# Japan report of Last year's activity

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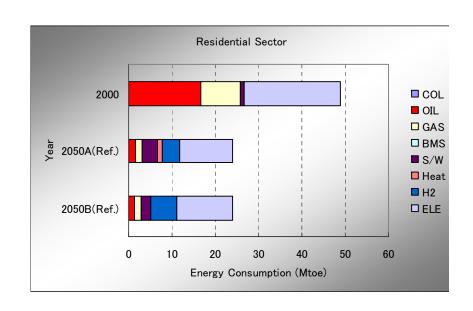
## Last year's activity

#### ~Residential sector~

- □ Community-based life because of becoming compact city
- □ Advanced information technology (ICT)
- □ Introduction of efficient equipment (e.g. heat insulating properties)



□ Share of  $H_2$  and renewable energy consumption will increase.



## Last year's activity ~Transportation sector~

- □ Rate of public traffic will increase.
  - Car-sharing, LRT, bicycle, and so on
- $\square$  H<sub>2</sub> car or electric car will be used.

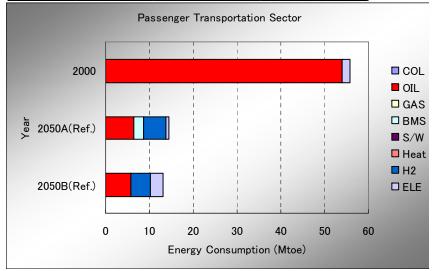


□ Energy consumption in passenger transportation quite decrease because people will not use cars mach.

#### **Future Transportation Demand**

|           | Unit   | Passenger transportation |     |
|-----------|--------|--------------------------|-----|
|           | OTIL   | Base Year (2000)         | REF |
| Motorbike | B p-km | 6                        | 7   |
| Car       | B p-km | 870                      | 552 |
| Bus       | B p-km | 82                       | 94  |
| Railway   | B p-km | 384                      | 183 |
| Air       | B p-km | 202                      | 202 |

|         | Unit   | Freight transportation |     |  |
|---------|--------|------------------------|-----|--|
|         | Unit   | Base Year (2000)       | REF |  |
| Car     | B t-km | 313                    | 309 |  |
| Railway | B t-km | 22                     | 15  |  |
| Water   | B t-km | 242                    | 198 |  |
| Air     | B t-km | 1                      | 3   |  |



## Activity for LCSs (Country level)

□ Background

Need for reducing 60-80% GHG emissions in Japan, by 2050

□ Project (2004~)

"a Sustainable Low-Carbon Society (LCS)"

 $\downarrow$ 

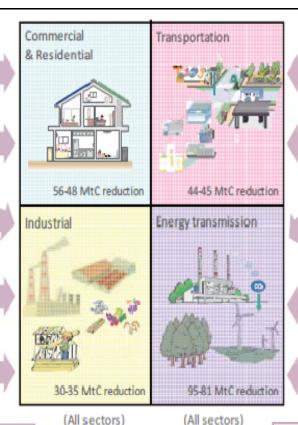
Japan has the technological potential to reduce its CO2 emissions by 70% compared to the 1990 level by 2050.



A Dosen of Actions

### A Dozen of Actions toward LCS

- Comfortable and Green Built Environment
   Efficiently use of sunlight and energy efficient built
   environment design. Intelligent buildings
- Anytime, Anywhere Appropriate Appliances
   Use of Top-runner and Appropriate appliances.
   Initial cost reduction by rent and release system
   resulting in improved availability.
- Promoting Seasonal Local Food Supply of seasonal and safe low carbon local foods for local cuisine
- Consuming In-Season Local
   Using local and renewable buildings materials and products.
- Environmentally Enlightened Business and Industry Businesses aiming at creating and operating in LC market. Supplying LC and high value-added goods & services through energy efficient production systems
  - Labeling to Encourage Smart and rational Choices
     Publicizing of energy use and CO<sub>2</sub> costs information for
     smart choices of LC goods and service by consumers,
     and public acknowledgement of such consumers



6. Swift and Smooth Logistics

Networking seamless logistics systems with supply chain management, using both transportation and ICT infrastructure

7. Pedestrian Friendly City Design

City design requiring short trips and pedestrian (and bicycle) friendly transport, augmented by efficient public transport

8. Low-Carbon Electricity

Supplying low carbon electricity by large-scale renewables, nuclear power and CCS-equipped fossil (and biomass) fired plants

9. Local Renewables for Local Demand

Enhancing local renewables use, such as solar, wind, biomass and others.

10. Next Generation Fuels

Development of carbon free hydrogen- and/or biomass-based energy supply system with required infrastructure

12. Low Carbon Society Leadership

Human resource development for building "Low-Carbon Society" and recognizing extraordinary contributions.

Resource: Japan Scenarios and Actions towards Low-Carbon Societies (LCSs) "2050 Japan Low-Carbon Society" scenario team

## Activity for LCSs (City level)

□ Shiogama city, in Miyagi pref (population 58,000)



Fried fish sausage

⇒waste edible oil (540 thousand litter/yr)



BDF (plant construction, collection of oil ~ production and distribution)

CO2 reduction (1,133t-CO2/yr)

## Points for scenario development

- □ We require consideration of these points
  - take advantage of aging population
    - □ Keep labor force population
    - □ Improve living conditions
  - Renewable energy production by utilizing unused land area
  - Need for installation of high-efficiency equipment