False or True? : The Keidanren Voluntary Action Plan In Japan
A Typical Example of “Pledge and Review” System

Summary

The Keidanren Voluntary Action Plan is an environment action plan devised by the Nippon Keidanren (Japan Business Federation) that makes no commitment to the Japanese government that targets will be met. The industrial sector and the energy conversion sector account for 64% of total CO_2 emissions and form the core of the Kyoto Protocol Target Achievement Plan of Japan (hereinafter referred to as “Government Plan”).

In the Government Plan, most of the reductions in the industrial sector are reliant on the Keidanren Voluntary Action Plan and other real policies have not been implemented. However,

The Keidanren Voluntary Action Plan is a plan that uses “easy targets” through “indicators convenient to the industry,” and does not aim to reduce emissions of greenhouse gases. It cannot become an alternative for emissions trading system.

The Japanese Government Plan mainly focuses on the Keidanren Voluntary Action Plan for reductions in the industry and power generation sector, and power and steel industries faces significant shortage to meet their own voluntary targets. That makes achievement of the Kyoto Protocol targets in danger. Policies such as an emissions trading system must be implemented quickly.

The Keidanren Voluntary Action Plan is a typical example of “Pledge and Review” System”. Based on these lessons, a pledge and review system should not be adopted in the negotiation of post- 2012 framework.

Dec. 2007, in Bali, COP13/MOP3

Kiko Network
http://www.kikonet.org/

1. Japan's Government Plan and the Keidanren Voluntary Action Plan

The Japanese government is aiming for the 6% reduction stated in the Kyoto Protocol.

Of this target, forests sinks accounts for 3.8% and Kyoto mechanisms account for 1.6%, with domestic reductions accounting for a mere 0.6% (Figure 1). Moreover, gases other than CO_2 are also reduced, so energy related CO_2 is aimed to increase by 0.6%.*

However, in 2005, greenhouse gases in Japan had increased by 7.8% compared to Kyoto base year. In particular, there has been a significant increase in the number and emissions of coal-fired power plants (Figure 2), and emissions have increased substantially since the 1990s, equal to the amount of emissions increase from 1990.

The Japanese energy conversion sector and industrial sector account for 64% of CO_2 emissions, which is higher than any other developed nation (Figure 3). Approximately 5000 factories and power plants account for 63%, and only 180 power plants and factories account for 50% of Japan's total CO_2 emissions (direct emissions) (Figure 4). Japan's achievement of Kyoto Protocol targets seems to depend on the measures implemented in these major power plants and factories.

*6 gas emissions up 0.6% from base year. As 90% of Japan's energy is derived from carbon dioxide, the increase in emission gases is expected to be the same.

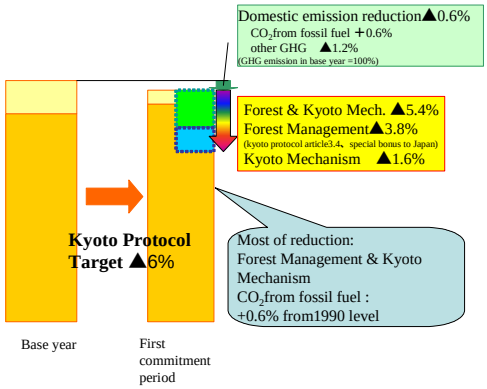

Figure 1: Breakdown of Japanese Reduction Targets only Partially Comprised of Domestic Reductions

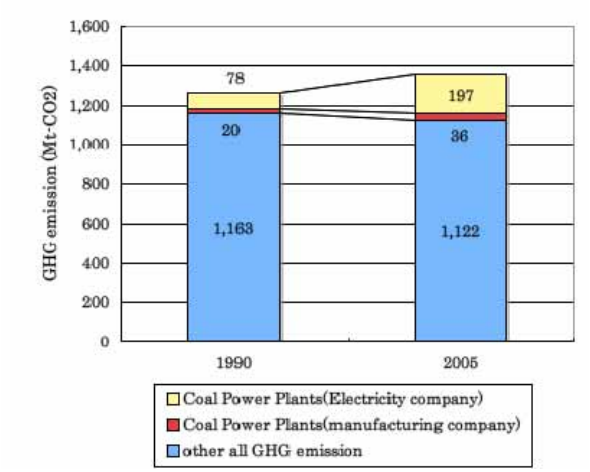

Figure 2: Rapid Increase in Coal-fired Power Generation in Japan

Created based on energy balance tables from the Agency for Natural Resources and Energy

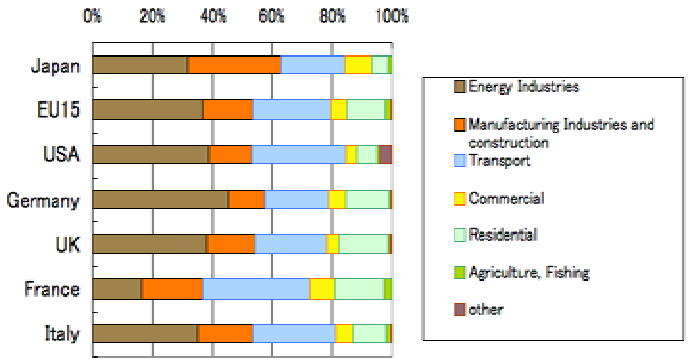

Figure 3: International Comparison of CO_2 Emission Structure

Based on Greenhouse Gas Emission Inventory for Japan, EU and US

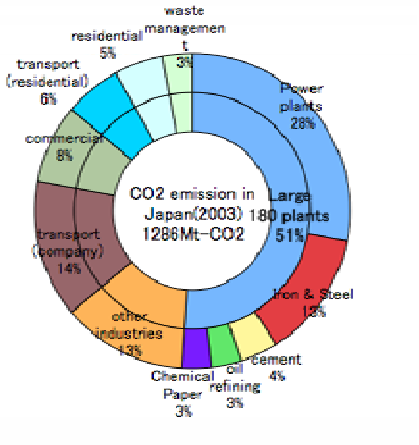

Figure 4: Japan's CO_2 Emission Structure by Emission Location

Based on materials disclosed by Kiko Network in accordance with the Law Concerning the Rational Use of Energy (FY2003) and Greenhouse Gas Emission Inventory

2. The Actual State of the Keidanren Voluntary Action Plan

The Keidanren Voluntary Action Plan was started in 1997 and is in its 10th year. At present, it boasts participation from 35 industries in the energy industry, the mining industry and the construction industry. The government plan aims to reduce emissions by 8.6% in the industrial sector, whereas the 2010 target for the Keidanren Voluntary Action Plan only sets out to stabilize emissions at the same level as 1990.

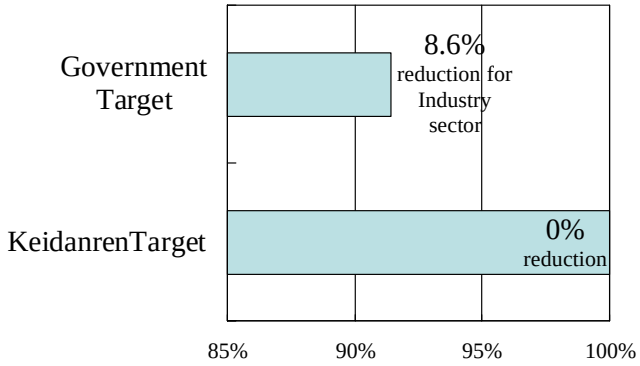

Figure 5: Differences between the Government Plan and the Keidanren Voluntary Action Plan

The Keidanren Voluntary Action Plan is positioned as a Kyoto Protocol Target Achievement Plan in the government plan, but there is no agreement with the government and there has never been public discussion about the basis or appropriateness of the target levels.
Problems with the Keidanren Voluntary Action Plan are listed below.

- "Target Indices that Suit Industry"

Industries select one or several target indices from CO_2 emissions, CO_2 per unit, energy consumptions, energy consumptions per unit. And CO_2 reductions are not must. Because of this, indices that suit industry circumstances are selected (Table 1).

Table 1: Examples of Target Indices that Suit Industry

	Gross Targets	**Efficiency Targets**
CO_2 **Targets**	**Industries with declining production e.g. Automobile manufacturing, etc.**	**Industries with increasing production e.g. Power companies, electric/electronic manufacturing, etc.**
Energy Targets	**Industries with declining production with an increased proportion of carbon e.g. Steel manufacturing, etc.**	**Industries with increasing production with an increased proportion of carbon e.g. Chemical industry, cement*, etc.**

* Cement used efficiency targets as production was initially expected to increase when the targets were established.

- Target levels are easy and do not aim to reduce future emissions.

Keidanren Voluntary Action Plan has not been revised in 10 years.
The targets used by the individual industry groups forming the Keidanren Voluntary Action Plan are also easy targets. There are even some industries that accept deterioration of energy efficiency and CO_2 emissions per unit in the period between 1990 and 2010.

- "Production Indices that Suit Industry"

In the Keidanren Voluntary Action Plan, most industry groups have selected indices that have been increasing since 1990, artificially creating energy-saving records by manipulating the use of target indices at their own discretion. For example, nominal production is used for automobiles, which have a higher unit price, while real production is used instead of nominal production for electric/electronics, which have a lower unit price.

- “Convoy System”

The plan uses industry organizations and units, and the measures and efforts employed by individual businesses and locations are hidden within the black box. Because of this, the potential for reductions in individual businesses and locations remains unknown, with businesses that make efforts being unrewarded and free-riders reaping the benefits. Because of this, it does not work as an incentive.

3. Detrimental Effects of the Keidanren Voluntary Action Plan

Enhancement of government policies has been postponed by industry as target indices and target figures are chosen to suit industry in continual self-evaluations proclaiming targets have been reached. Coal consumption has increased as a result of measures not being implemented, and coal consumption has particularly increased in electric power company plants and self-generation facilities in the manufacturing industry.

The energy efficiency of industry has been deteriorating since 1990 (Figure 6).

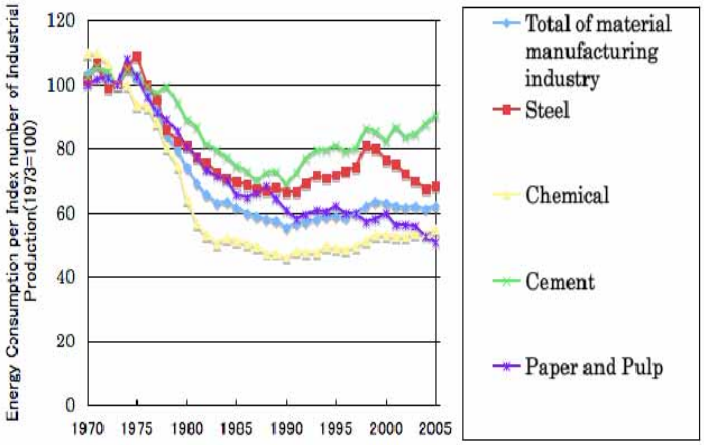

Figure 6: Energy Efficiency of Japanese Industry in Decline during the 1990s

Created based on the “Handbook of Energy & Economic Statistics in Japan” from the The Institute of Energy Economics

4. The Government Plan Risks Failing to Achieve Targets by Continually Relying on the Keidanren Voluntary Action Plan

Even the easy targets set in the Keidanren Voluntary Action Plan do not seem likely to be achieved. The government has stated that excess CO_2 emissions amount to 34 million tons (2.7% of the Kyoto base year emissions), but Kiko Network believes these are optimistic forecasts, and that excess emissions are forecast to reach 150 million tons of CO_2 (12% of the Kyoto base year emissions) under the current policies lacking in emissions trading and carbon tax. More than half of this is in power and steel manufacturing that are unlikely to reach their targets in the Keidanren Voluntary Action Plan (Figure 7).

In Autumn of 2007, industry groups “voluntarily” raised targets, creating a stir. However, 11 of the 18 industries that raised targets have achieved their “targets” for many years and the new targets are below the levels already being achieved. The raising targets in these industries are in name only and cannot be called additional reductions.

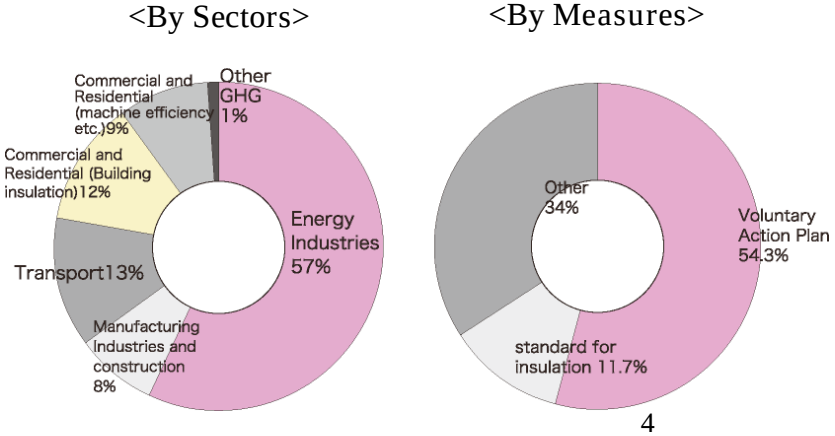

Figure 7: Japan’s Government Plan Lacks Reduction Measures (Overestimation of Targets)

Kiko Network “List of Evaluations of Measures in the Kyoto Protocol Target Achievement Plan”

5. Japanese Industry has not Dried Up (Great Reduction Potential)

Keidanren claims that the Japanese industrial sector has dried up and has no room for reductions, but these claims are baseless as shown by the facts below.

(1) Room for energy efficiency improvements

The energy efficiency distribution in power plants and parts of the manufacturing industry shows that the efficiency of the best power plants is almost double that of the worst (Figure 8), and significant reductions can be achieved by aiming to become a "top runner plant" by employing the best technologies available in all plants.

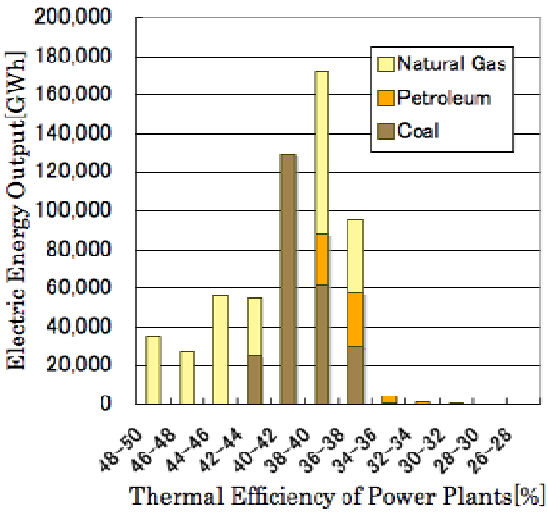

Figure 8: Distribution of Energy Efficiency of Each Power Plant

Based on Agency for Natural Resources and Energy's "Overview of Electric Power Supply and Demand"

(2) Room for fuel conversion

Emissions can be reduced by 12% by converting coal (excluding coal and cokes used in steel production) used in power generation and industry to natural gas. Emissions can also be reduced by 5% simply by fully utilizing underused natural gas fired power generation and lowering the equivalent amount of coal fired power generation.

(3) International comparison of energy efficiency

According to estimates made by the Ministry of the Environment, Japan is being overtaken by Europe in energy consumption per unit of production in the steel and paper manufacturing industries (Figure 9).

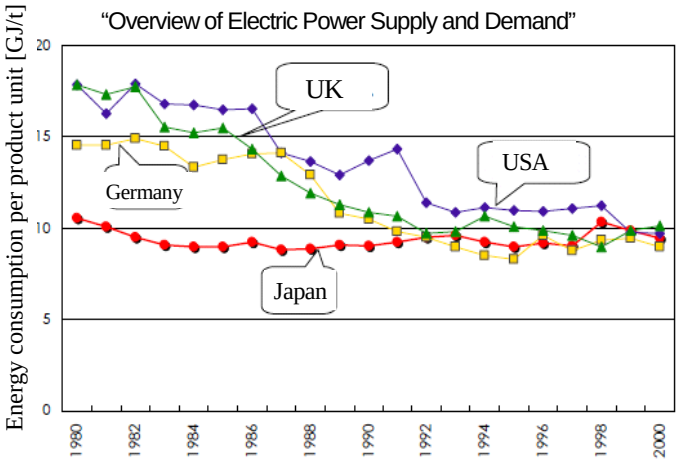

Figure 9: International Comparison of Production to Energy Consumption in the Steel Industry

Ministry of the Environment "Trends and Background of Greenhouse Gas Emissions in Japan"

(4) International comparison of fuel composition

A comparison of energy consumption composition in industry shows that half of Japan's fossil fuel usage is account for by coal, which has high CO_2 emissions and natural gas is only around 10 percent. In contrast, coal usage is 10-20 percent and gas usage is 50-70 percent in Europe. Even in electric power generation, the portion of fuel composition of Japanese power plants accounted for by coal is higher than in EU power plants.

In addition, cogeneration is rarely used for business power generation in Japan and there is room for more reductions considering that Japan

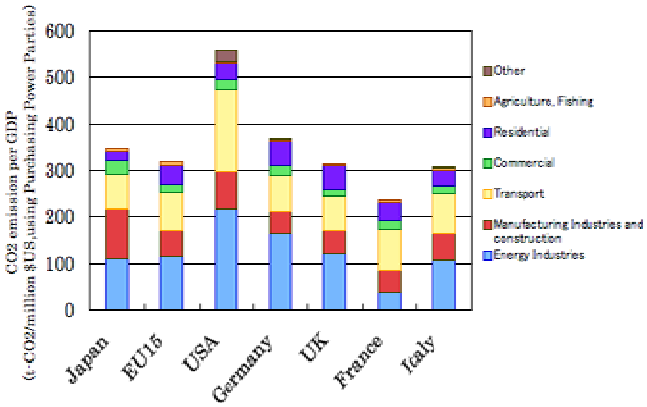

Figure 10 International Comparison of CO_2 Emissions in Relation to GDP

Source: Based on the Greenhouse Gas Emission Records Submitted by Japan, EU and US for the UNFCCC and IEA Energy balances of OECD countries 2003-2004 (GDP)

has been reluctant to expand renewable energy.

6. International comparison by country

When comparing CO_2 emissions and energy consumption in relation to the GDP of each country, the high GDP of Japan is overestimated in currency conversions because of the high cost of living, and Japan's efficiency seems higher than it actually is. When comparing purchasing power parity, Japan is slightly below Europe, with the ratio of Japanese industry being far higher than Europe, while the proportion of households and transportation is lower (Figure 10). If Japan's efficiency is high, it is because the waste in industry is made up in households and transportation.

7. Preparations for fair allocation of emissions are ready!

Power plants and factories account for approximately 60 percent of direct emissions in Japan, and the introduction of Cap & Trade emissions trading is essential.

It has been indicated that the initial introduction of emissions trading is difficult. However, Keidanren makes no mention of fair distribution of responsibility within industries in the Keidanren Voluntary Action Plan.

Fortunately, Japan has had a system for periodic reporting each year for the past 14 years thanks to the Law Concerning the Rational Use of Energy, and 5,000 large business locations nationwide report their fuel consumption by type, production volume, energy capital expenditure and energy efficiency to the Ministry of Economy, Trade and Industry. If this data is made public and utilized, "fair initial allocation will be easy" in Japan. The use of this data will also make it possible to use a sectoral benchmark in Japan.

8. Suggestions for International Systems

The Keidanren Voluntary Action Plan can be viewed as a typical pledge and review system. It cannot be alternative to emissions trading scheme. Keidanren has no qualms about the selection of indices to suit industries or the easiness of the target levels, and it should be noted that Keidanren is pushing the sectoral approach for post 2012 framework of the Kyoto Protocol.

Inevitably, developed countries like Japan need to accept deeper reduction targets for post 2012 framework, and the Keidanren plan cannot be a measure to secure the implementation. Japan should decide to introduce C & T emissions trading system immediately.

References

Kiko Network "List of Evaluations of Measures in the Kyoto Protocol Target Achievement Plan" (2007)

Ministry of the Environment "Trends and Background of Greenhouse Gas Emissions in Japan" (Materials submitted to the Global Environment Subcommittee in the Central Environment Council, January 2004)

Agency for Natural Resources and Energy "Overview of Electric Power Supply and Demand"

Contact : Kiko Network URL : http://www.kikonet.org/ E-mail : tokyo@kikonet.org kyoto@kikonet.org