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# **Problems of Sectoral Approach in Climate Change Policy of the Japanese government**

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# Overview

- At the Ad hoc working group on further commitments for Annex I Parties under the Kyoto Protocol (AWG), the framework of ‘Post 2012’ has been discussed.
- The Japanese government submitted a proposal of Post 2012 including Sectoral Approach (SA) on March 2008 (FCCC/AWGLCA/2008/MISC.1/Add.1).
- However this proposal has several problems and may not be suitable for the framework of Post 2012.
- Main points of this report
  - ✓ What wrong is the Japanese proposal?
  - ✓ What is the background?

# What is a Sectoral Approach?

- Sectoral Approach is not defined as a uniform idea.
  - Four types defined by IEA ( Baron etc., 2007, pp.23-28 )
    - 1) Country-specific quantitative approach
    - 2) Sustainable development policies and measures (SD-PAMs)
    - 3) Transnational quantitative sectoral approach
    - 4) Technology-oriented approaches
  - Merits of SA
    - 1) **Environmental effect**
    - 2) **Equity**
    - 3) **Cost effectiveness, etc.**
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- <Key words>
- a) **Voluntary (not mandatory)**
  - b) **Flexibility**
  - c) **Technological development**

# Critical questions for Sectoral Approach

- 1) Is it a reliable way to reduce GHG emissions, especially on the voluntary-oriented framework? How establishes the sanction system?
- 2) The cost of changing course?
- 3) Increased complexity? How negotiates among so many countries and companies?
- 4) Information asymmetry? Lack of sound data of individual companies.

# Japanese government proposal of Sectoral Approach

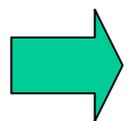
## 1) Bottom-up SA

- Setting ambitious and feasible national emission reduction targets for developed countries by aggregating sectoral reductions volume, reflecting sectoral reduction potentials (based on Intensity) and projection of activities
  - Model analyses based on marginal abatement costs
  - Similar to the Keidanren environmental voluntary action plan

## 2) Cooperative SA

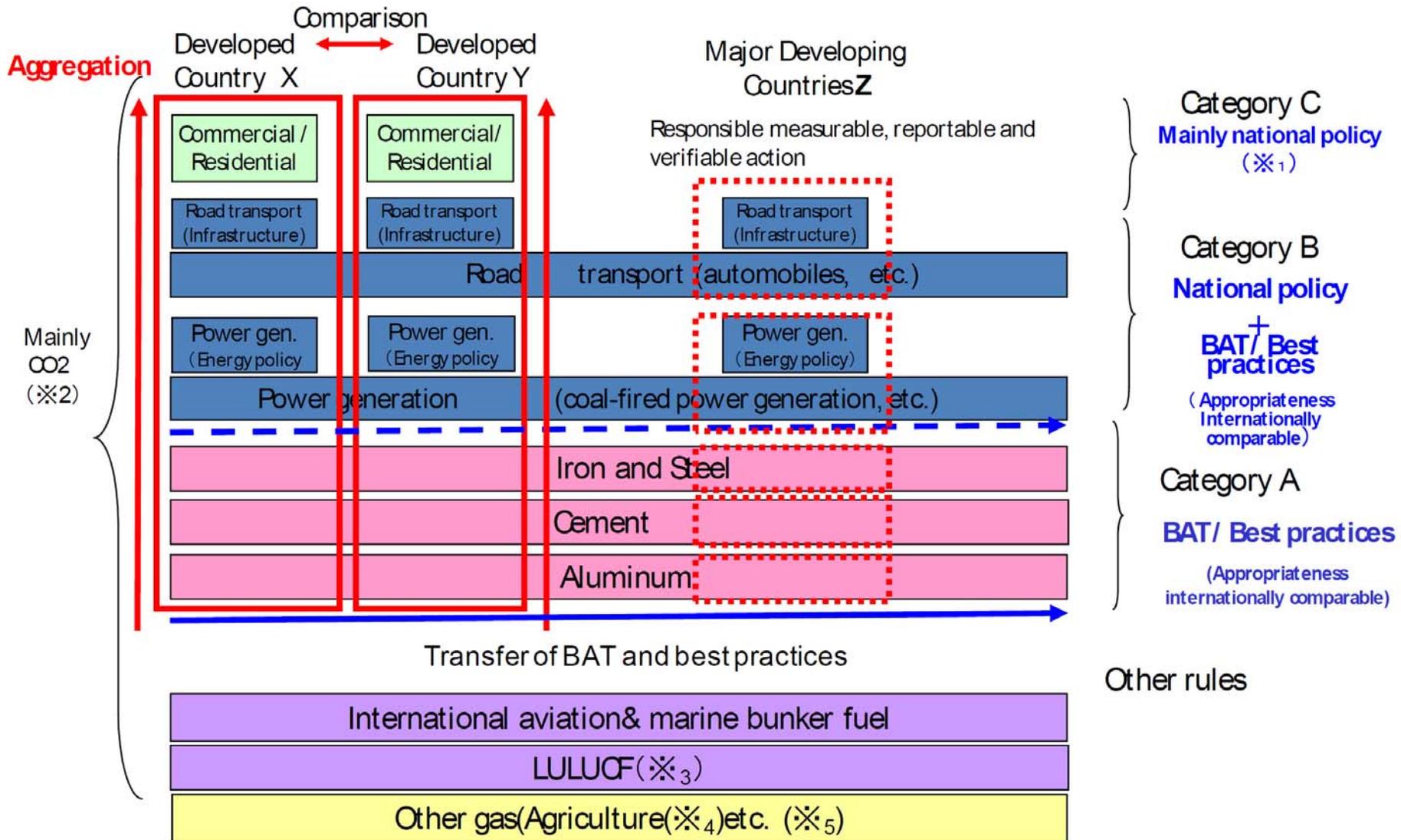
- Promoting transfer of those identified Best practices and BATs from developed countries through analyzing reduction potentials and setting indicators.

◆ These ideas are based on **1) Voluntary, 2) Non-legal binding, 3) Cost effectiveness.**



This is the consistent position of Japanese government & industry

# Three categories by Japanese proposal



# Problems of Japanese proposal

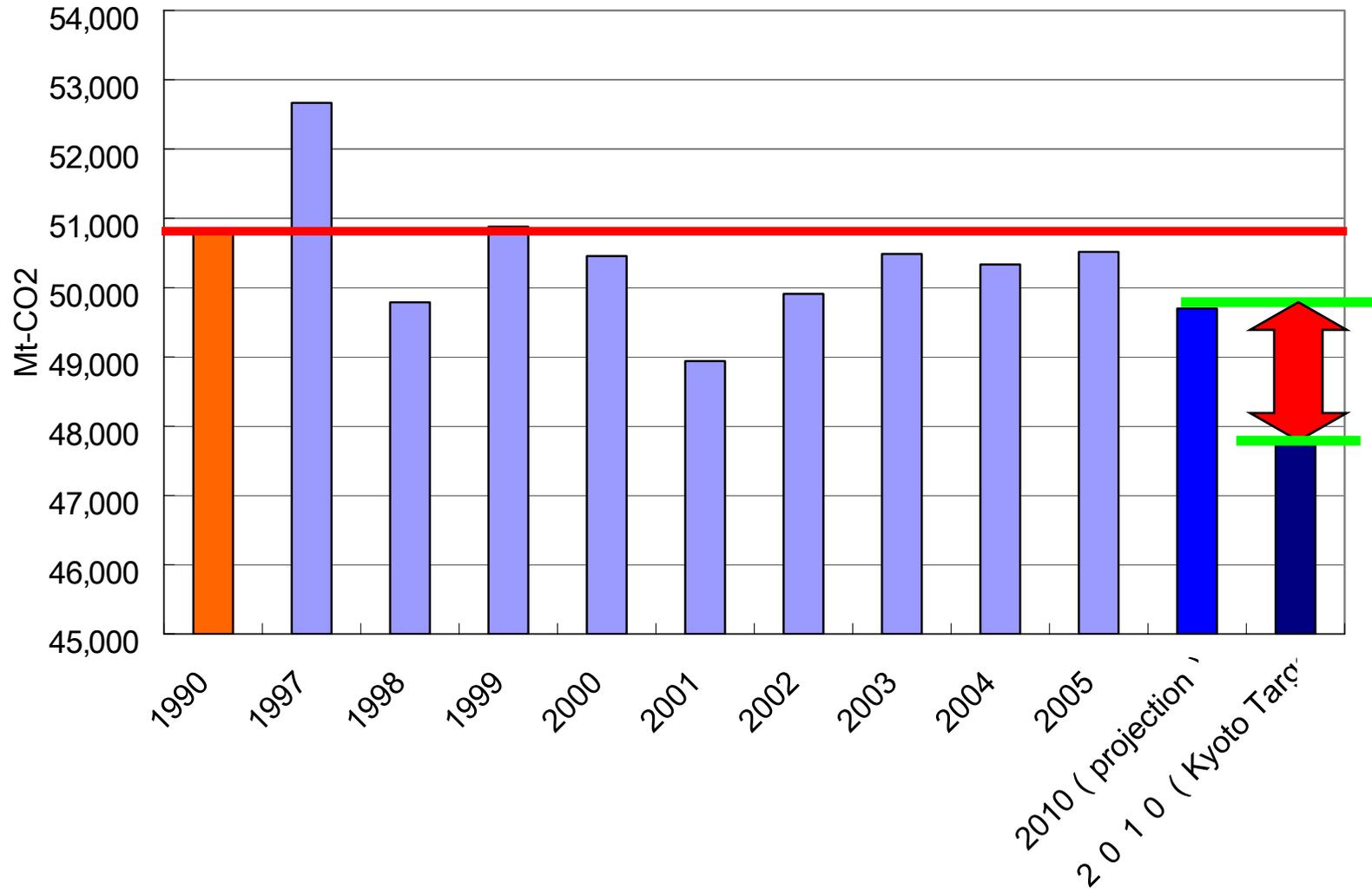
- The aim of Japanese proposal is seemed *not* to reduce more than half of GHG emission by developed countries, *but* to minimize the Japanese reduction volume by using various indicators and intensities.
  - Target based on Bottom-up SA may *not* be ambitious. Because this framework is similar as **Keidanren plan**.
  - Is it true that Japanese industry energy efficiency is the highest in the world?
- Japanese proposal emphasizes on **equity and cost effectiveness**. But who is for?
  - It *never* refers to CO<sub>2</sub> or energy consumption per capita.
- Japanese government doesn't show her target yet (Long & Middle term).

◆ Japanese climate policy is relayed on **voluntary action by industry and individual**.

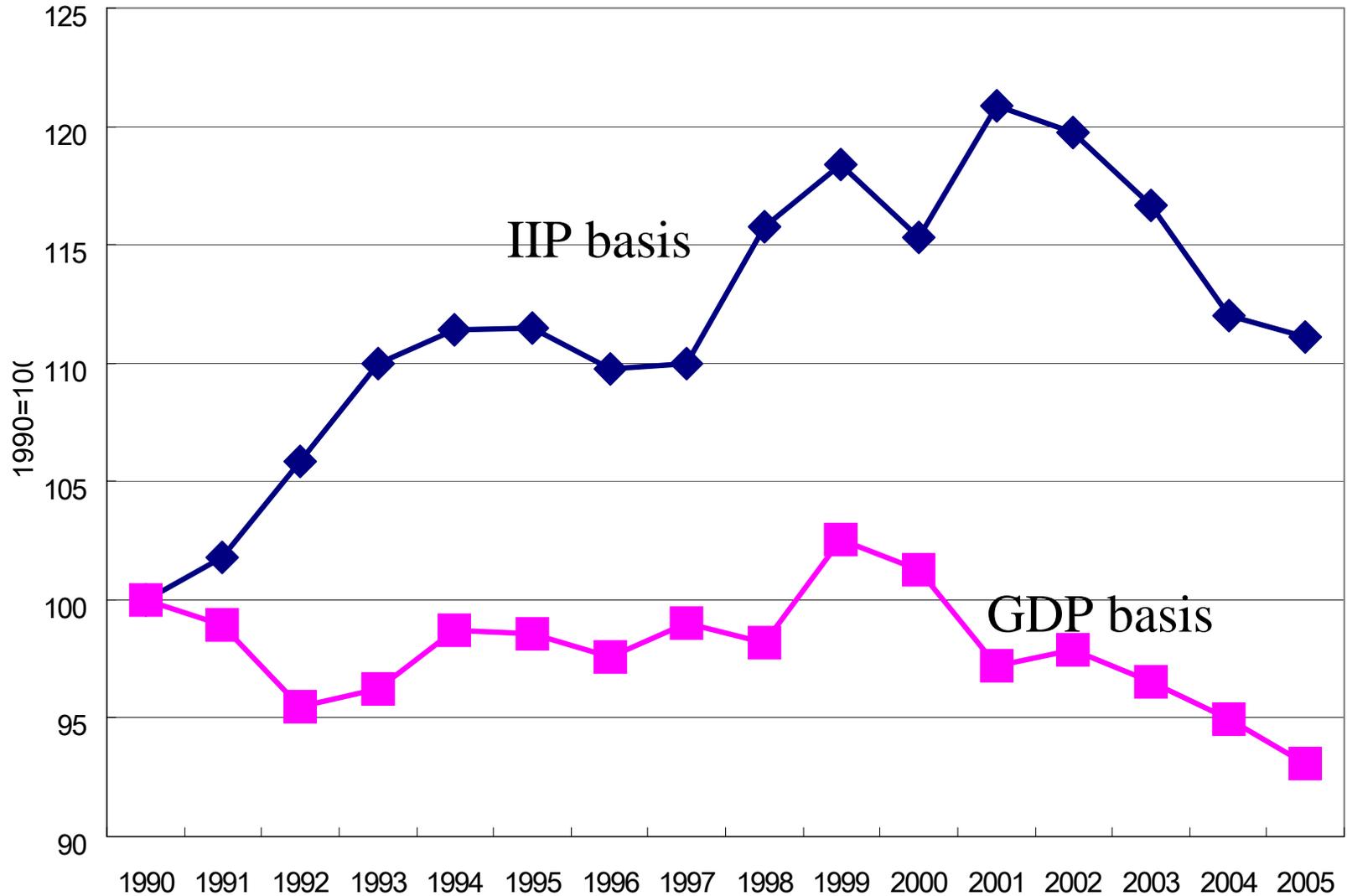
# Abstract of Keidanren Plan (from 1997)

- Structure of Keidanren Environmental Voluntary Plan
  - ✓ Keidanren plan is a main policy of Domestic climate policy in Japan. However it is still a **unilateral declaration** by Keidanren. They have never negotiated the target level with government.
  - ✓ There is **no sanction** in the case of non-compliance.
- Target
  - ✓ "to endeavor to reduce CO<sub>2</sub> emissions from the industrial and energy-conversion sectors to **below the levels of 1990 by 2010**"
  - ✓ Each industry groups set their own voluntary target (energy consumption, energy intensity, CO<sub>2</sub> emission and CO<sub>2</sub> intensity)
- Participant industry group
  - ✓ 35 industry groups join this plan in industrial & electricity sector, and cover 80% of total GHG emission in both sectors.
- Environmental effect
  - ✓ CO<sub>2</sub> emission in 2005 (manufacturing & electric company joined Keidanren) decreased 0.6% comparing in 1990.
  - ✓ Concerning Energy intensity in manufacturing (2005), GDP basis improved 7% comparing in 1990, Indices of Industrial Production (IIP) basis became worse 11%.

# Total CO<sub>2</sub> emission by manufacturing and electric sector (joined Keidanren)



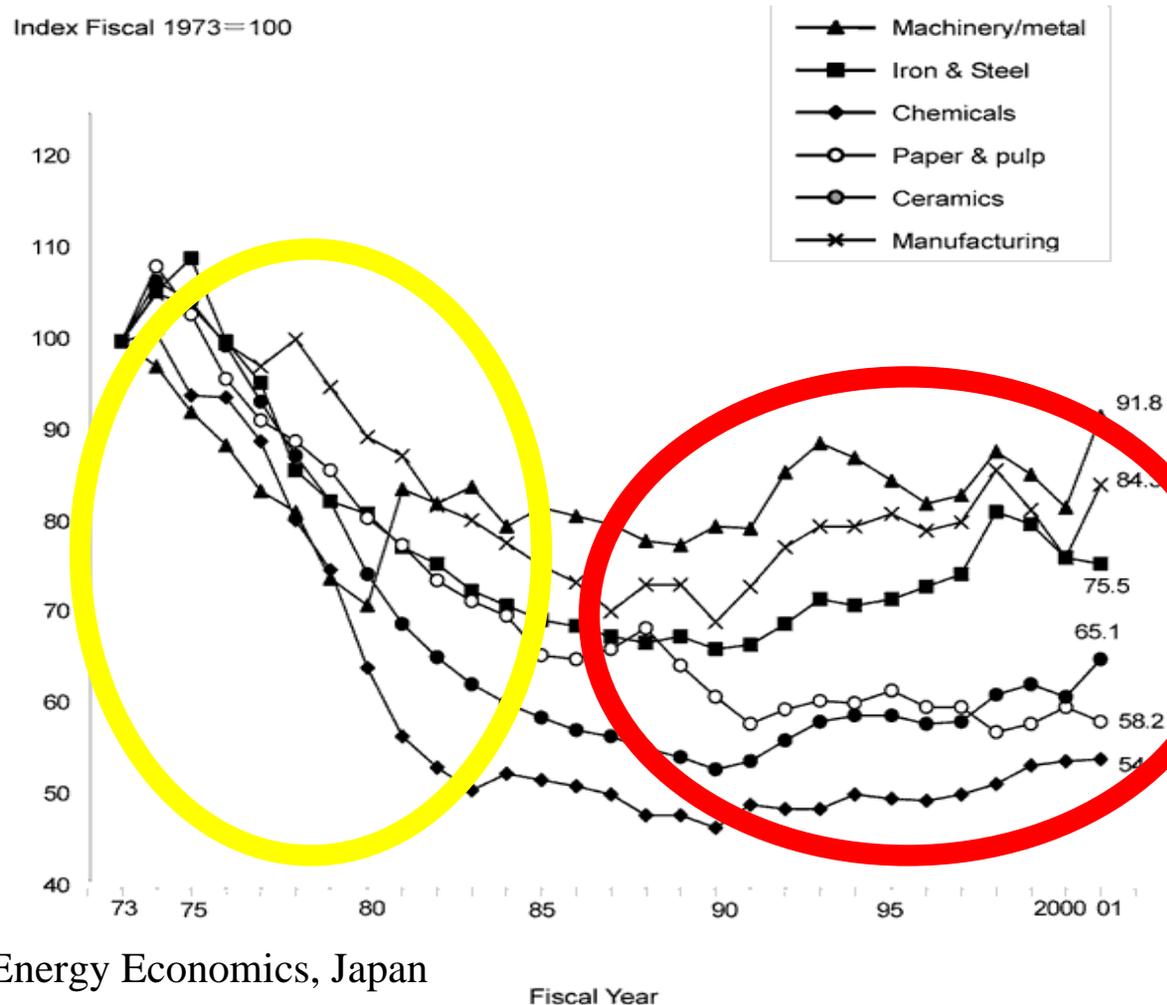
# Energy Intensity of Manufacturing



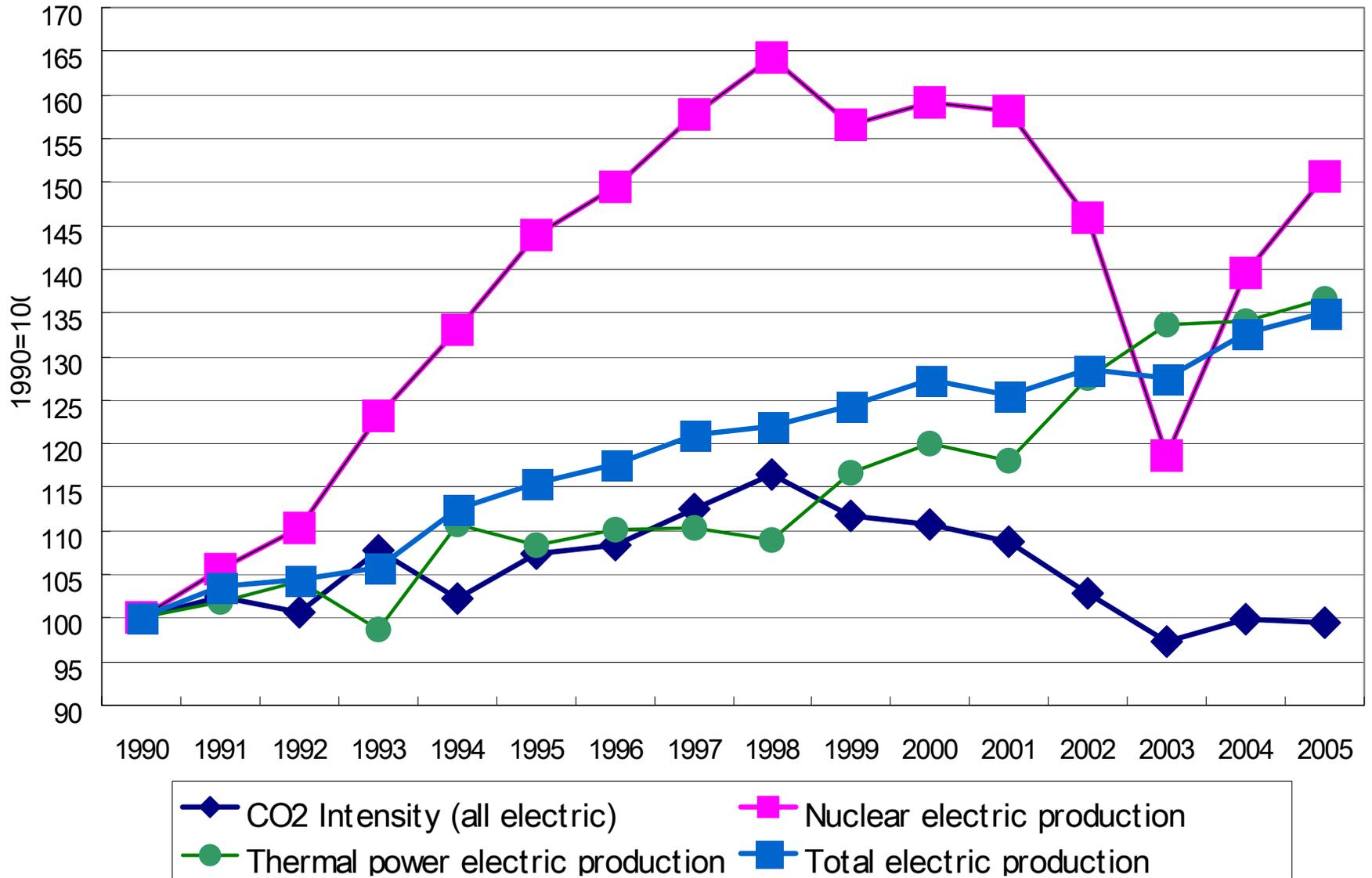
Source; The Institute of Energy Economics, Japan

# What is Indices of Industrial Production?

- Indices of Industrial Production (IIP) contains index of production, shipments, inventory and inventory ratio.
- IIP shows the current situation of Japanese **manufacturing activity**.



# CO<sub>2</sub> Intensity of Electric



# Have CO<sub>2</sub> emission & Energy consumption decreased?

## 1. Factor of **CO<sub>2</sub> emission** fluctuation in 2005 (by Keidanren explanation)

Factor	compared to 1990
Production level	10.1%
CO <sub>2</sub> emission unit	0.2%
Effect by company's measures	-10.9%
Total	-0.6%

## 2. Factors of **energy consumption** fluctuation in manufacturing in 2005 (IIP basis)

Factor	compared to 1990
Industrial structure	-6.3%
Production level	2.6%
Crossover term	-2.4%
Intensity	18.1%
Change in energy consumption	12.1%

Source; The Institute of Energy Economics, Japan

# Reasons for weak effectiveness of Keidanren Plan

## 1. Because of unilateral declaration

- ✓ Industry groups set **non-ambitious target**.
- ✓ Companies do not face with a threat such as penalty in the case of non-compliance.

## 2. Not linked with other policies.

## 3. Not necessary for strong measures

- ✓ Reliance on **nuclear power**
- ✓ Company can fill shortage by using Kyoto mechanism

## 4. No critical review by “Independent party”

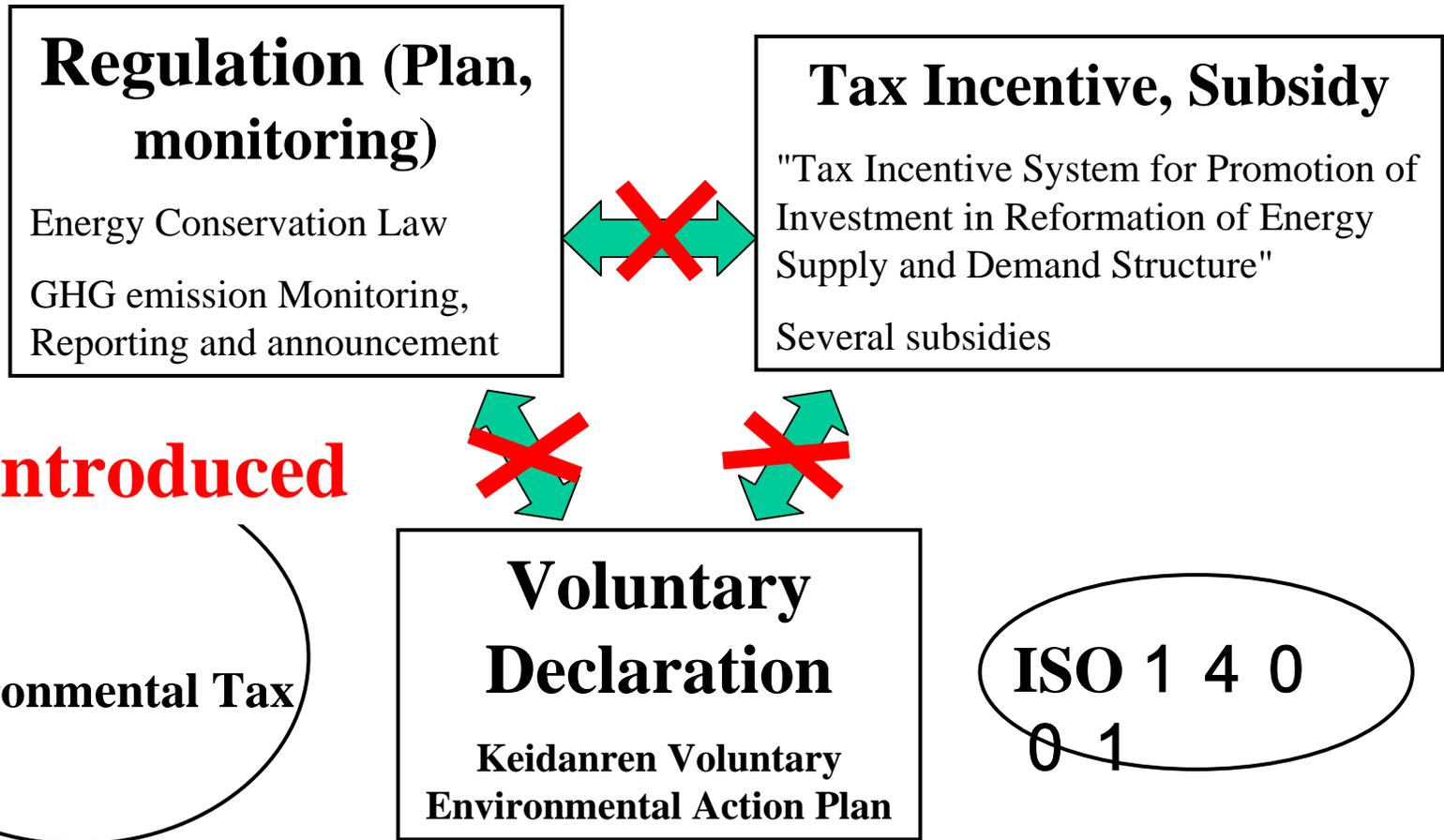
- ✓ They show the result “*well done*”, do not open the detail date.
- ✓ Most member take the same position as Keidanren and METI.



It is clear that solo Keidanren Plan gives a little of reduction effect.

# Japanese Climate Policy in industrial sector

**Not linked each other**



# Conclusion

- Japanese proposal SA may *not* highly bring a large emission reduction in developed countries and the whole world.
  - ✓ Institutional defect (voluntary, non-legal binding, etc.)
  - ✓ Keidanren plan is *not* successful for ambitious CO<sub>2</sub> emission reduction.
- ➡ Japanese SA is produced from failure of national climate policy.
- SA should only be used as part of a legal binding national policy, and not for setting cap.

# Consideration

- What point is difference between Japan and EU?
  - ✓ EU industrial groups complain ETS and climate policies. But they understand that establishing the low carbon society is necessary in the near future (**environmental reason**). In addition, they intend to get the international competitions in the energy efficiency and renewable energy areas (**economic reason**).
  - ✓ These ideas are shown on the Stern review and climate security.
  - ✓ On the other hands, Japanese industrial groups still believe that the lowest reduction target is suitable for national merit = company merit (**high GDP growth myth**).
- The background of Japanese SA lies on postponing the strong measures such as ETS because they are lack of crisis for climate change issue.
  - ✓ Keidanren plan, individual action, technology development, nuclear promotion haven't brought a large reduction of energy consumption.
- The Japanese government and industry should understand the Stern review, and escape from high GDP growth myth.

**Thank you for your attention!**