

Comment on the Analysis by the “Study Panel of Mid- and Long-Term Roadmap for Global Warming Measures” of the Ministry of the Environment

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Voluntary Members of the Task Force
Senior Vice-Minister Level Review Team
Ministerial Committee on the Global Warming Issue

The Fifth Plenary Meeting of the “Study Panel of Mid- and Long-Term Roadmap for Global Warming Measures” of the Ministry of the Environment was held on March 26, 2010, and necessary measures to achieve the medium-term target and the results of analysis on economic impact on that occasion were presented. In addition, Minister of the Environment Ozawa published his own draft proposal of the “Medium- and Long-Term Roadmap Concerning Measures against Global Warming” on March 31 based on the results of the analysis.

With regard to costs, etc. necessary to achieve the medium-term target, the “Task Force,” established under the Senior Vice-Minister Level Review Team of the Ministerial Committee on the Global Warming Issue, conducted analysis from a scientific and technical standpoint last October, and published an “interim report” last December after going through open and transparent discussion. The “interim report” also indicates future analytical works, such as economic impact analysis incorporating technical innovation effect and consideration of specific policy package, as the future tasks of the Task Force.

It is regrettable that, under such circumstances, the Ministry of the Environment recently released the results of analysis conducted by the “Study Panel of Mid- and Long-Term Roadmap for Global Warming Measures” with limited information on the analysis presented without sufficient discussion held and that part of the released results was used in the draft proposal of the Minister of the Environment. Although the details are unspecified as the information disclosed is insufficient, the following points, for example, appear not to be based on the results obtained through past discussions at the Task Force. We are concerned about this. Considerable emission reduction will bring about a great impact on and major changes to people’s life; therefore, it is a challenge that is impossible to resolve without the understanding and cooperation of all the people. Consequently, we hope for careful examination thereof through open discussions from a scientific and technical standpoint in the future.

(Advocates among the members of the Task Force)

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1. Regarding Economic Impact Analysis

(1) Regarding propriety of the effect of technical innovation, etc.

Analysis by Professor Ban of Osaka University and analysis by Professor Matsunami of the University of Tokyo and others of this time appear to incorporate the effect of innovation, which is set in an exogenous manner. Although the Task Force has already conducted analysis of the same kind, in doing so, its members pointed out that “Careful consideration in light of the technical roadmap, fiscal scale, etc. is necessary in setting the rate of technical progress.”

However, it seems that careful consideration from the aforementioned perspective has not been conducted with regard to exogenous values and parameters concerning technical innovation in the analyses of this time. For example, although an 8% reduction of equipment costs (a 57% reduction by 2020) is assumed in the innovation promotion case, isn't it necessary to carefully verify whether it is possible to reduce by half establishment costs, including construction costs, etc. of which reduction is scarcely expected, for the whole of new energy sources, including wind power generation, etc., for which cost reduction has already tended to be saturated, within the next decade?

(2) Relationship between marginal cost of emission reduction and GDP loss

According to the Task Force, the relationship between the marginal abatement cost and GDP loss is basically consistent among research institutes.

On the other hand, comparing the results of analysis of research institutes by the Task Force and the results of analysis by Professor Ban, GDP loss is very small in the analysis of this time though the marginal abatement cost is not much different from that in other models. Isn't it necessary to conduct repeated verification of prerequisites, etc. in public in the future?

| | Marginal abatement cost | GDP loss |
|----------------------------------------------|-------------------------|----------|
| KEO's model | ¥87,667 | -5.6% |
| Japan Center for Economic Research | ¥63,180 | -3.1% |
| National Institute for Environmental Studies | ¥52,438 | -3.2% |
| Analysis by Professor Ban | ¥55,635 | -0.4% |
| Analysis by Professor Ban (promotion) | ¥52,459 | +0.4% |

* For the case of 25% domestic reduction

* It is impossible to verify the analysis by Professor Matsunami and others, as the results concerning marginal abatement cost, GDP loss, etc. are not presented.

(3) Importance of taking into consideration both positive and negative effects

In the economic analysis by the Task Force, analysis has been conducted based on general equilibrium models, taking into consideration both positive and negative effects of measures against global warming, including the price mechanism and reduction in other investments, in addition to creation of investment by measures against global warming.

The analysis by Professor Fujikawa of Nagoya University, presented this time, is a partial analysis of a positive effect – demand creation effect by new investment. It does not take the impact on energy-intensive industries, etc. into account. Therefore, indicating the results of the analysis as economic impact owing to the achievement of the medium-term target may give a false impression to the people.

2. Regarding analysis on accumulation of measures

(1) Feasibility

In accumulating measures, careful consideration taking feasibility, balance with fiscal discipline, etc. into account is indispensable. If it is neglected, the policy of the whole of Japan may go wrong based on an infeasible picture. This was also pointed out by the Task Force, and it is thus considered to be important to conduct verification in public from a broad perspective.

The Medium- and Long-Term Roadmap of the Ministry of the Environment includes measures for which verification from this perspective has not been sufficiently conducted. For example, although the Roadmap indicates introduction of wind power generation of 11.31 million kW, the potential of establishment on land is said to be 6.4 million kW, and sufficient discussion has not been held on the necessary measures, costs, etc. to promote introduction beyond this. In addition, for high-efficiency water heaters, 41.5 to 51 million units (including solar water heaters) are assumed to be disseminated. However, it appears to be unrealistic to disseminate this number of units by 2020, taking into account that the market size for water heaters constitutes annual sales of a little over 3 million units.

(2) Regarding necessary amount of investment

An estimate by the National Institute for Environmental Studies presents the results of analysis that investment of 66.3 trillion yen is required in the case of 15% domestic reduction by 2020, and that investment of 99.8 trillion yen is required in the case of 25% domestic reduction by 2020.

In calculating the amount of actual investment, some costs are not taken into account, such as necessary costs for modal shift, etc. to reduce the quantity demanded for traffic and necessary costs for offshore wind power generation. If this goes on, a false message could be delivered to the people. Therefore, it seems to be necessary to conduct further verification on the propriety thereof among specialists.

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