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Tokyo's Initiatives for Low Carbon and Energy Efficient City



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Tokyo's Population, Energy Consumption & CO2 Emissions

- **Population:** 13.19 million
Households: 6,690,000 (Sept 2013)
- **Energy Consumption:** 681.8PJ (FY2011)
→ About the same volume of consumption as Denmark
- **CO2 Emissions:** 50.52 million t-CO2 (FY2011)
→ Comparable to the volume of emissions of Switzerland

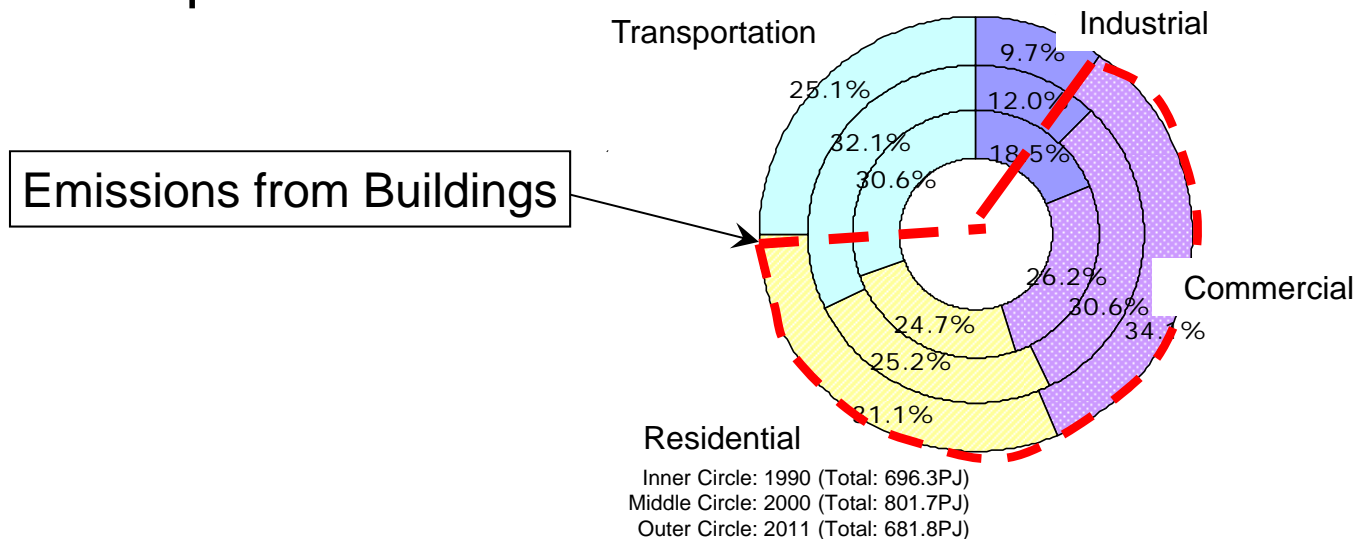
However,

compared to the 2000 volume of 801.8PJ, the 2011 volume of energy consumption decreased by 15.0%!

Characteristics of Tokyo's Energy Consumption

- Much consumption in the commercial sector (office buildings, commercial facilities, etc.) and residential sector.
- Energy consumption in building sector accounts for about 65%.

About half of residential / commercial sector energy consumption is in the form of electric power



TMG's Initiatives – A Driving Force



Not to limit the city's business activity and development, but to consider the environment and promote the transition to low-carbon buildings



Tokyo Emergency Electric Power Program (1)

- Which made it possible to significantly reduce ? -

This program was formulated with the aim of overcoming the power crisis following the Great East Japan Earthquake of March 2011 and breaking away from a society excessively dependent on electrical power.

(Main Contents)

- Summer-time power-saving and reviews on a lifestyle too dependent on electrical power
- Diversification / distribution of energy sources through "urban power produced in Tokyo"
- Future direction - aiming for a low-carbon, highly disaster-resistant city



Tokyo Emergency Electric Power Program (2)

- For large customers ⇒
 - Use of the Cap-and-Trade Program mechanism
- For small customers ⇒
 - Guidance on power-saving measures for offices utilizing submitted 30,000 CO2 Emission reports
- For households ⇒
 - Wide promotion of power and energy saving through public school students
 - Approx. 6,000 power saving advisors for 520,000 households



Tokyo Initiative on Smart Energy Saving (Outline)

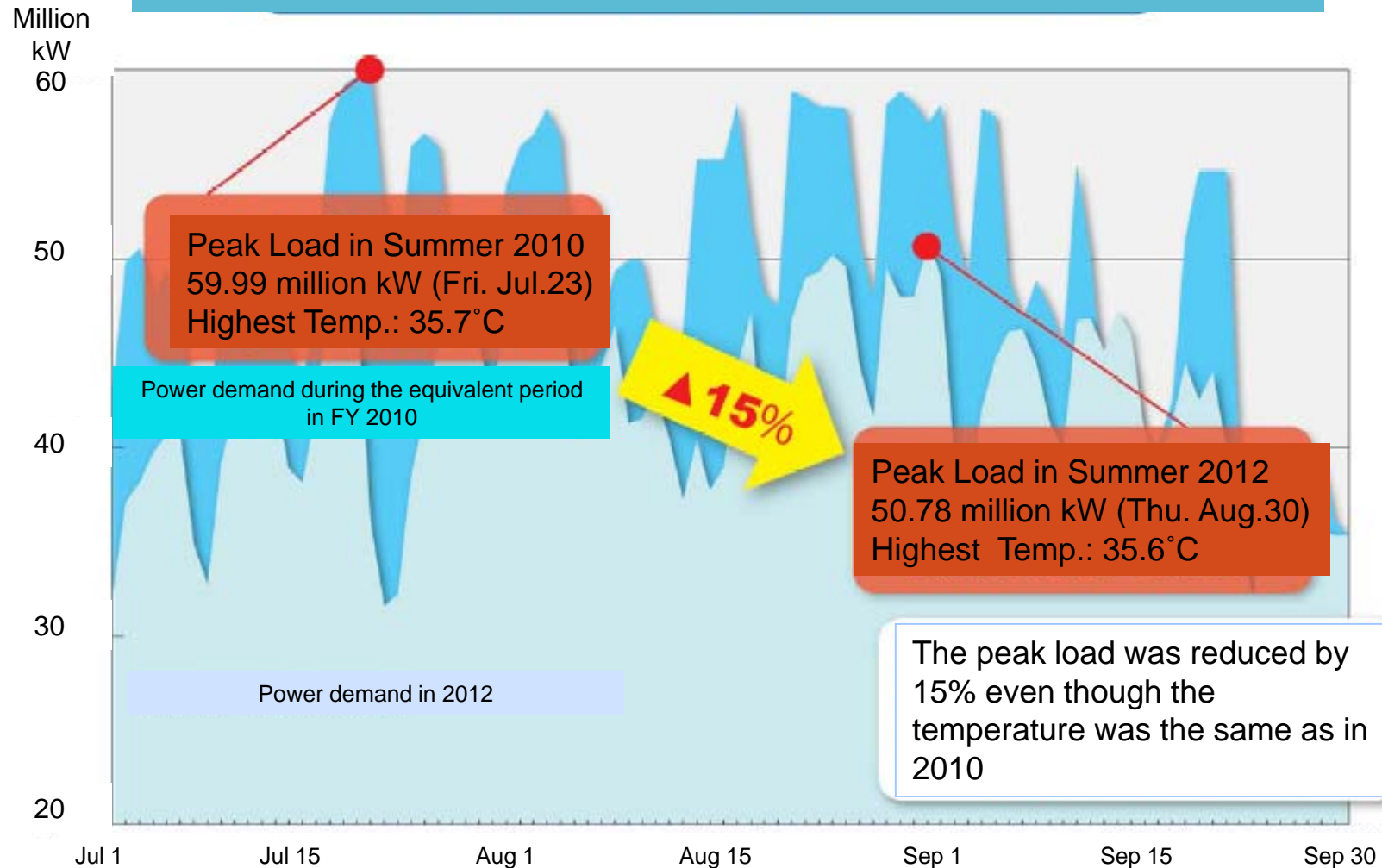
- Developed in May 2012 in accordance with power demand forecast for summer 2012
- Provides basic principles and business/ household oriented menus of measures for "smart power saving", which is the foundation of future energy conservation
- Aiming for "Smart Energy City"- The city with low-carbon, comfort and disaster-resistant

3 Principles of "Smart Power Saving"

- 1 Eliminating waste, and promoting "long-lasting energy-saving measures"
- 2 Strictly conserving energy, when necessary (Peak Cut)
- 3 In principle, not enacting initiatives that will undermine the economic activity and prosperity / amenity of the city

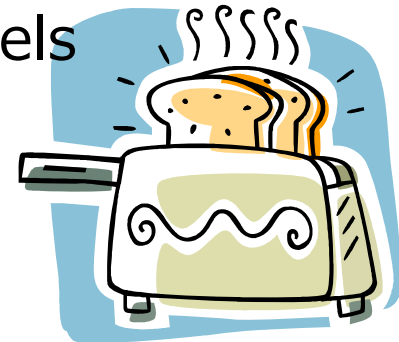
Electricity Peak Load in Summer 2012: 15% Reduction from 2010

Electric Demand Peak Load in TEPCO area (July-Sep 2012)



Achievement Status of Power-Saving Measures in Summer 2012

- **Lighting Levels**
Fixed at about 500 lux
- **Air Conditioning Temperature “28°C”**
Implemented in over 50% of offices of large corporations, including tenant areas
- **Service Facilities such as Restaurants**
Continued implementation of flexible temperature settings to comfortable levels in sales and customer seating areas

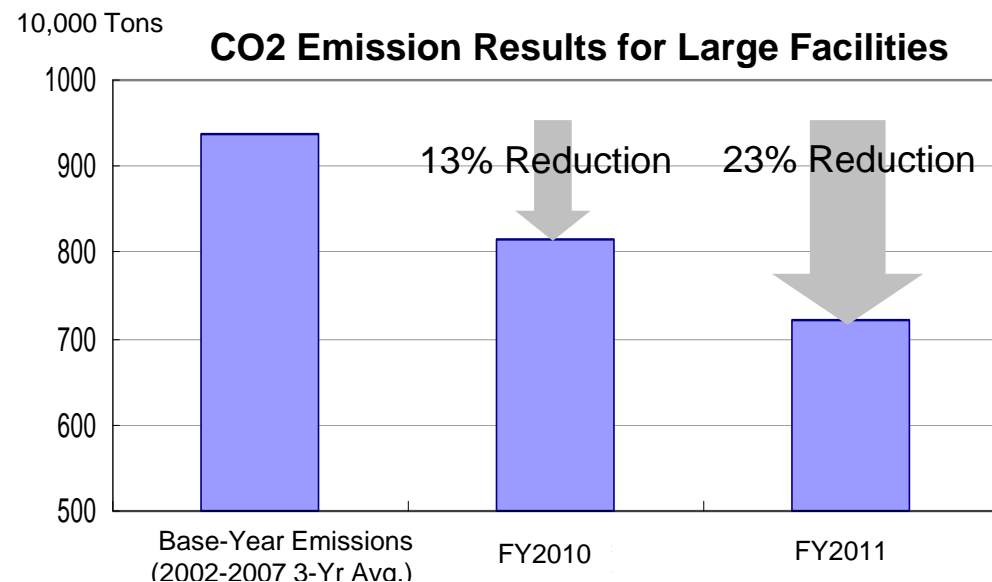


Tokyo Cap-and-Trade Program

Reduction Results / Program Effects

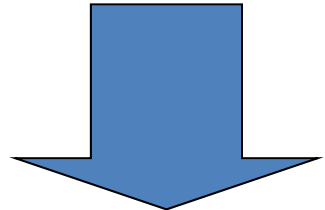
■ Reduction Results in FY 2010, 2011

- FY2010: 13% reduction from Base-Year-emissions
- FY2011: 10% further reduction from the result of FY2010
- Over 90% of facilities reduced more than their reduction obligation rate for the 1st compliance period (2010-2014)
- Over 70% of facilities has reduced over 17%, which is the reduction obligation for the 2nd compliance period (2015-2019)



Building Energy Efficiency Initiatives in Asian Cities

Some Asian Cities have already implemented Building Energy Efficiency and Green Building Initiatives



“C40 Tokyo Workshop for Building Energy Efficiency” will be held in June, 2014 in Tokyo



Tokyo's Policy on Sustainable Energy Use

- Promoting both demand and supply side approaches -

◇ Measures on the demand side

- Promoting conservation of power and energy, which also contributes to a stable power supply

◇ Measures on the supply side

- Promoting the introduction of distributed energy sources such as renewable energy and co-generation systems

- Promoting utilization of solar heat energy

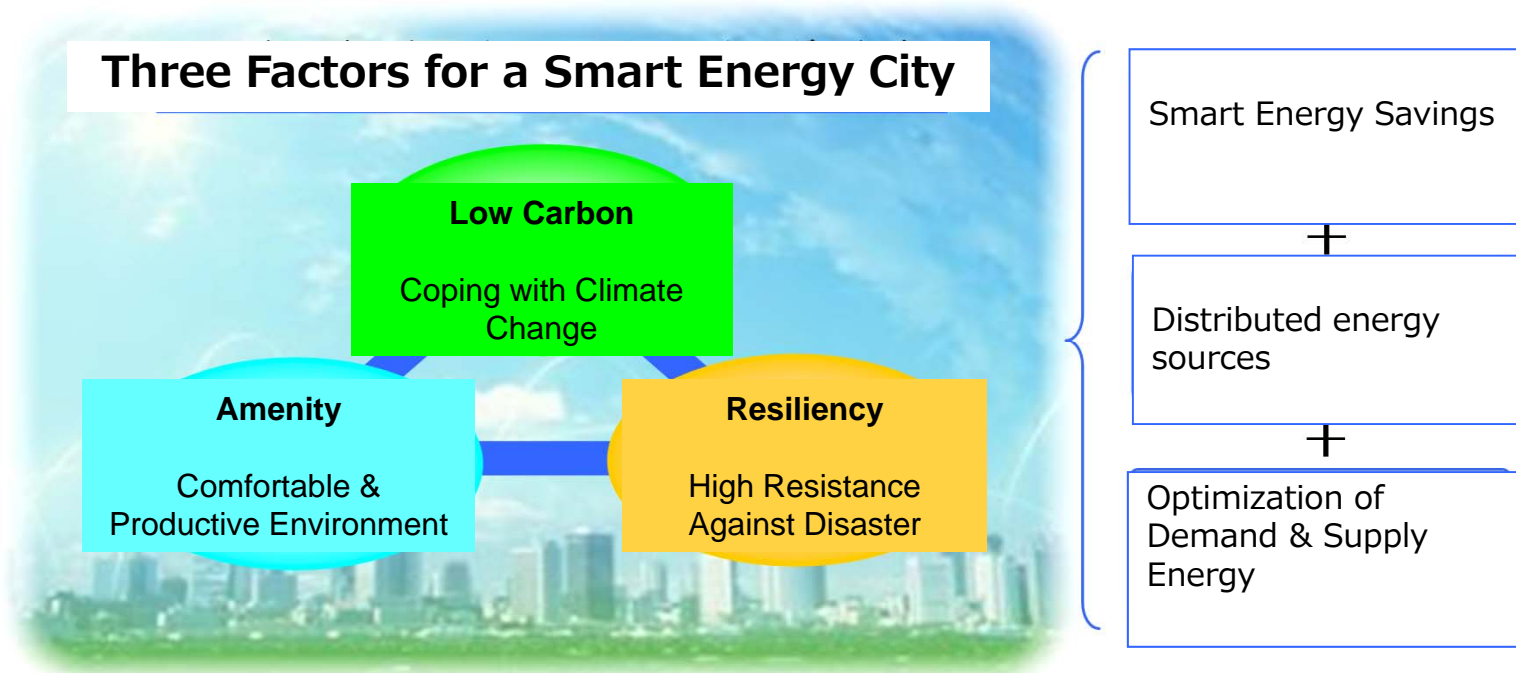
◇ Measures for optimization on the supply side and the demand side

- Introducing energy management systems, which enable efficient regional power supply



Our Ideal Tokyo

- A smart-energy city, beyond simple power saving -



Thank you for your kind attention.