**
  - Support of low-carbonization of Asian cities, Iskandar and Putrajaya
  - Cooperation on air pollution countermeasures and waste management in urbanizing cities

- **International cooperation and support on Cap-and-Trade program.**
  - Joined ICAP in 2009 as the first member from the Asian region.
  - TMG has taken part in management as a member of ICAP steering committee since 2011.
  - Cooperated for technical support of C&T program design as a lecturer of training course hosted by ICAP.