

**Interim Report by Subcommittee of Global Environment Council
under Central Environment Council**

July 2001
Global Environment Bureau
Ministry of the Environment of Japan

An interim report by the Central Environment Council shows that the target established under the Kyoto Protocol is achievable from the viewpoint of technical feasibility. The report concludes that current policy alone will make it difficult for Japan to achieve the target set by the Kyoto Protocol. Japan should review its current policies and introduce new and additional policies in order to achieve its Kyoto target.

1. Process of Discussion

- In February 2001, two subcommittees, the Subcommittee for Establishing a Scenario for Achieving the Kyoto Target and the Subcommittee for New Policies for Achieving the Kyoto Target, were established under the Global Environment Council of the Central Environment Council, a Ministry of the Environment panel. These subcommittees were formed to discuss the promotion of measures to prevent global warming. Interim reports of their discussions to date were presented by both subcommittees to the Global Environment Council on July 9, just before the convening of COP6 bis.
- Discussion will continue on the issue of new institutions to achieve the target set by the Kyoto Protocol based on the results of COP6 bis. Public comments will be invited concerning the interim reports.

2. Outline of Interim Report of Subcommittee for Establishing a Scenario for Achieving the Kyoto Target

Prediction of Greenhouse Gas Emissions in 2010

- It is expected that **by the year 2010, greenhouse gas emissions will have increased by 8% over base year emissions** despite the emissions reductions measures already being taken.

Emissions Reduction Potential

- If we consider emission reduction potential from a technological standpoint, there is the potential for greenhouse gas emissions to

decrease by 4% to 7% vis-à-vis the base year with regard to implied energy faculty of thermal power¹ or decrease by 2% to 5% with regard to implied energy faculty of all power².

(refer to table)

- **This means that the target set by the Kyoto Protocol is achievable from the viewpoint of technical feasibility.** The rationale for this is that the figures above (i.e., 4-7% or 2-5% reductions) are greater than the average yearly reduction target of 0.5%, a figure set under the Outline for Promotion of Efforts to Prevent Global Warming, calculated to achieve a total emissions reduction of 6%, Japan's target established under the Kyoto Protocol.

Evaluation of Economic Efficiency Based on the Evaluation of Countermeasure Technology

- Some greenhouse gas reduction measures are effective not only in reducing greenhouse gas emissions but also in reducing energy consumption and so on. This means that parties undertaking these measures, particularly in the commercial/residential and industrial sectors, will not suffer a financial loss to implement the measures, even considering the cost of capital investment.

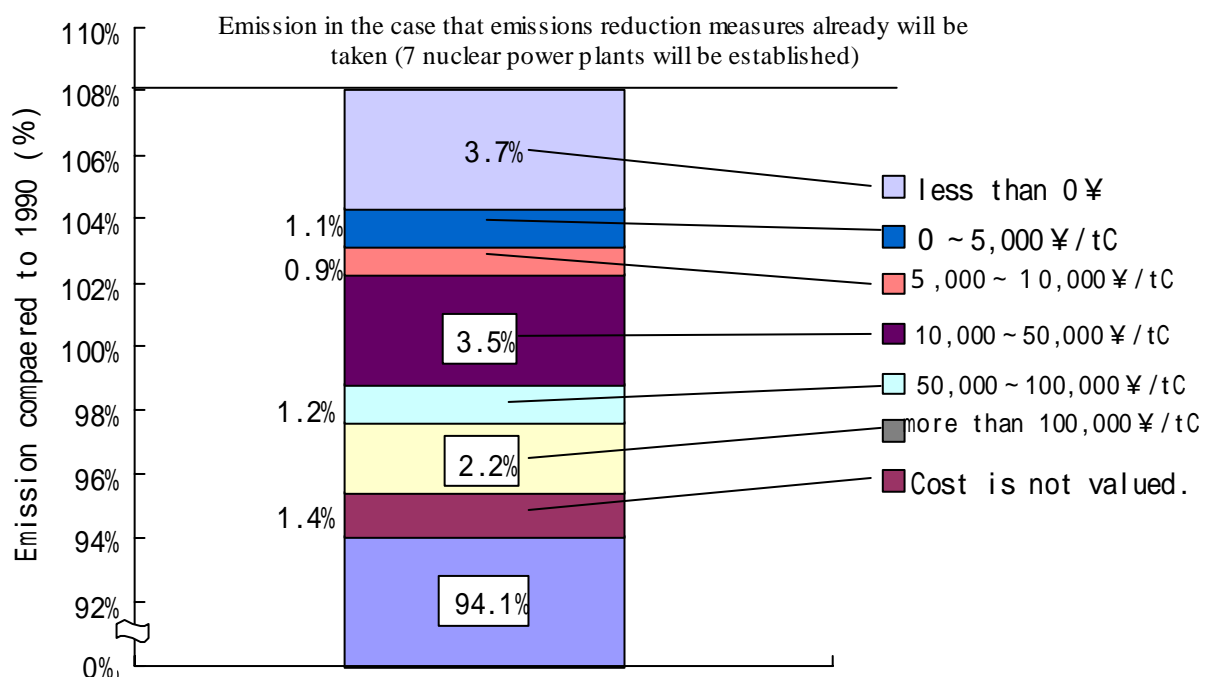


Figure: Emissions reduction volume by additional reduction cost (with regard to implied energy faculty of thermal power)

1 Based on the assumption that generated electric power volume by thermal power will be reduced through the reduction of electric power consumption.
 2 Based on the assumption that generated electric power volume by all power means will be reduced at the same rate through the reduction of electric power consumption.

Evaluation of Economical Efficiency based on a Quantitative Model

- The results of six kinds of economic analysis models indicate that a carbon tax of somewhere between 13,000 and 35,000 yen per ton would be needed for 2001 to achieve reductions of 2% compared with the base year. This is expected to reduce GDP in 2010 by between 0.06% and 0.72% compared to what it would be without a carbon tax.

Table : Prediction of Greenhouse Gas Emissions by kinds and sectors in 2010 for achieving 6 % reduction target , taking Reduction Potential into consideration (with regard to implied energy faculty of thermal power) (unit : thousand t-c)

		Guideline of Measures to Prevent Global Warming(1998)			Base Year	Emission in 2010 in the case that emissions reduction measures already being taken	Taking Reduction Potential (after distributing power) into Consideration	Reduction Rate (%)		
		Base Year	Reduction Rate(%)	Emissions in 2010						
CO ₂ from Energy	Industry	135,000	± 0	126,000	135,000	129,000	117,000 ~ 113,000	± 0 ~ - 2		
	Commercial/residential	72,000		72,000	71,000	91,000	78,000 ~ 77,000			
	Transportation	58,000		68,000	57,000	71,000	67,000 ~ 64,000			
	Energy Conversion	21,000		22,000	21,000	24,000	23,000 ~ 23,000			
	Sub Total	287,000		287,000	284,000	315,000	286,000 ~ 277,000			
CO ₂ from non-Energy		37,000	- 0.5	21,000	32,000	18,000	27,000 ~ 26,000	- 1 ~ - 2		
CH ₄				3,500		7,000			2,900	6,000
N ₂ O						7,000				5,000
Others			- 2	[-6,000]						
HFC、PFC、SF ₆		14,000	+ 2	21,000	14,000	11,000	5,000 ~ 4,000	- 3		
Total		338,000	- 0.5	337,000	330,000	355,000	318,000 ~ 307,000	- 4 ~ - 7		
Sinks			- 3.7	[-12,000]						
Kyoto Mechanism			- 1.8	[-6,000]						

*1 Some calculation isn't correct because of half adjusting.

*2 HFC,PFC,SF₆ are calculated by factual emissions. The base emissions of these gases are those in 1995.

*3 Reduction rate shows proportion to total emissions in base year.

*4 In this estimation, Emission in base year is not factual one because this is calculated by the same way of estimation for data consistency.

3. Outline of Interim Report the Subcommittee for New Policies for Achieving the Kyoto Target

Evaluation of Current Policy

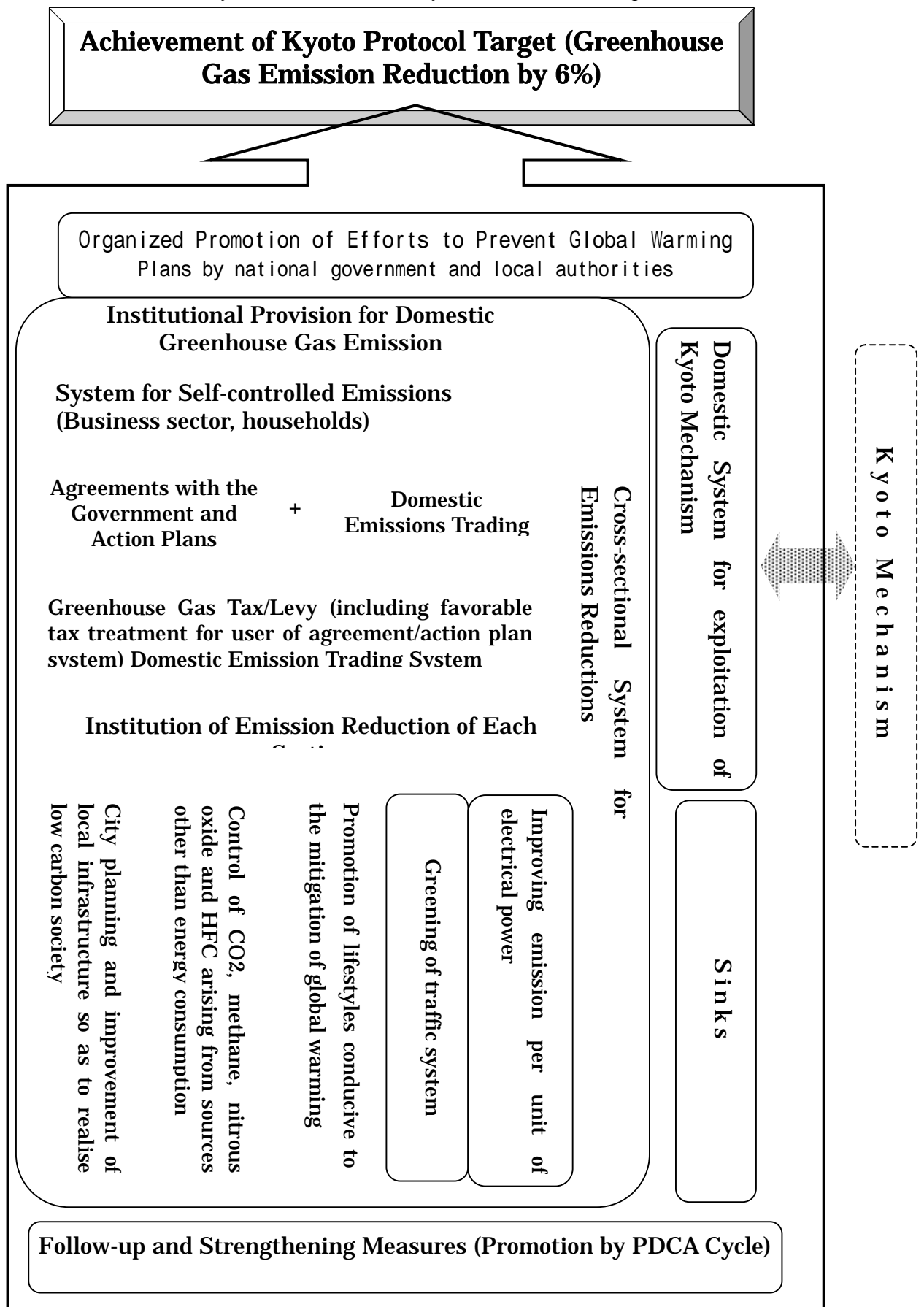
- Current policy, as based on the Outline for Promotion of Efforts to Prevent Global Warming, is not sufficient to achieve the target set by the Kyoto Protocol.
- **To achieve the target set under the Kyoto Protocol, it is necessary to review its current institutions and create new and additional policies** aimed at realizing the reduction potential under study by the Subcommittee for Establishing a Scenario for Achieving the Kyoto Target.

The Directions for New Policies for Achieving the Kyoto Target

- **Organized Promotion of Measures to Prevent Global Warming**
 - A Establishment of plans by the Government
 - B Establishment of plans by local authorities
 - C Organized efforts by the business sector
- **System for Self-controlled Emissions**
 - A Notifications and opening of the data of greenhouse gas emissions resulting from business activities
 - B Notification of greenhouse gas emissions resulting from the use of household electricity, gas and water services (via bills for public utilities) and “Global Warming Prevention Diagnosis” by specialists
- **Cross-sectional System for Emissions Reductions among Industrial, Commercial/Residential and Transportation Sectors**
 - A Agreements between businesses or business organizations and the national or government or local authorities requiring the drafting of action plans and periodic announcements of progress achieved
 - B Domestic emission trading system
 - C Greenhouse gas tax /levy
- **Systemic Provisions for Emissions Reductions in Each Sector**
 - A Improvement of emission per unit of electrical power
 - B Greening of transportation system
 - C Promotion of lifestyles conducive to the mitigation of global warming
 - D Control of CO₂, methane, nitrous oxide and HFC arising from sources other than energy consumption
 - E City planning and improvement of local infrastructure so as to realise carbon society
- **Domestic System for Exploitation of Kyoto Mechanisms**
- **Scheme for Follow-up of Plan and Review of Measures**

Reference

Overall Picture of System to Achieve Kyoto Protocol Target



Future Plans

- The Subcommittee for New Policies for Achieving the Kyoto Target has just completed its discussions of alternatives in policy methods to reduce greenhouse gas emissions based on the evaluations of economic efficiency of countermeasure technologies presented in the interim report of the Subcommittee for Scenario Achieving the Target.
- The Subcommittee for New Policies for Achieving the Kyoto Target will undertake to integrate the various measures which introduce or implement countermeasure technologies, including in this integration concrete emissions reduction volume, and undertake to come up with a proposal by the end of the year for a domestic system enabling Japan to achieve its Kyoto reduction target.

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