

Lead Role in Halving Greenhouse Gas Emissions

– Japan Taking Initiative toward 2008 G-8 Summit –

Interviewer: *Ida Tetsuji*

With the issue of global warming drawing attention worldwide, the global community is expected to deepen discussions on various occasions on how to fight it internationally. How is Japan planning to participate in such international efforts and what can it contribute to the global community over the matter? Ito Hajime, deputy director general for global environmental affairs at the Ministry of Economy, Trade and Industry, speaks about these issues in an interview with *Japan SPOTLIGHT*.

Coexistence with Nature: Japan's Traditional Culture

What did Japan do at the Group of Eight (G-8) summit in Heiligendamm, Germany, where global environmental issues were top on the agenda?

Ito: As Prime Minister Abe Shinzo took the leadership in discussing global environmental issues that took center stage at the Heiligendamm summit, Japan could act as a bridge between the United States and the European Union. I think Japan's contribution was extremely significant at the summit. It was significant that prior to the summit, the prime minister declared what Japan would do, including his proposal to reduce global greenhouse gas emissions by 50% by 2050. I think the prime minister's initiative resulted in drawing out positive messages from major greenhouse gas emitters, such as the United States and China.

I think Japan should be prouder of its environmental policies. There is no other country in the world that maintains such a big economy and such a large population with only this much energy consumption. We will further push forward in that direction from now on. And I think Japan can make major contributions to the world by spreading technologies and systems we have so far



Ito Hajime, deputy director general for global environmental affairs, Ministry of Economy, Trade and Industry

accumulated. We would like to continue to pursue such a position.

Japan will host the next G-8 summit at the Lake Toya hot-spring resort in Hokkaido in July next year. The summit will be held at such an environmentally excellent location. Originally, coexistence with nature is a long-held Japanese tradition. I hope Japan can continue to take initiatives under such circumstances.

Japan to Aid World with Energy-saving Expertise

Japan's energy-saving technologies are drawing global attention, aren't they?

Ito: I think so. International organizations such as the International Energy Agency say that the global spread of existing energy-saving technologies is the cheapest and the most extensive, effective way to reduce carbon dioxide (CO₂) emissions. No one denies this argument. Neither the United States nor the European Union does. The diffusion of existing technologies would have a major impact. I think Japan can make significant contributions in this field.

But, such an approach alone is not enough to achieve the proposed halving of greenhouse gas emissions by 2050. Sunlight, hydrogen and other (renewable) resources, coupled with new technology such as a CO₂ capture and storage (CCS) mechanism, will play major roles. The proposed halving of greenhouse gas emissions is difficult to achieve without development of innovative technologies. So, Japan will seek to spread existing technologies on the one hand and develop innovative technologies on the other. Potentially, the CCS technology will be effective as it is expected to lead to a reduction of 2 trillion tons of greenhouse gases. But CCS is, in a sense, an existing technology. Although cost problems remain, the CCS technology is already used to raise the rate of crude oil recovery at aged oil fields in the Middle East and the North Sea. It can be used more widely if the

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G-8 leaders face photographers for a commemorative shot on the second day of their summit in Heiligendamm, Germany. Among them are Japanese Prime Minister Abe Shinzo (fourth from right) and German Chancellor Angela Merkel (on his left).

cost problems are settled. Japan will seek understanding on the safety of the CCS mechanism and continue efforts to cut costs. Some 70% of the CCS cost comes from the CO₂ capture. So, development of low-cost capture technology will be the key. Japanese companies' CO₂ capture technologies have attracted international attention. A research institute under the control of the Ministry of Economy, Trade and Industry is also making research on new materials. I believe low-cost CCS technology can be realized in the long range of 20 to 30 years.

I think nuclear power should be promoted, too, for all the debate about it. Multi-use small and midsize reactors, fast breeder reactors, and very efficient reactors will be necessary.

And, no one would oppose the use of sunlight. Both the public and private sectors in Japan will focus on the development of efficient, low-priced photovoltaic batteries that are easy to be processed. The top maker of solar batteries is located in Japan. I believe the use of sunlight should be a major theme to be jointly tackled by the public and private sectors. The use of hydrogen will be important in the future. Sunlight will be used to produce hydrogen, which in turn will be used as automobile fuel. If this scenario is realized, the targeted 2050 halving of greenhouse

gas emissions will become significantly realistic. We need to spend sufficient time to materialize the project. If motor vehicles stopped using fossil fuel, the 2050 picture would come close to reality. If iron ore reduction is done with hydrogen in place of coke, it would be efficient and only water would be emitted in the process. This would reduce CO₂ emissions by 30%. So the industrial use of hydrogen, such as in steel-making, is also a major theme. I think Japan can make major international contributions in these fields.

New Financial Aid Mechanism for Developing Countries

Is Japan planning to promote more efficient use of energy internationally?

Ito: The G-8 communique issued at the Heiligendamm summit strongly reflects the notion that energy efficiency is the No. 1 keyword. It has also been an important keyword at various international conferences. I believe the setting of energy efficiency goals in the next

international arrangement for fighting global warming that follows up the Kyoto Protocol will be significant not only for developing countries that need to achieve economic growth but for advanced countries as well.

I believe the ultimate target of anti-global warming measures is how to raise the efficiency of energy use. The essential part of such measures should aim to improve energy efficiency by promoting environmental technologies through various policy approaches and by stimulating investments. Discussions on total emission cuts are necessary. But economic growth cannot be sacrificed. Not only developing countries but industrial nations cannot ignore economic growth or tolerate zero or negative growth to resolve issues such as pensions, healthcare and unemployment. The biggest policy theme is how to keep a favorable balance among them.

How about Japan's assistance to developing countries?

Ito: Toward next year's G-8 summit, Japan is considering establishing a fresh funding mechanism. As written in Prime Minister Abe's message clearly, Japan will provide active assistance to self-supporting and high-spirited developing countries. If developing countries come to commit themselves in one way or another to improving their energy efficiency, I believe Japan will back up such efforts. It will absolutely be more effective to tell developing countries to make efforts toward improving their energy security than to simply urge them to reduce their CO₂ emissions.

Take China, for example. When urged to take some action to cut CO₂ emissions, China reacts by saying that advanced countries are responsible for global warming. We should convince China that progress in energy saving is the same as owning a fresh, independent source of energy at home. Even China must be well aware that securing a stable supply of energy or ensuring energy security is the very mainstay. I think that is why China has promised to improve energy saving by 20%.

There are a number of matters Japan can undertake to cooperate with devel-

oping countries in this field. Some developing countries are trying to make do with their own efforts. Of course, there are voices of support in Japan to assist such self-supporting developing countries. But even Japan will be unable to provide support for countries that only demand technologies and funds and sell emissions credits.

Japan Firms Competing Harder for Energy-saving Technologies

Japan's energy-saving policies appear to have won international fame.

Ito: Japan has introduced what is called a "Top Runner Program" for motor vehicles and various home electric appliances. This program designates the best energy-efficient product as a standard and requires other makers to make efforts to catch up. It has achieved major results in improving energy-saving performance of vehicles and appliances. The program has won acclaim from other countries and drawn attention from various international organizations. We tell them that this is one form of regulation aimed also at promoting competition. One characteristic of the program is that it is premised on existing technologies and not on dream ones. It contains the message that "at least one or two of your rivals have adopted those technologies and you need to catch up." The program is structurally excellent in that it is regulatory but at the same time competition-promoting. It has helped produce clear results in various products, such as motor vehicles and refrigerators. Serious discussions are under way internationally to introduce the program in other countries and to incorporate it in an international anti-global warming framework. The government has done nothing other than decide on the regulations. The market has moved to act autonomously and helped produce energy-saving effects. This is a policy

tool best suiting Japan, which is accelerating a shift from the government to the private sector. It is also a rare example of Japan's administrative approaches that have won high marks from abroad.

I think there remain many institutional measures that can be taken to improve energy efficiency in various aspects domestically, such as in the housing field. Costs can sometimes be cut by 30%-40% by implementing an energy-saving advisory service program without reducing the level of living standards, not by trying to be stoic. If one measure is friendly to the Earth and can cut costs, you will have no choice but to take it. In terms of taxation, the Japanese government has aggressively promoted the so-called greening of automobile taxes to encourage the greater use of environmentally friendly motor vehicles. As a result, automobile energy efficiency has begun to improve as a whole, beginning to help halt the increase of greenhouse gas emissions in the transportation sector.

Similar measures are to be taken in the housing sector from now on. Various specific steps, such as a deduction from corporate tax and approval of special asset depreciation, have already been introduced in the office sector after being found effective. Fresh tax measures should be taken if they are effective and suit Japanese situations.

3 Principles toward 2050

What is Japan planning to do toward the 2008 summit to push forward international discussions on the post-Kyoto Protocol framework on global warming?



There is no national border in the global environment. To protect it, we should establish a flexible and diverse framework that pays attention to each country's situation.

Ito: I think there are two ways of discussions – a medium-term one on what should be done for the Kyoto Protocol target year of 2013 and beyond, and a longer-range one on what should be done toward 2050. To speak about matters for 2050, Japan needs to promote development of innovative technologies as proposed by Prime Minister Abe, spread the Japanese model of energy saving, and substantiate the proposed funding mechanism.

On medium-term matters, I can note that the prime minister has proposed three principles. One is to establish a flexible and diverse framework that involves all major greenhouse gas-emitting powers. Secondly, the framework needs to pay attention to each country's situation. The third point is to utilize energy-saving technologies and balance environmental conservation and economic growth. Japan needs to materialize the three-point initiative. But we should not be hasty and need to be cautious in relations with the United States, which has at last become positive to reducing greenhouse gas emissions. If the United States retreated from the framework, participation by China and India would be doomed. Japan as a summit host needs to show the leadership in ensuring commitment by those major gas emitters. **JS**

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