

## GHG-Bank Plan: Domestic System Design for Climate Change in Japan

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President Bush of the United States announced a substitute proposal for the Kyoto Protocol to prevent global warming on February 14. The focus of this proposal is to reduce by 17% in 10 years, the amount of green house gases (GHGs) emitted for producing the value of one dollar. If we compare the U.S. economy to an automobile, this can be called a proposal of improving its “fuel efficiency”. The U.S. improved its “fuel efficiency” of CO<sub>2</sub> emissions by 21% from 1978 to 1988 and by 17% from 1988 to 1998, although its total emissions have increased by 16% during the same periods. The outlook by the U.S. Department of Energy at the end of last year indicated that the “fuel efficiency” of CO<sub>2</sub> emissions would improve by 14%, while the total emissions would increase by 19% during the same period as stipulated in the President’s proposal. This means that the Bush proposal is only announcing an improvement of 3% from the ongoing trend in the U.S.’s “fuel efficiency”, which cannot be a substitute for the Kyoto Protocol at all.

On the other hand, Japan had improved its “fuel efficiency” by 22% during 1978-1988, but improved by only 5% during 1988-1998. It is a difficult situation for Japan to be aligned with Bush’s strategy.

Under such circumstances, the ratification of the Kyoto Protocol is now on the table at the Diet as an important item. However, there is no “large-boned” strategy for a domestic system to achieve the Protocol target. The Protocol is now going to be ratified without any promise of achieving the target, just only with limited and near-sighted strategies.

The Protocol adopted the mechanisms of emissions trading, joint implementation, and clean development mechanism, which are called “Kyoto Mechanisms”. They are the embodiment of “the maximum effect with the minimum costs” set out in the Framework Convention on Climate Change. GHGs would be priced by the Kyoto mechanisms. By giving higher prices to more carbon emitting goods, and by controlling consumption through the change of relative prices, global warming would be prevented.

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The reason why we have to aim at the minimum cost is that the prevention of global warming is such an ultra long-term problem with a time scale of hundreds of years, that it would incur a tremendous amount of costs.

The Protocol obliges 38 countries - mainly from developed and economies-in-transition countries - to reduce their GHGs at least 5.2% below the 1990 levels during the first commitment period from 2008 to 2012. As for Japan, the target is a 6% reduction below the 1990 level. The framework of the Protocol is to fix emission "amounts" and to reconcile through "prices".

If we intend to achieve the Protocol target by a hard-landing approach of suddenly reducing GHGs after the first commitment period begins, Japan's economy is likely to be affected severely. What is a domestic system that can be consistent with the Protocol?

Japan depends on imports for most of its fossil fuels. More than 80% of GHGs are derived from fossil fuels. Here, I would like to propose the immediate adoption of a "GHG (Greenhouse Gases) Bank Plan" as a simple, transparent and large-boned domestic system utilizing the market mechanisms, with which we can make good use of these fossil fuels while pursuing the principles of the Protocol.

The importers of fossil fuels will buy emission permits corresponding to their imports. They will not be able to sell fossil fuels without the permits. The GHG Bank (hereinafter referred to as G-Bank) is an entity that will sell permits to importers through bidding. For example, suppose an oil company "A" devises a strategy for the next day's bidding. As it would like to secure 800,000 kl calculated based on successful bids of the last month, a daily price trend in the emissions trading market, and the forecast of a heat wave, it will add 6% on the most recent permit price for its bidding. As for an additional 150,000 kl for the future use, it will make a bid at 4% lower than the most recent price. What will be the result?

This is an upstream type emission trading where fossil fuel importers cannot sell their products without the equivalent amount of permits with their imports. In this scheme, the relative prices of fossil fuels will go up depending on the prices of permits. The G-Bank is the supplier of such permits.

This is a "no-cap" trading system, where an individual entity will be free from caps while

the total amount of permits supplied by the G-Bank, or in other words Japan's overall emissions, will be capped.

In the case of cap-and-trade, where permits are traded among companies with an emissions cap, such a capping practice itself will require a tremendous amount of costs. The monitoring of emissions will also require huge costs. Without caps, these costs will be saved. Possible entities in the G-Bank Plan are the importers of fossil fuels only, which are approximately 300 companies.

With the "no-cap" system, the targeted emissions limitation will be achieved without fail. In this system, permits will be priced at the upstream. Therefore, no entities will be able to escape from the system, and fairness will be ensured. Through the price increase of fossil fuel intensive goods, reduction investment at the downstream will also be promoted.

The G-Bank will support the "no-cap" trading system. In order to avoid the hard landing that is likely to occur after 2008, a GHGs emissions path for 2003-2007 is going to be designed. Starting with milder controls will be preferable.

Permits will be issued according to this path. However, as the dynamics of the Japanese economy will be bound if the total amount is completely fixed, the permits balance in the market will need to be adjusted according to the economic fluctuation. When the economy is favorable, more permits will be issued, and when the economy is dull, permits will be withdrawn from the market. Recall the selling and buying operations of national bonds by the Bank of Japan.

Although it is after 2008 that the emissions trading under the Protocol will begin, the U.K. and the EU will start their own emissions trading prior to that. As there is no compatibility between permits in the markets in Japan and those countries until 2007, Japan needs to adjust the market balance so that the emission prices issued by the G-Bank will not deviate from those in the overseas markets. This will directly lead to securing the international competitiveness of the Japanese industry.

In the meantime, during the first commitment period starting from 2008, the G-Bank will supply permits that have been allocated to Japan. As Japan will have experienced "no-cap" trading domestically before the commitment period, it will be able to shift the Kyoto Mechanism smoothly.

As permits from other countries or those generated from CDM and JI will come to flow into Japan after 2008, Japan's available total amount of permits will not be fixed.

The G-Bank will also have functions of supplying investment capitals for addressing global warming, and supplying subsidies to adversely impacted industries, by recycling revenues from permits sales. In addition, it will have a permits registry function as well as an information banking function. The G-Bank should be made an organization under the immediate control of the Prime Minister in order to establish it as an organization with a public nature while vitalizing the private power, and to be free from the borders between the ministries and the agencies.

The G-Bank Plan is not inconsistent with several existing measures. The Keidanren's Voluntary Action Plan will work within the framework of the G-Bank Plan, in which they will voluntarily reestablish the reduction targets while watching the permit prices in the market. Companies will pay full attention to the permit prices rather than implementing reductions blindly, and will improve the cost structure through the consumption control of fossil fuels.

Some of the domestic systems that have been discussed are not always consistent with the Protocol. Let me summarize concepts that should not be implemented. There are some problems in an idea to make a carbon tax a major strategy. As the prices are fixed and amounts are changing in a tax system, the Protocol targets may not be achieved through tax.

There is also a problem in an idea of the wider use of the tax revenues now earmarked for specific purposes after 2008, in order to make them resources for buying overseas permits. This is because it will not bring about a change in the relative prices in Japan, which is aimed at in the Protocol.

The total amount control on individual companies and the emissions intensity control are now about to start. However in those systems, costs will not be reduced because they control areas with high reduction costs as well as those with low reduction costs together. In addition, they will bring disadvantage to those who have already taken measures. Moreover, it is uncertain whether the target can be achieved through the emissions intensity control.

Such a control of taking freedom from individuals, in which the efficiency improvement of air conditioning is advocated by assembling all family members in one room, is out of the question.

Some are contriving the “free-ride” of system designing, thinking measures adopted in the U.K. or the EU can be directly applied in Japan. In the U.K. and Germany, which are responsible for most of the EU’s reduction stipulated in the Protocol, the CO2 emissions have almost consistently been decreasing since 1979. It might be easy for them to achieve the Protocol targets. However, in Japan, the emissions have been almost consistently increasing during the same period. Our Protocol target cannot be achieved just by imitating others.

We have to stay within the framework of the Protocol, and should comply with it if we ratify it. By establishing a domestic system that can achieve the target, we will be able to propose the design of a truly equitable new system where developing countries can also participate, in the post Kyoto negotiations starting from 2005.