

Draft of Climate Change Tax: *Proposal for a national dialog*

It is the opinion of the Expert Committee that the following 6 points of the tax for combating climate change proposed by the Expert Committee will be of great interest to all Japanese citizens. While we would like to hear the opinions of the people with regard to anti-Climate Change Taxes in general, we would especially like to hear their opinions on these 6 topics, regardless of whether they are for or against them.

1. Current state of measures for combating climate change, and merit of Climate Change Tax in this context *Why should we study Climate Change Tax?*

1.1 Features of Climate Change Tax in the context of measures for combating climate change

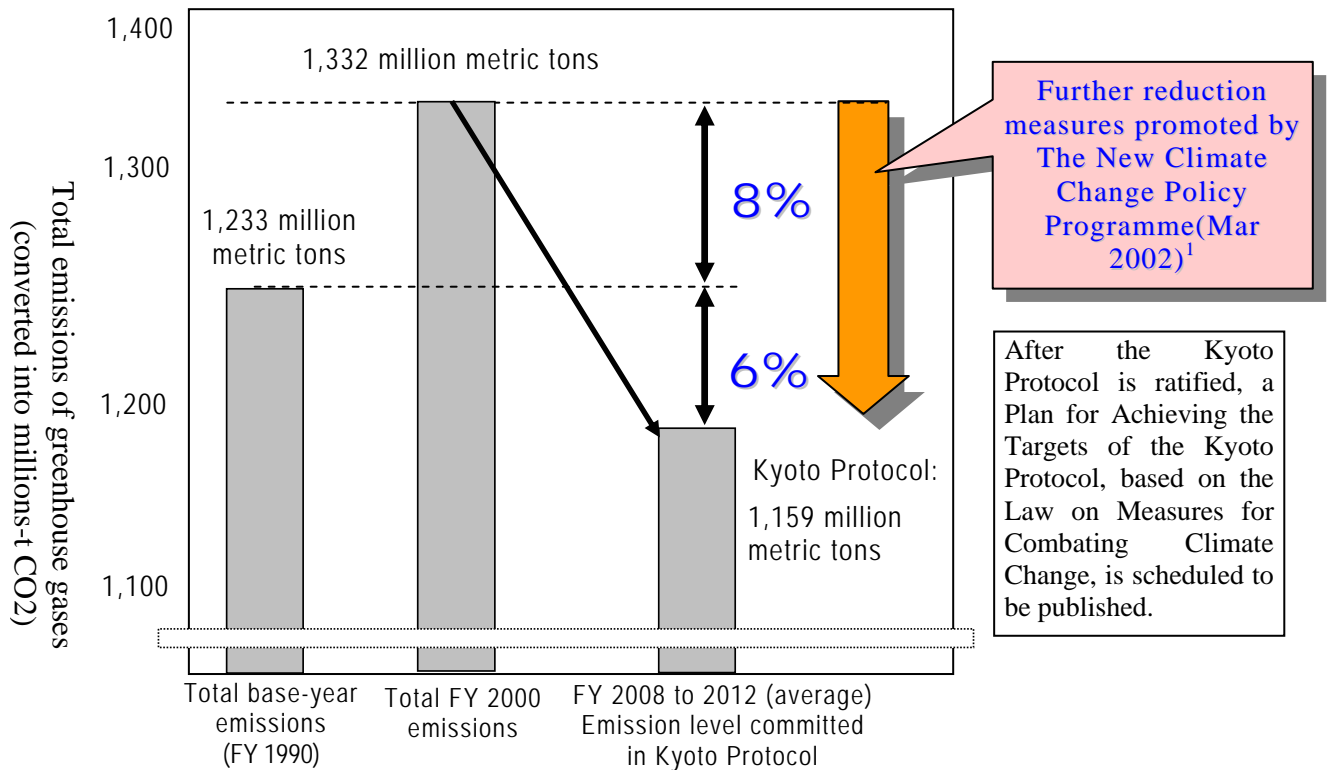
Despite a number of measures, Japan's emissions of CO₂ and other greenhouse gases rose by 8% between 1990 and 2000. It will not be easy to achieve the committed 6% reduction in greenhouse gas emissions from 1990 levels in the Kyoto Protocol. And in order to overcome the issue of climate change, it will be necessary to reduce emissions by even greater levels over the long term¹. In order to accomplish this, not only Japan but the entire world must continually reform their socio-economic structures over the next century. Coping with climate change will be a major test of Japan's ability to survive and continue to grow.

There is a limit to how far regulations and autonomous efforts can go toward continuing this type of difficult reform. The reason for this is that under these types of programs, the measures will only be born by some. A particular problem is that there will be little incentive to implement measures for types of discharger that are small in scale but very numerous, such as those used by households and automobiles, despite the fact that this is a very important area for reform. Additionally, while autonomous commitments are important, they are limited in the sense that it is not possible to precisely estimate their effectiveness. Another problem is the limitations on funding for economic subsidies to support autonomous commitments.

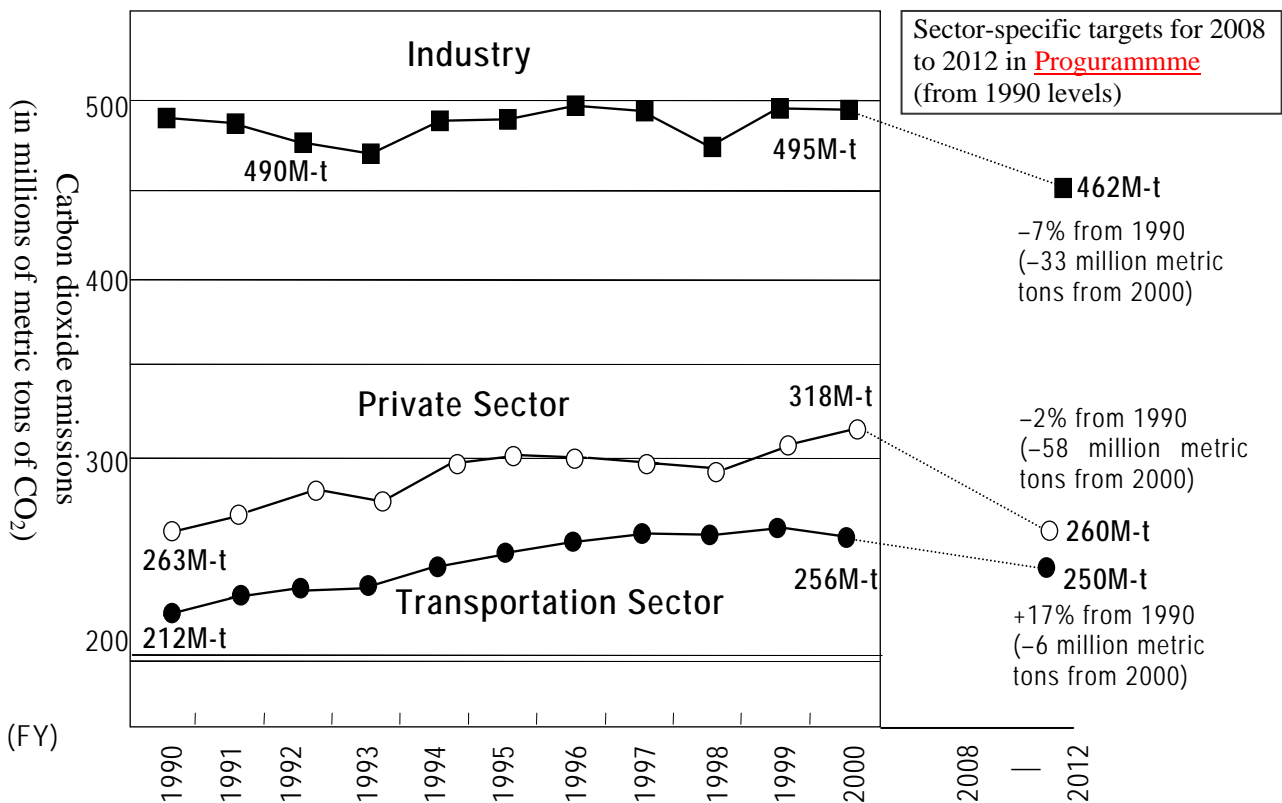
Consequently, measures based on a new concept are required in addition to such conventional measures as regulations. In other words, it will be necessary to propose and adopt even more rational measures, that provide all people and enterprises with incentives to combat climate change, including in general households and automobiles, promote measures made rational through creativity and ingenuity, and are borne by society as a whole.

Reference 2: State of Japan's emissions of carbon dioxide (CO₂) and greenhouse gases

- As of fiscal 2000, total emissions had **risen by 8%** compared to the base year (FY 1990)
- Achieving the committed a 6% reduction will require an **approximately 14% reduction in emissions from fiscal 1990 levels**, starting from fiscal 2000



- Over 90% of Japan's greenhouse gas emissions are carbon dioxide. The figures show carbon dioxide emissions by sector



¹ On 29 August 2003, Japan's emissions of CO₂ and other greenhouse gases for fiscal 2001 were published. According to these figures, the fiscal 2001 level was 1,214 million metric tons, 8.2% above fiscal 1990 levels.

One possible new mechanism of this kind is economic measures that actively harness the strengths of a market that is familiar to the Japanese people, such as Climate Change Tax and an emissions trading system. Of these possible new mechanisms, Climate Change Tax could promote the selection of more energy efficient products when businesses purchase or upgrade equipment, when ordinary households buy cars or electronics, and the like, and when building or remodeling homes, as well as encourage a reduction in the use of fossil fuels (coal, petroleum, and natural gas) and emissions of greenhouse gases there from, by taxing the greenhouse gases that cause climate change and/or fossil fuels. Additionally, unlike regulations, a policy that makes fossil fuels relatively expensive for environmental reasons should also provide good incentive for research and development into energy-efficient technologies and the like. In other words, as a mechanism, Climate Change Tax spread the cost of keeping the planet clean more appropriately and naturally across the socio-economic structure.

The adoption of Climate Change Tax would first reduce greenhouse gas emissions through the price-incentive effect of the above-mentioned taxes (the effect of increasing the incentive to reduce the use of the products whose costs have been relatively raised through equipment adoption measures and the like).

Additionally, the revenues obtained through these taxes could be used on behalf of the Japanese people to achieve a number of policy goals. For instance, if they are used to combat climate change, they could further reduce emissions of greenhouse gases.

Below are some possible advantages of using Climate Change Tax:

1. It is almost only policy, which could require all sectors to become involved in greenhouse-gas emission measures, including the private and transportation sectors, which have been increasing their emissions in recent years.
2. It is an economically rational policy, which can achieve a given reduction at the minimum cost to society as a whole.
3. It provides a continuing incentive to reduce emissions and develop technologies.
4. It would be possible to consider using the tax revenues it generates for further reductions.
5. The above advantage should advance the Japanese environmental industry and the development of environmental technologies in Japan.
6. Additionally, since there is high social interest in tax systems, the act of adopting such Climate Change Tax could motivate the rapid popularization of ACC measures (announcement effect).

Tax systems are a kind of market rule, and have major impact on the population's economic activities, both implicitly and explicitly. If we review these tax systems from the perspective of environmental conservation, and improve them in order to enable the above-mentioned effects, then the population will work even harder to protect the environment. This should allow the Japanese economy to dynamically transform itself, in order to co-exist with the global environment.

At any rate, the process of developing future measures and policies for combating climate change is a major challenge facing the Japanese people as a whole, and the future of our nation hangs in the balance. Japan should actively work to integrate the economy and the environment, with concrete measures that are rational and internationally competitive, through a free debate over the selection of policies.

Climate Change Tax has already been adopted elsewhere in the world. They were adopted in the early 1990s in northern Europe and the Netherlands, and more recently in Britain, Germany, and other countries. In northern Europe, which has had the taxes in effect for many years, the effectiveness of such taxes has also been proven. In Japan as well, we are also moving partially toward a philosophy of Climate Change Tax, having already modified our automotive tax to raise the tax rate for motor vehicles with high environmental impact. In recent years, Japan has also begun to seriously study the revision of policies in other fields related to the environment to achieve the public interest by actively utilizing market competition that takes advantage of creativity and ingenuity, and has actually put some revisions into effect, for example in the fields of energy and economic policy. Climate Change Tax matches the intent of this type of major movement going on in related fields.

¹ The calculations studied internationally before the negotiation of the Kyoto Protocol predicted that in order to stabilize the concentration of CO₂ in the atmosphere to 550 ppm (twice the level of before the industrial revolution), it would be necessary to halve total worldwide emissions by the end of the 21st century.

1.2 A mechanism under which emissions will be reduced

Climate Change Tax make energy-efficient equipment, and equipment using new energy sources, more economically attractive, by making fossil fuels more expensive than before. As a mechanism, they provide people and businesses with an incentive to take action to prevent climate change. The question, however, is whether there are currently sufficient energy-efficient products and the like to achieve the reductions committed in the Kyoto Protocol.

Achieving the reductions committed in the Kyoto Protocol will naturally require the development and popularization of such innovative technologies as fuel cells. However, even widely adopting existing technologies through various policies could also have a major effect (For example, focusing on the private and transportation sectors, the wide adoption of such new-energy technologies as solar power generation, solar heating, and small wind power generators, and energy-efficient technologies for highly energy-efficient homes, household equipment such as highly energy efficient heaters and air conditioners, and the like, could be enough to achieve the reductions committed in the Kyoto Protocol).

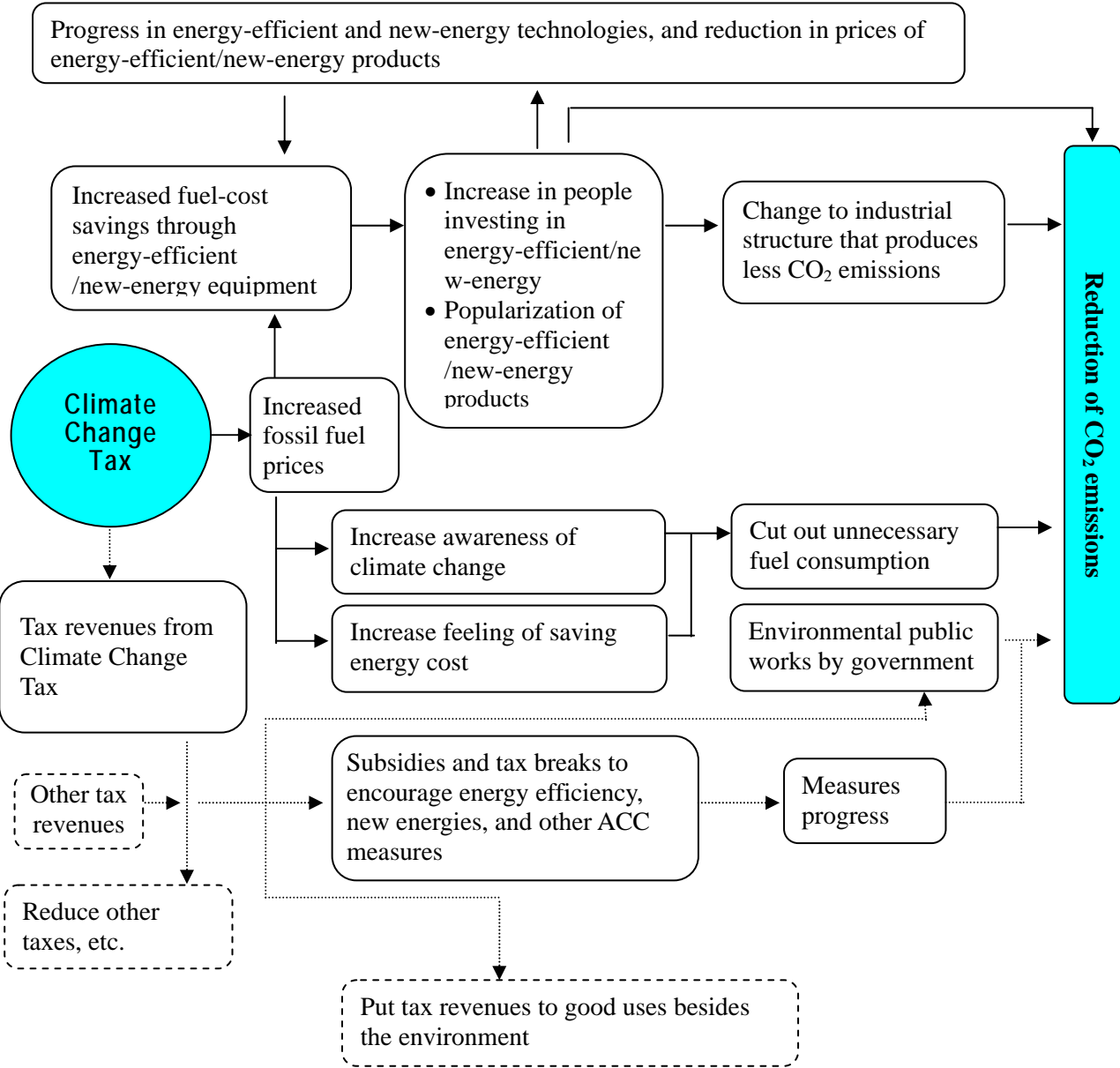
The question is, what kind of policies will promote the adoption of products and equipment using these technologies? In the situation that we see today, in which it is more expensive to implement technologies addressing these issues than it is to continue purchasing energy under the price of energy and cost of technologies nowadays, then just educating people to purchase goods and equipment that prevent climate change will only have an impact on people with a high awareness of environmental issues. In this situation, increasing regulations will mean that the government is telling everyone what measures they must take, and by their nature, any such measures must not be mandatory, i.e. not taken through free choice.

Presently, the Japanese government is implementing aggressive policies, with yearly government expenditures in the 1 trillion-yen range¹. Thus, it is conjectured that emissions have actually been held to considerably lower than they would have been with no measures in place. Nevertheless, Japan's present greenhouse gas emissions are much higher than 1990 levels. In order to achieve the reduction committed in the Kyoto Protocol, both the public and private sectors must strengthen their commitments to combating climate change, and increase investments in adopting technologies to combat them. Thus, it is highly likely that achieving this reduction will require even stronger measures than we have in place now.

In such a situation, it is expected that using economic methods will heighten the effectiveness of the policies. In other words, making fossil fuels more expensive, or making the initial cost of adopting technologies that combat climate change cheaper, would be an effective method for promoting a broad and natural increase in energy conservation, by making it more economically profitable to adopt energy-efficient measures, and making energy-efficient products, equipment and the like more economically attractive. A measure having this function would be a tax targeted at preventing a climate change, or such a tax applied in combination with a subsidy system.

¹ The total budget of The New Climate Change Policy Programme for fiscal 2003 is about 1,320 billion yen. The main components of the budget are as follows: (1) Approximately 390 billion yen for forestry-industry measures, including forest conservation project; (2) Approximately 320 billion yen for the promotion of nuclear power; (3) Approximately 200 billion yen for measures to reduce emissions of non-energy-derived CO₂, CH₄, and N₂O, including measures to enhance waste treatment facilities and treat wastewater from agricultural communities; (4) Approximately 126 billion yen for the construction of a transportation system with low environmental impact; (5) Approximately 122 billion yen for new-energy.

Reference 3: How adopting Climate Change Tax will reduce carbon dioxide



Source: Created based on Report of the Study Group on Economic Instruments in Environmental Policies (May 2000)