Japanese Urban Policies to Tackle Climate Change

Feb. 2008

国土交通省

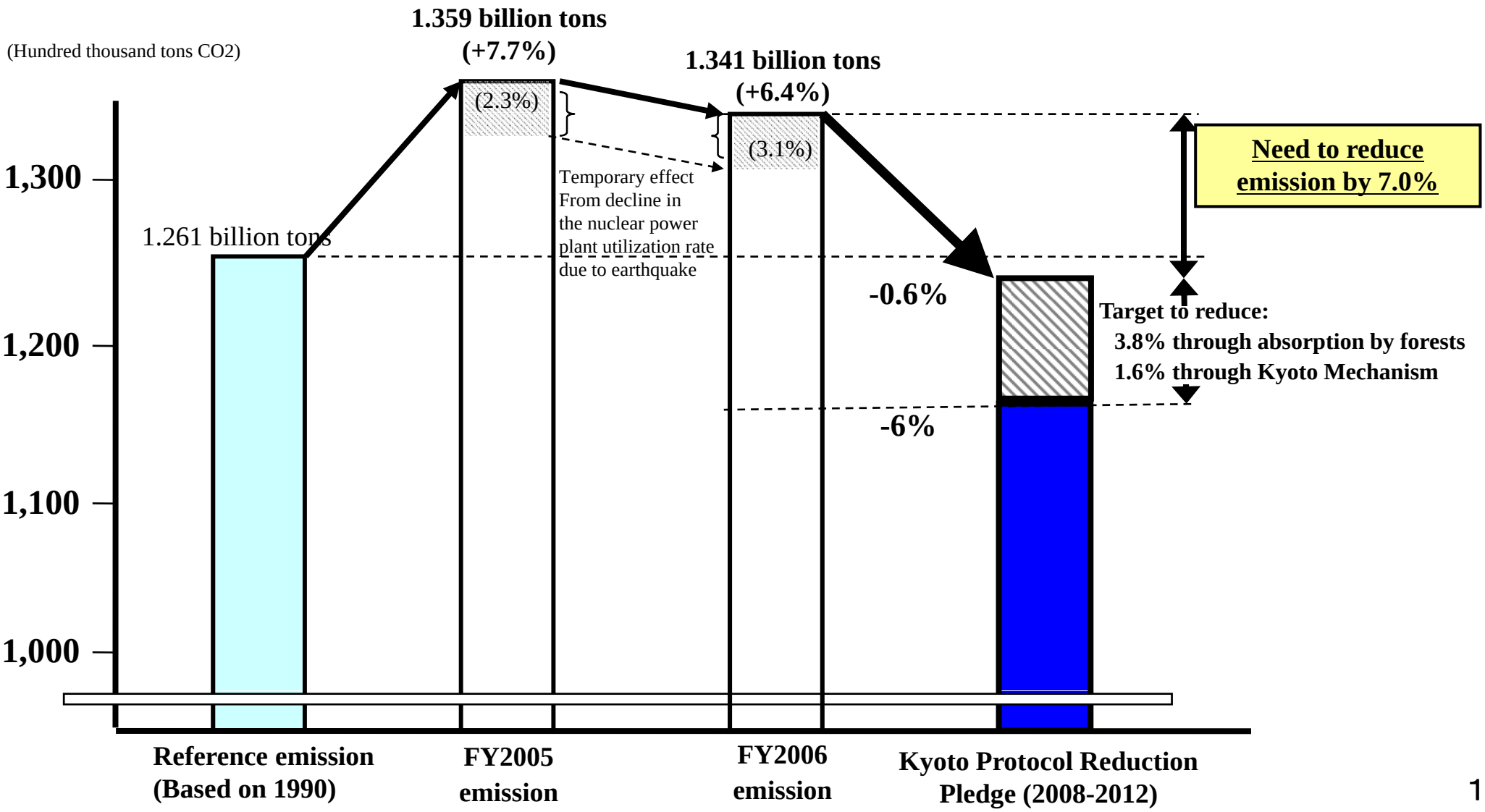
Akiyasu KURISHIMA

Director of Urban and Regional Policy Division
Urban and Regional Development Bureau
Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

Greenhouse Gas Emission in Japan

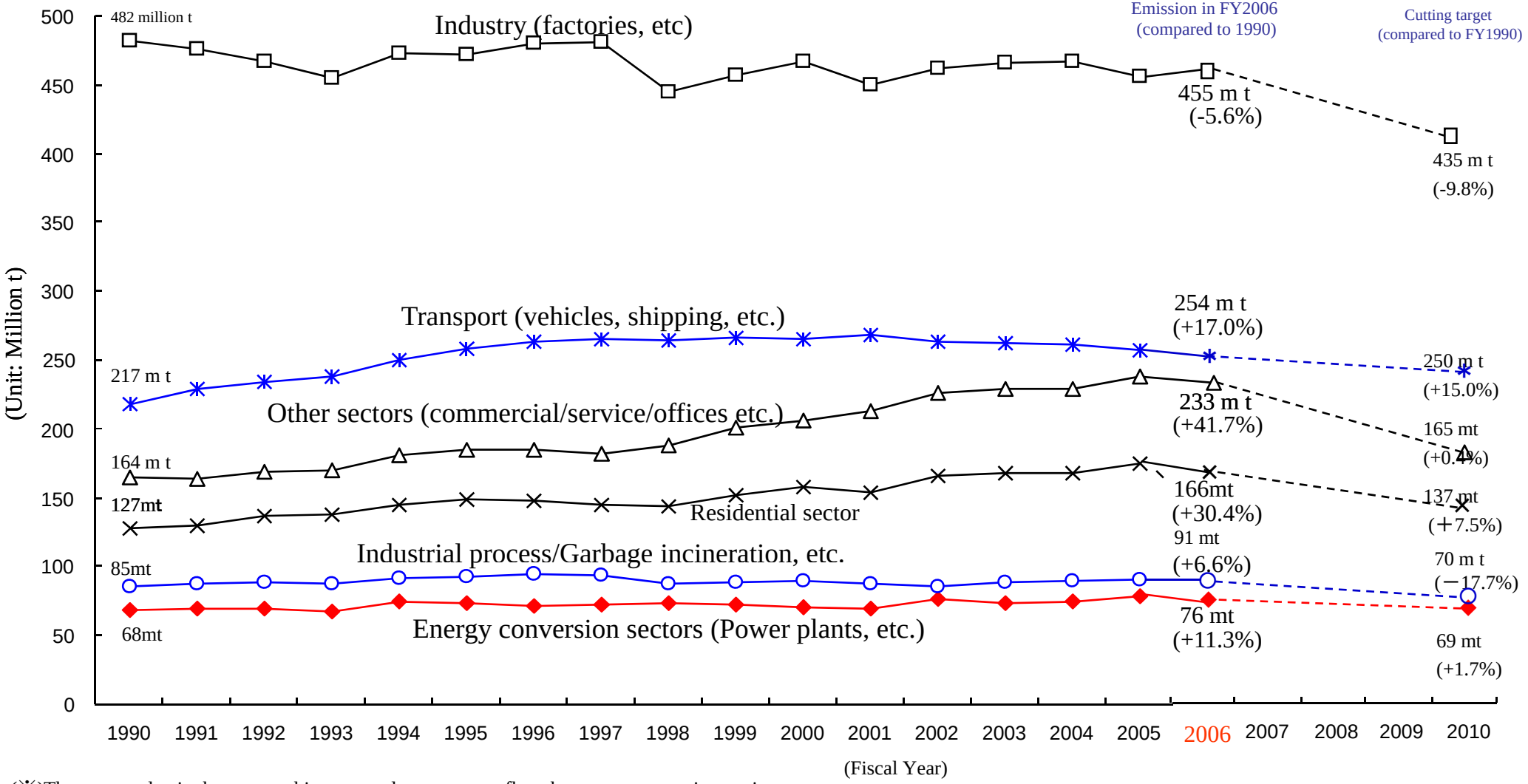
The emission in FY2006 surpassed the 1990 reference by 6.4%,

Japan needs to cut emission by 7.0% to achieve the 6% reduction committed to in the Protocol.



CO2 Emission by Sector

- CO2 emitted in FY2006 stood at 1.295 billion tons. This is an increase of 13.3% from the FY1990 reference emission.
- The industrial sector succeeded in cutting the emission while that of other sectors, namely, household, transport, etc. have considerably risen compared to 1990.



(※)The target value in the target achievement plan may not reflect the correct comparison ratio because the values prior to the August 30, 2006 report were used as the reference values.

MLIT Measures to tackle Climate Change

- Enhancement of the energy conservation measures for houses and buildings
  - Compulsory notification of energy conservation efforts
  - CASBEE, Tax incentives
- Low carbon urban design
  - “Compact Cities”, Urban greening, Potential of sewage, Area-wide energy use
- Promotion of public transportation
  - LRT, IC card tickets, Bus location system
- Low carbon distribution system
  - Modal shift, Efficient truck transport
- Improvement of the traffic flow
  - ITS、Elevation of railroad
- Improvement of the fuel efficiency of automobiles
  - Top-runner standards, Tax incentives

Main reasons for urban GHG emission growth

- Growing dependence on cars
- Decrease of urban green
- Increase of energy consumption in houses and commercial buildings

Urban policies to reduce GHG emission

- ✓Creating “Compact Cities”
  - ✓ Land use control in peri-urban area
  - ✓ Reintroduction of urban functions to city center
  - ✓ LRT, EST, BRT, Cycling roads
- ✓Increasing urban green space
- ✓Reducing GHG emission by sewerage system Improvement
- ✓Fostering area-wide energy use

Promote Public Transportations (Examples of Measures)

・Build new railroads, etc.　　・Promote existing train and bus services

○ New urban railways put in service from FY2003 to FY2005

13 routes, 144 km.
Tsukuba Express
(Opened August 24, 2005)

○ Utilization of IT technology

・IC train card tickets have been introduced to 25 railway carriers and 30 bus carriers, as of April 2006

○ Promote LRT

◇Toyama light rail
(Total distance about 8km)
(Opened April 29, 2006)
◇LRT is under consideration in Utsunomiya city, Sakai city, etc.

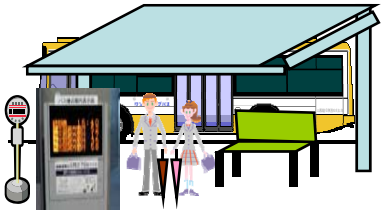
○Improve train-bus transfer convenience

Transfer between the Hiroshima Electric Railroad that connects Miyajima housing complex and the Hatsukaichi city, and “Sakura” bus has been made much simpler and convenient.

○ Make public transportation more convenient for use

・ Introduce bus location system

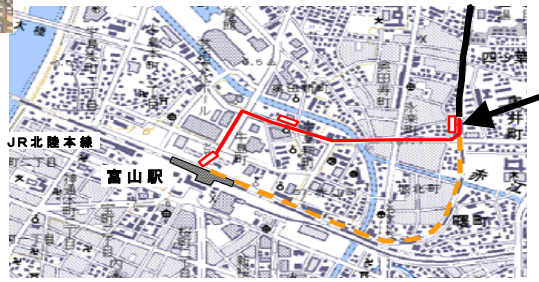
Already introduced to 4,683 routes nationwide (March 2005)



・ Introduce non-step bus

Already 6,974 buses have been introduced nationwide　(March 2005)

＜Toyama light rail route map＞



※Area of newly opened route

Greening Sites and Rooftops of Buildings

NAMBA PARKS (OSAKA: Oct. 2003)
4,800 m^2 of greening
(22% of the site(22,300 m^2))

With a view to mitigating heat island and providing CO2 sinks in urban area, there is a strong need for promoting of green spaces on sites and rooftops of buildings.

- Promotion of Greening through Land-use Plan and Tax Abatement

Municipal authorities may designate Greening Promotion Zones in which greening of certain proportion of building site is required.

Property tax is abated (by half for the initial five years) for green spaces on sites and rooftops of buildings for business use in designated urban areas including Greening Promotion Zones.

- Outcome

- 19 cases of tax abatement, which amount to 51 thousand square metres of green space in city centres. (2001 to 2006)
- According to enquiries for contractors, 1.7 million square metres of green rooftops and walls were completed in Japanese cities from 2000 to 2006.

Exploiting Potential Energy of Sewage

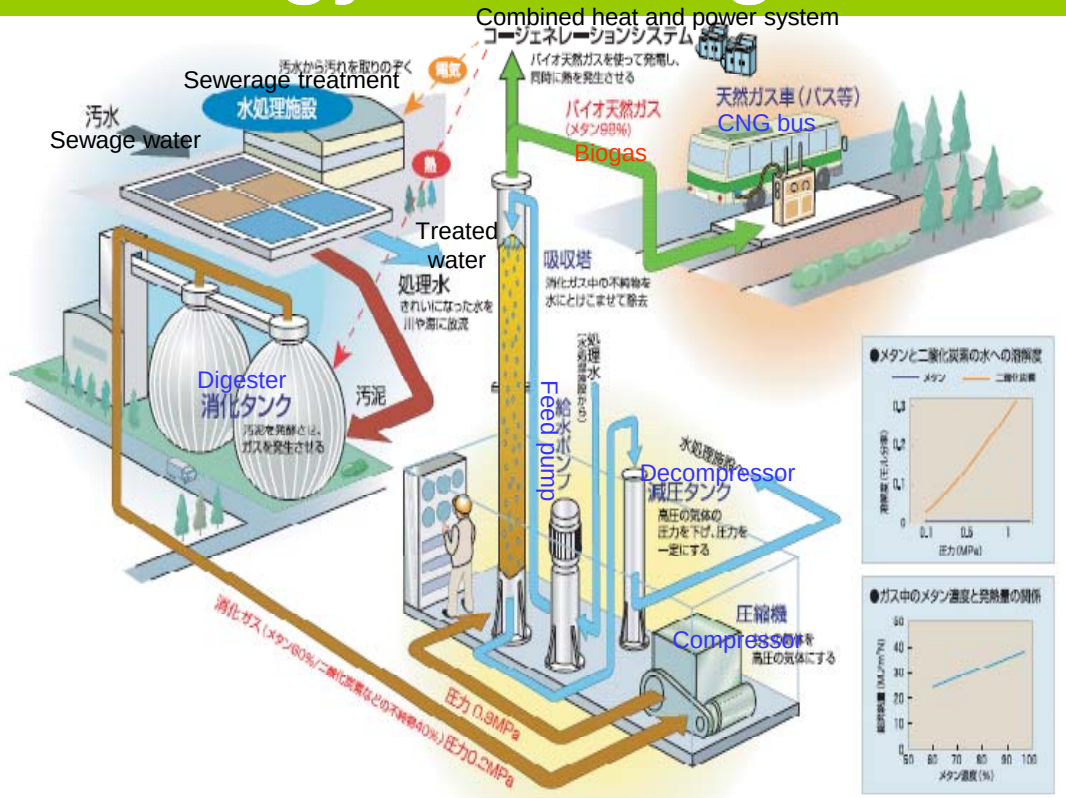
Reduction of GHG emission through the improvement of sewerage system

①Reduction of N_2O emission
Raise temperature of incinerators

②Efficient use of energy
Save electricity necessary for sewage treatment

③ Exploitation of potential energy
Extract renewable energy from sludge and make use of thermal energy of sewage

Good Practice



Refinement and use of Sewage Biogas

Use of refined Sewage Biogas (produced in the process of sewage treatment) as fuel for CNG (compressed natural gas) bus in the city of KOBE.

Reduce GHG emission by means of cutting fossil fuel consumption.

Use of refined Sewage Biogas as fuel for CNG bus (KOBE)