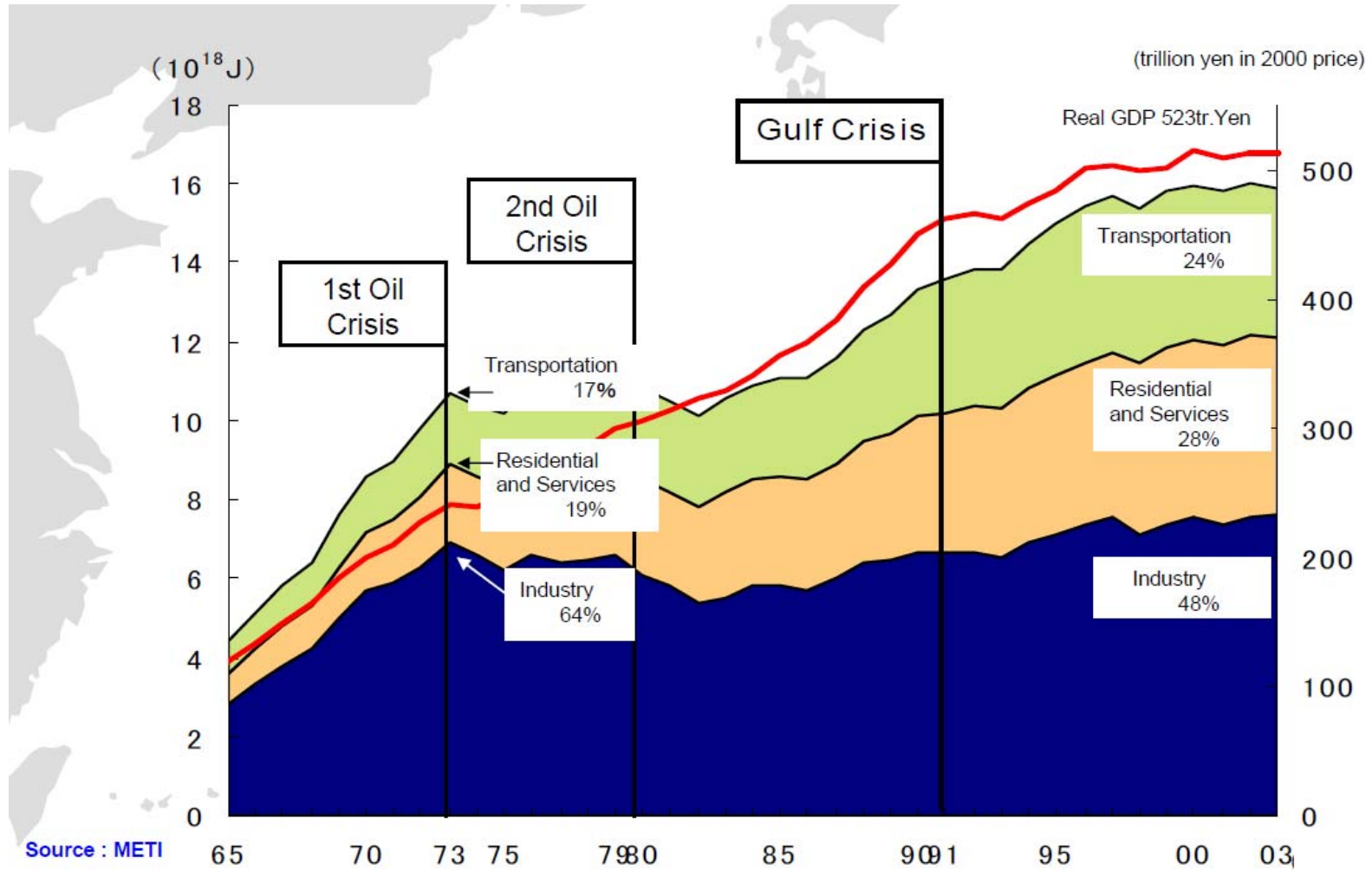


# Perspectives and experiences of Japan on energy efficiency

**Hideyuki Mori**  
**President, IGES**

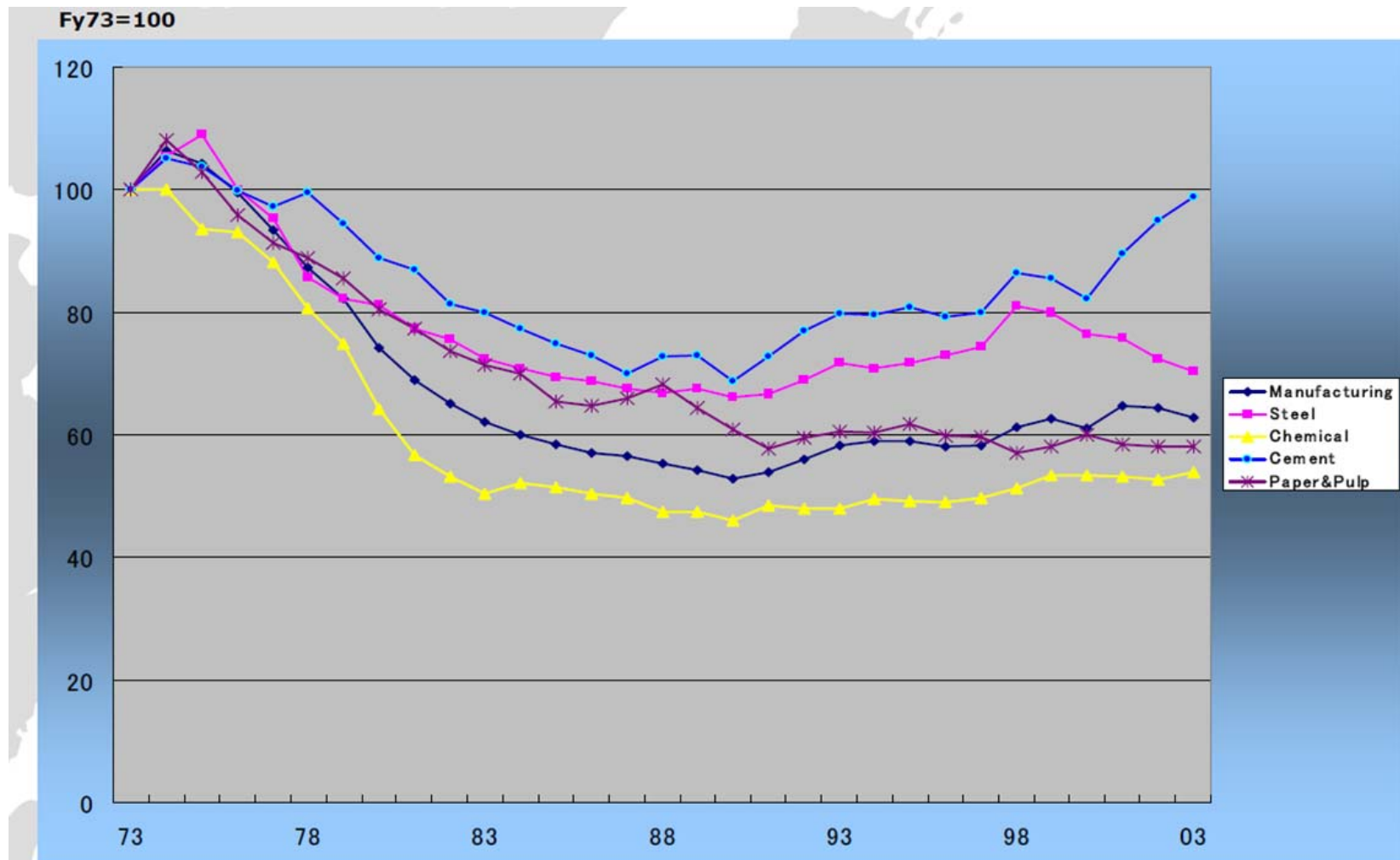
# Performance of Japan's Energy Efficiency

## Energy Consumption by Sector in Japan



# Performance of Japan's Energy Efficiency

## Energy Intensity by Industry in Japan

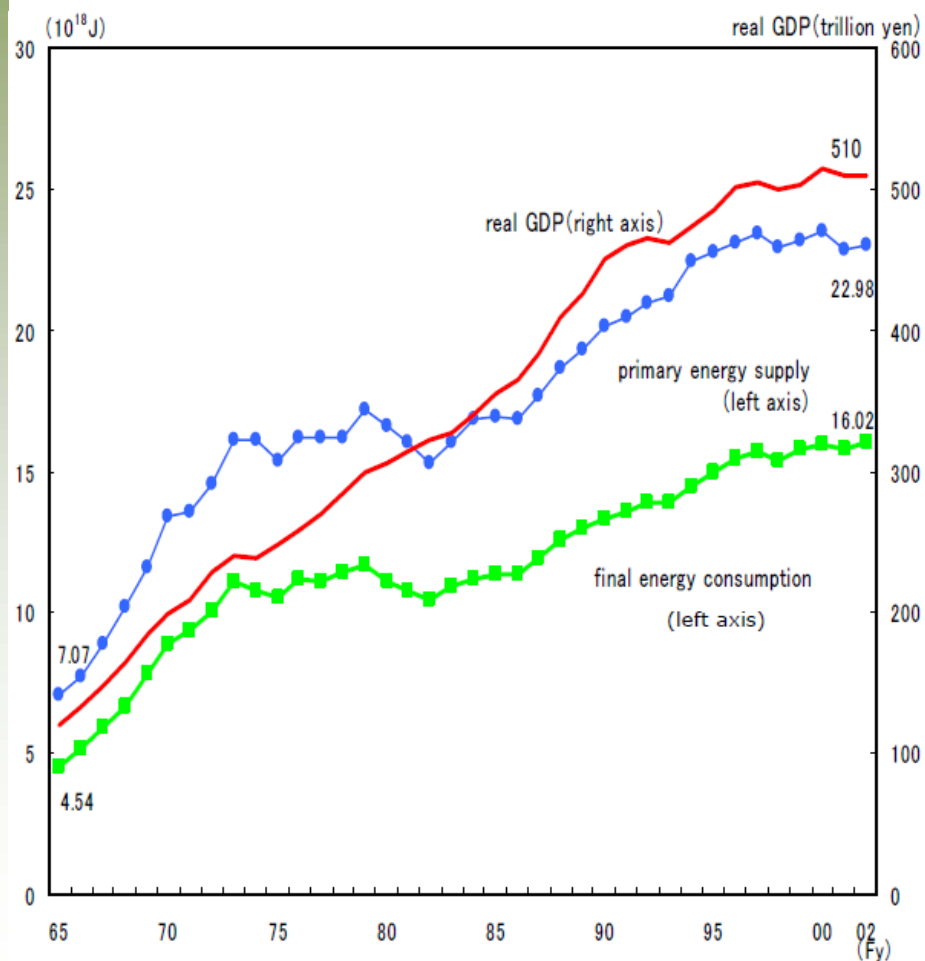


(energy consumption / IIP)

Source : METI

# Performance of Japan's Energy Efficiency

## GDP and Energy Consumption in Japan



### Elasticity

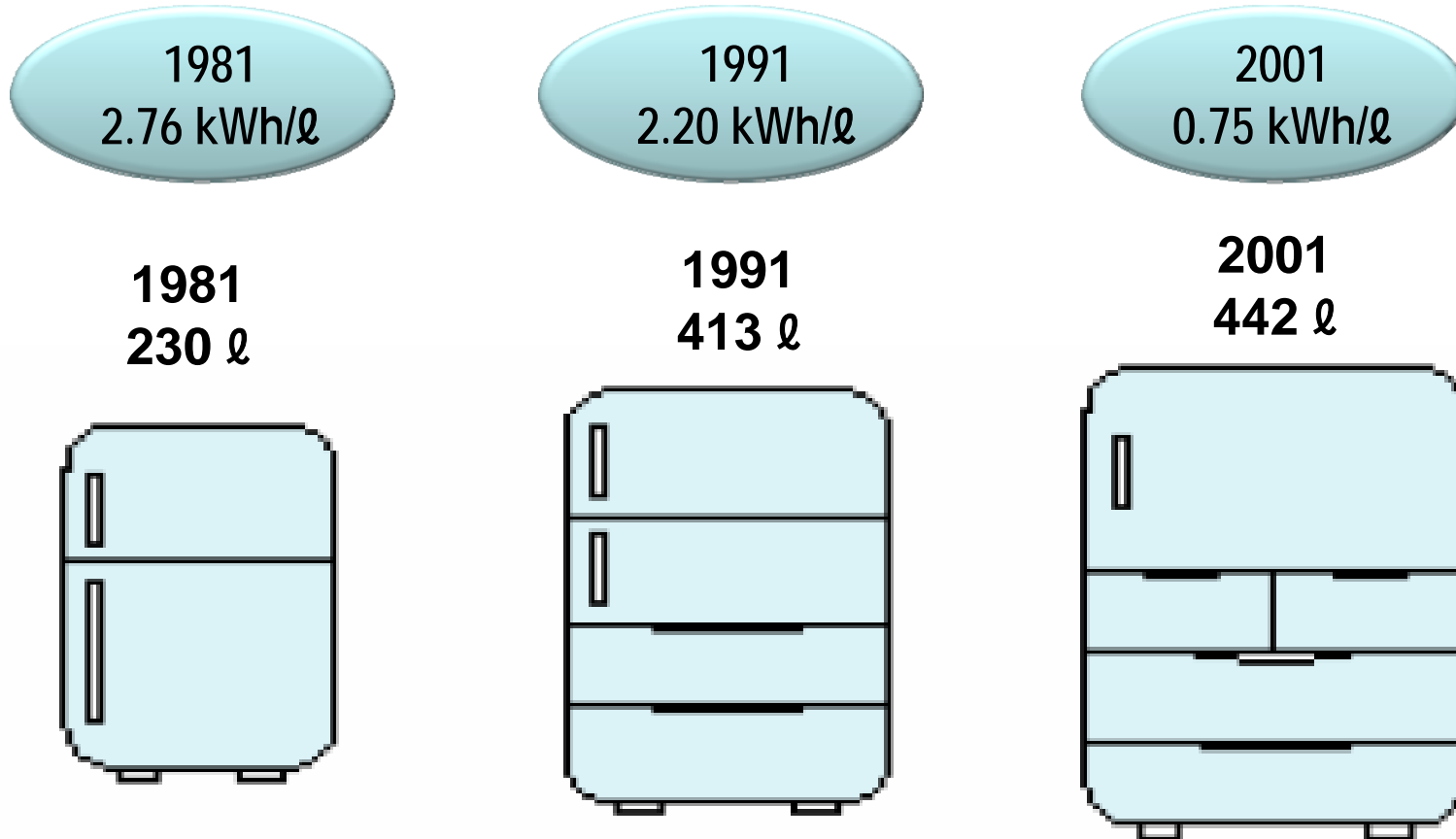
1965-'72	'73-'79	'79-'86	'86-'91	'91-2003
1.19	0.29	-0.11	0.85	0.71

Source: METI

# Performance of Japan's Energy Efficiency

## Energy Efficiency of Consumer Products

### Refrigerator : Perfect example of "Factor 4"



# Performance of Japan's Energy Efficiency

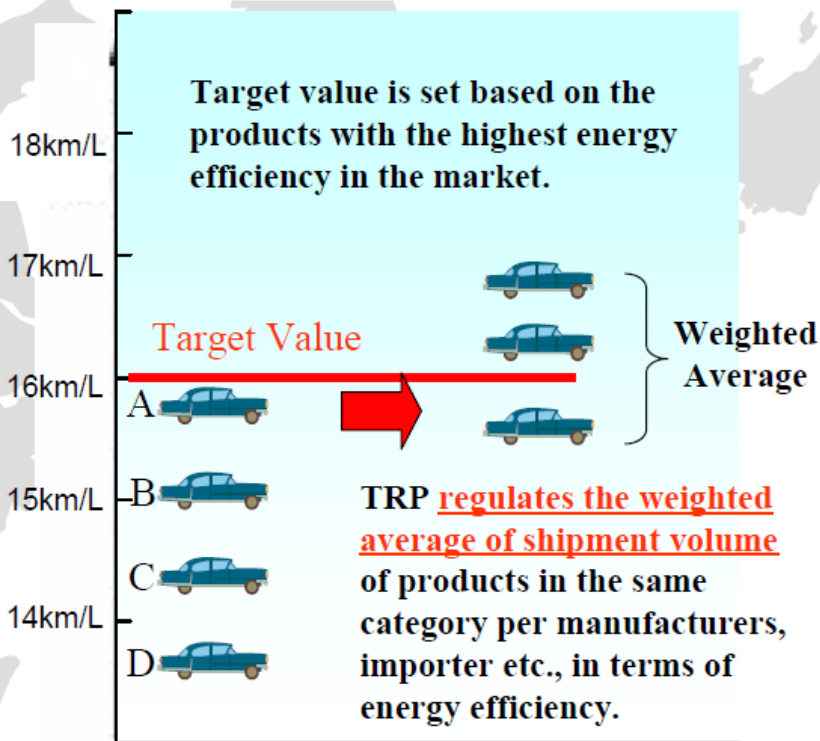
## Top Runner Program

### Concept for setting target standard

### Currently designated products

Fuel efficiency Energy efficiency standard ((A) is the top runner.)

Total 21 products designated



1. Air conditioners
2. Fluorescent lights
3. Television sets
4. Copying machines
5. Computers
6. Magnetic disk units
7. Video cassette recorders
8. Passenger vehicles
9. Freight vehicles
10. Electric refrigerators
11. Electric freezers

11 products designated in 1999

12. Space heaters
13. Gas cooking appliances
14. Gas water heaters
15. Oil water heaters
16. Electric toilet seats
17. Vending machines
18. Transformers (molded)
19. Electric Ovens
20. Electric Rice Cookers
21. DVD Recorders

7 more products designated in 2002

3 more products designated in 2006

# Performance of Japan's Energy Efficiency

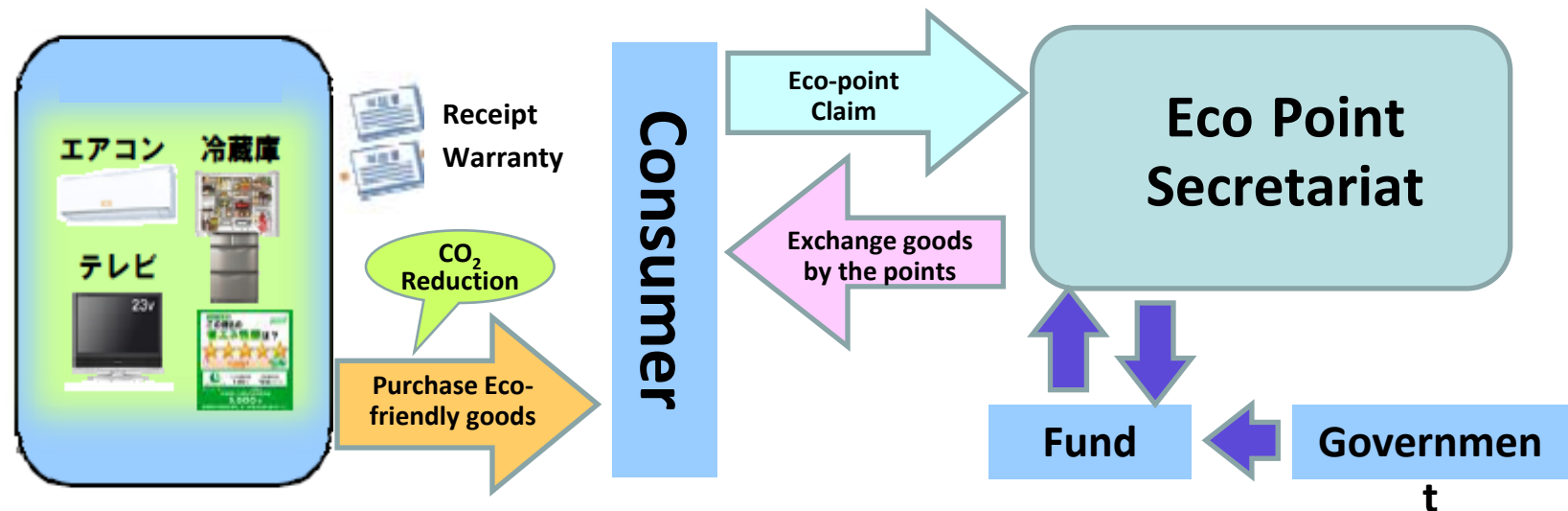
## Eco Point System Stimulate purchasing Eco-friendly goods

### Targets

1) CO<sub>2</sub> Reduction

2) Stimulate Economy

3) Spreading Terrestrial Digital TV



### <Eco Points>

Air Conditioning		Refrigerator		Television	
3.6 kW or more	9,000 points	501 liter or more	10,000 points	46V or more	36,000 points
2.8 kW – 2.5 kW	7,000 points	401 – 500 liter	9,000 points	42V, 40V	23,000 points
2.2 kW or less	6,000 points	251 – 400 liter	6,000 points	37V	17,000 points
		250 liter or less	3,000 points	26V or less	7,000 points

# Performance of Japan's Energy Efficiency

## Eco point system - Effect

### <CO<sub>2</sub> gas emission reduction>

400t/year reduction (4% of household emission reduction)

→ 4000t/10 years

### <Economic Stimulus>

Electric home appliances, electronic parts, semi-conductor industries

→ stimulate 4,000billion yen

### <Employment>

Stimulated job opportunity by new production

→ 120 thousand new employments

### < Spreading Terrestrial Digital TV >

→ June 2011 Start Terrestrial Digital TV Broadcasting

# Local Business Initiative (LBI) (Eco-Home Diagnosis Programme)

## Research Objectives

Increases in CO<sub>2</sub> emissions have been striking in the household sector!

⇒ Measures “go one step further” are necessary  
(Toward construction of a low-carbon society...)

⇒ The project of Eco-Home Diagnosis

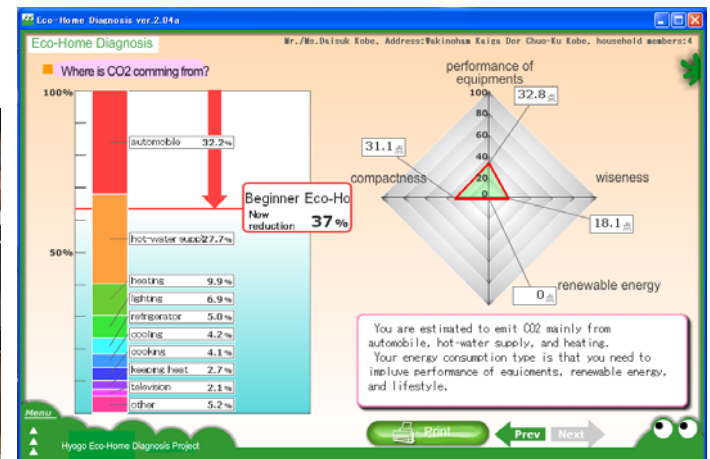
Individual consultation aims to effect real reductions of CO<sub>2</sub> in household sector.



Talks of software development

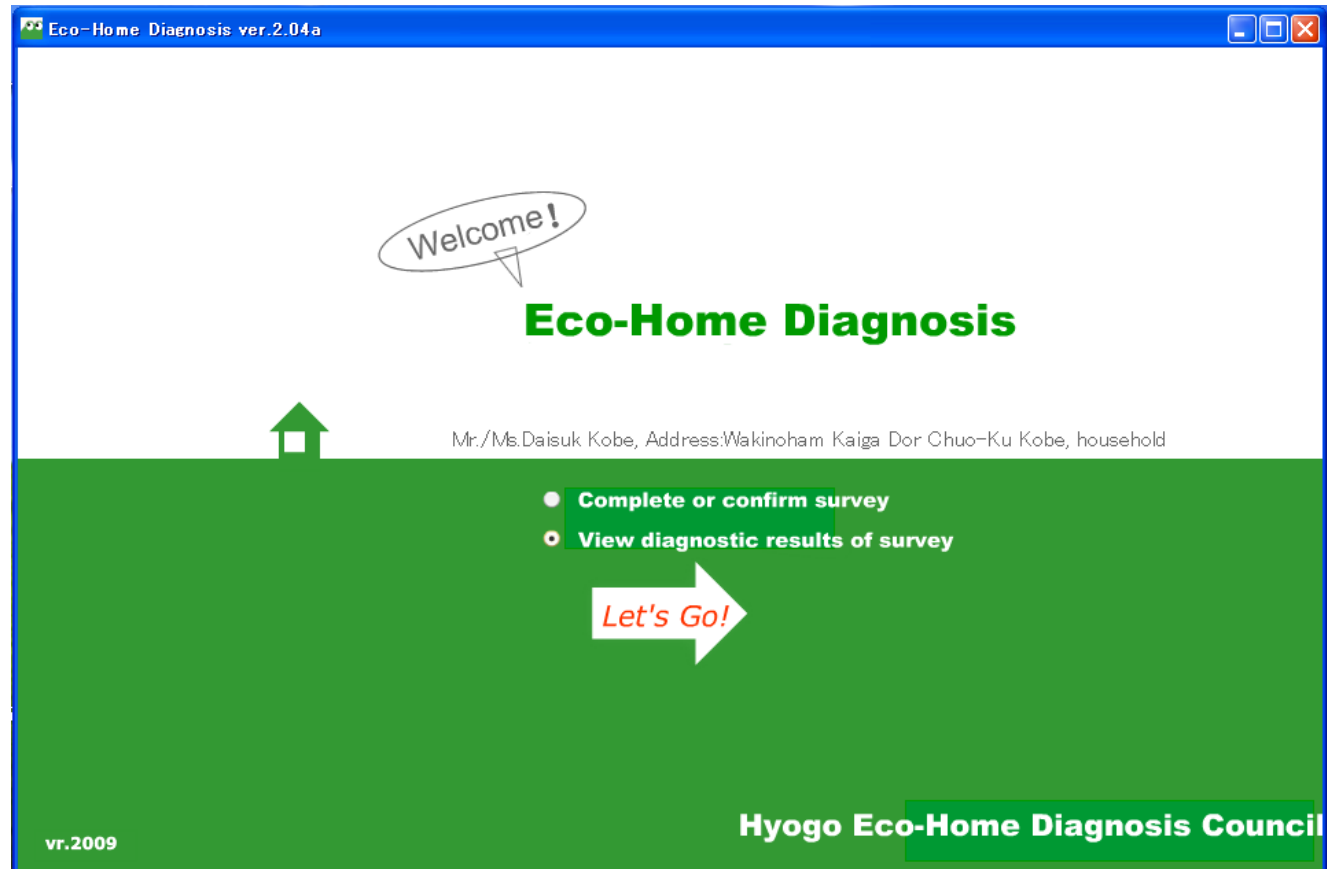


Picture of “Eco-Home Diagnosis”

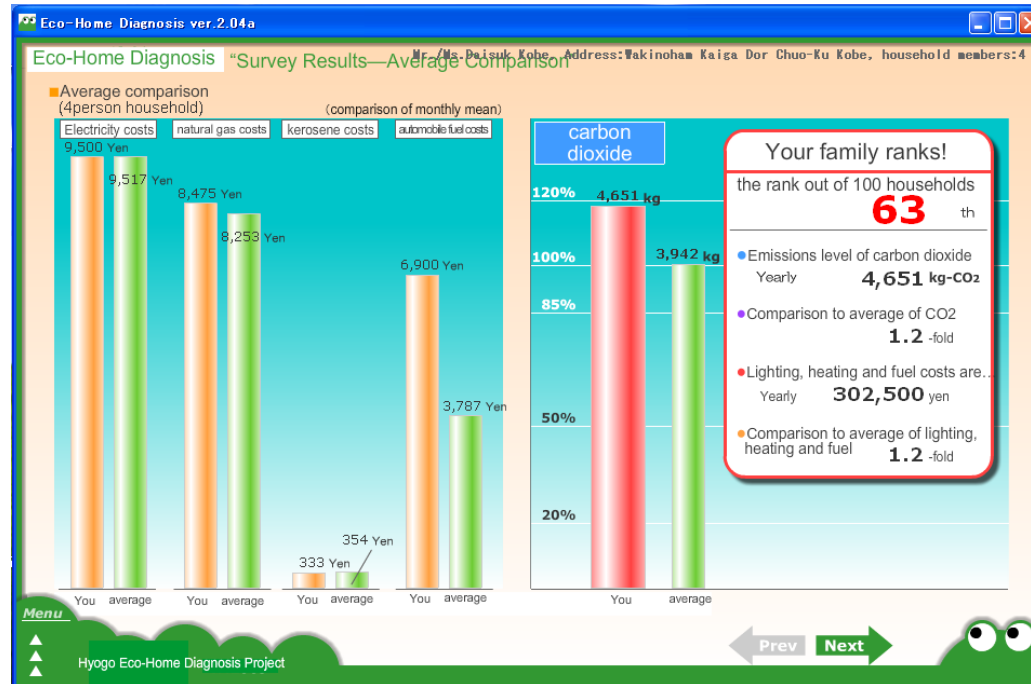


Developed “Eco-Home Diagnosis” Software

## Starting screen



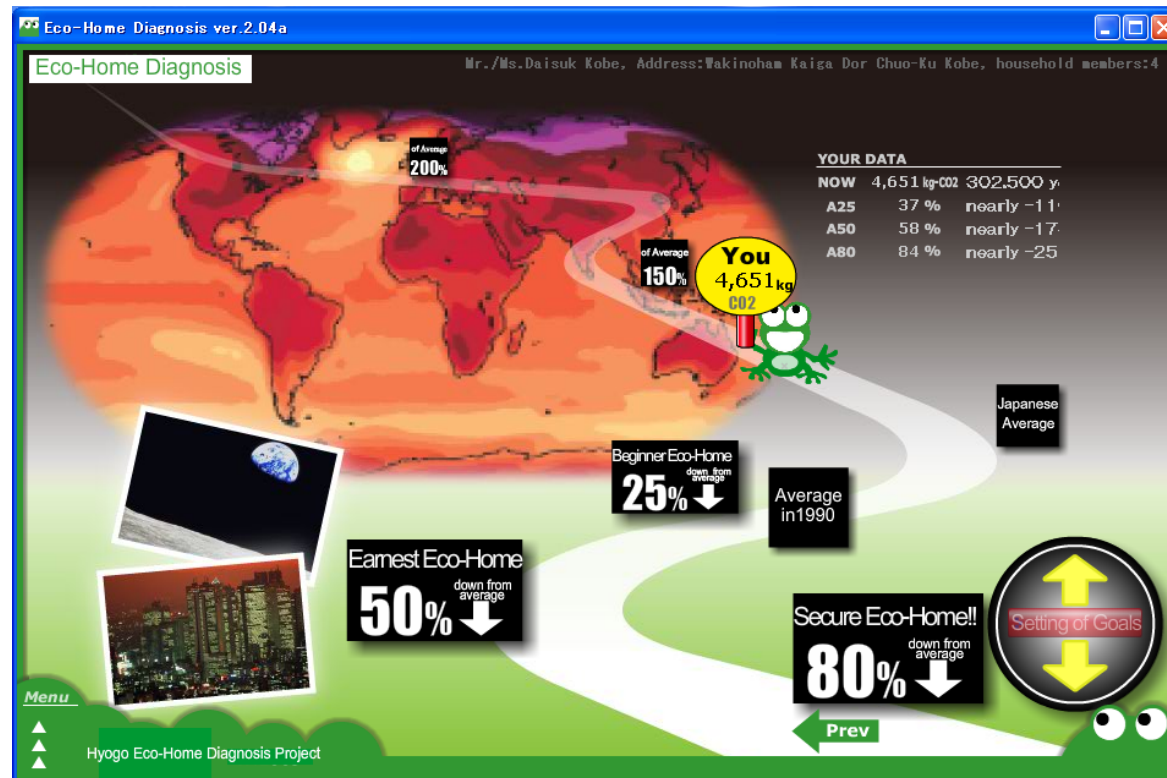
# Comparison and ranking in relation to average CO<sub>2</sub> emissions ⇒ Reorganization of one's position



- Whether your household's utility costs are expensive or inexpensive compare to average households
- Whether your household's CO<sub>2</sub> emissions are large or small compare to average households
- Ranking is give to each household, based on emissions “assumed 100 households are in the area”

Understanding of necessary amount of reduction and clarification of reduction target

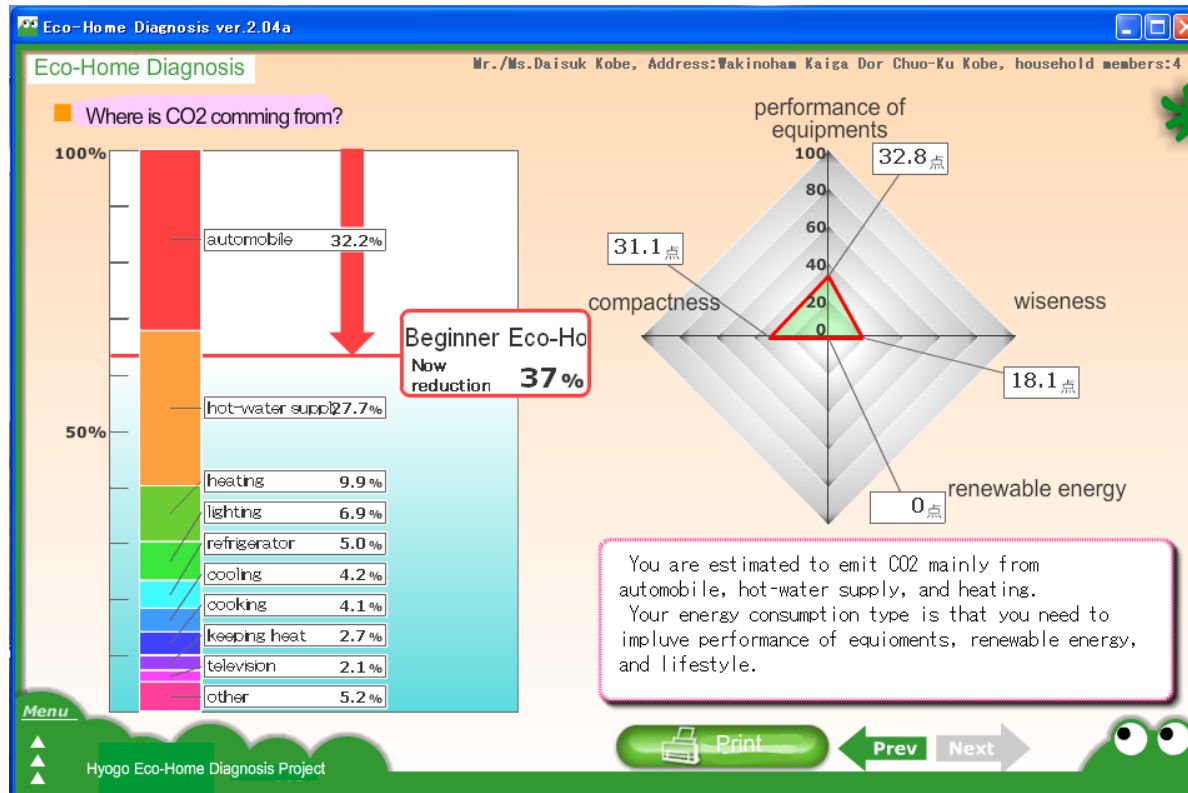
⇒ Confirmation of current positioned setting of reduction target



- Way toward the climate change mitigation (distance sense)
- “How much reduction” should we reduce? “our problem”

## CO<sub>2</sub> emissions factor analysis

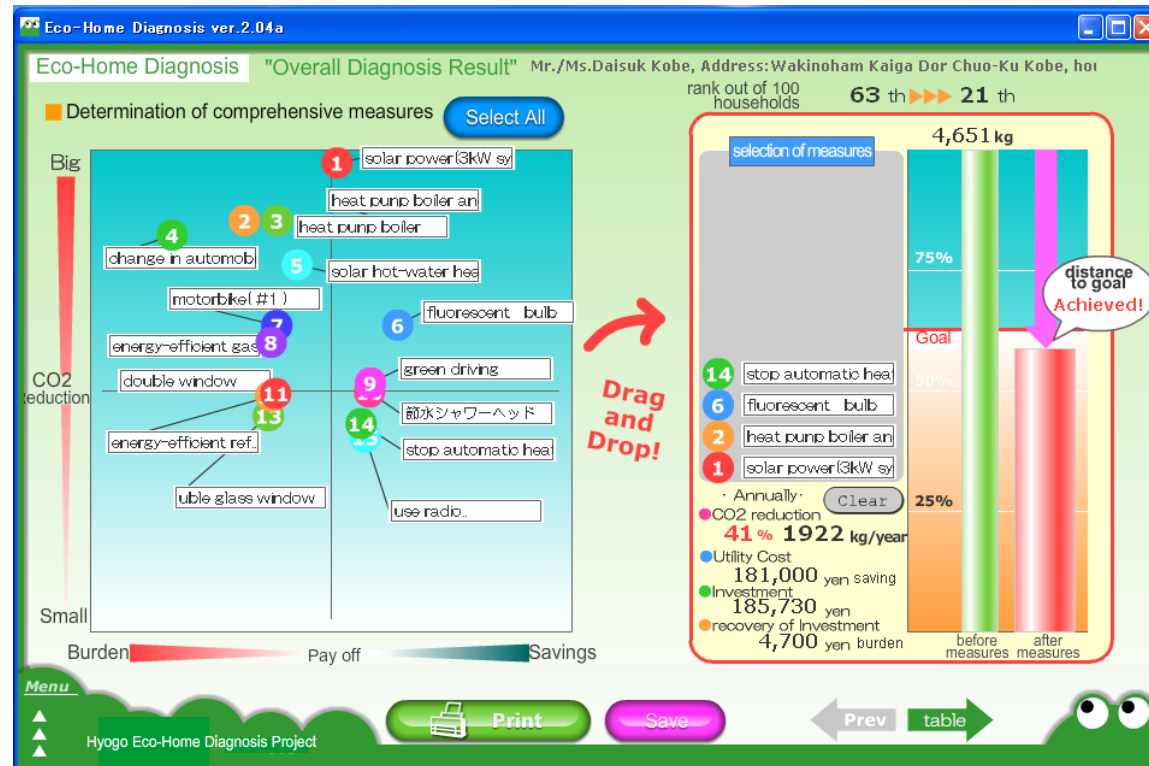
⇒ “Where from “ and “ how much” is being emitted?



- Emissions from 10 areas of daily living are analyzed
- Indicate the weak points by cobweb cart (analysis of causes)
- Break free from “ assumed eco-action”

# Identification of effective measures

⇒ Instruction in reliable ways of CO<sub>2</sub> emissions



- The top 15 effective measures for CO<sub>2</sub> reduction are displayed
- CO<sub>2</sub> reduction effects and economic impacts are displayed by selected measures to be enacted
- Position changes through implementation of measures

# LBI - Findings

Households are not necessarily aware of their main Emitting point of CO<sub>2</sub>.  
(such as car use, hot water supply and air heating)

**75%**.....It was found that 75% of all households agreed that, “there was an area of large CO<sub>2</sub> emissions (“blind spot” area) of which we were not previously aware”.

**40%**.....The pilot project also revealed that 40% of households were engaged in misdirected efforts in an area differing from the main emissions areas(assumed eco-action).

**85%**.....Of the monitor households who underwent the Eco-Home Diagnosis,85% have either enacted recommended measures or have concrete plans to enact measures in the near future.

For those who are in “assumes eco”, Eco-Home Diagnosis may be powerful approach to realize actual CO<sub>2</sub> reductions.



Unofficial meeting with MOEJ



Explanation to the governor of Hyogo Prefecture



Presentation at the Ministry of Environment in Indonesia (Feb.1.2010)

**Thank you very much for your attention.**



**Hideyuki Mori**

President

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