

**Proposal of the Council on the Global Warming Issue**  
**~ In pursuit of "Japan as a Low-carbon Society"~**

June 16, 2008

**Introduction**

The Council has discussed, from various perspectives, the ideal low-carbon society and the path to achieving it. Conversion to a low-carbon society cannot be realized without support and participation of the people. With the G8 Hokkaido Toyako Summit coming up shortly, the Council here announces a message to the Japanese people and its policy proposal toward the realization of a low-carbon society. We eagerly hope that this message and proposals are shared broadly among the people and reflected in policies on global warming.

**1. In what kind of era are we living in?**

We are now facing a crisis unprecedented in the history of humankind. Global warming has begun and is a reality, as clearly shown by the most advanced scientific rationale, such as the Intergovernmental Panel on Climate Change (IPCC). We are beginning to feel the effect of global warming on human activity and ecology closer than ever. It has become an immediate problem to our lives.

In addition, as the economy rapidly grows in Asia and elsewhere, there are concerns over the shortage of natural resources, fossil fuels, and food on a mid-/long-term basis. The price of these natural resources have already begun to surge, alerting us to the danger. Water problems are also a growing concern in many parts of the world.

If we leave global warming untouched and continued to depend on finite resources and fossil fuels, we will put future generations in a critical position.

If, on the other hand, we act now, then both current and future generations will lead a happier and better life. We are standing at a watershed.

## **2. What is an idealistic low-carbon society?**

The realization of a low-carbon society is the only way out of this crisis. We must also understand that this is a common challenge that needs to be taken on by all mankind.

Then what exactly is a low-carbon society?

In short, it is a society in which “our lives have become more affluent even though the amount of carbon dioxide we emit no longer exceeds the range the Earth can assimilate.” In other words, it is a sustainable society in which we break with economic activities and lifestyles that produce large quantities of carbon dioxide, which accounts for most of greenhouse gases. It is also a society in which we assume responsibility for our own carbon dioxide emissions, and as a result alleviate the problem of global energy shortfall. This is the low carbon society we all hope for.

Needless to say, the global warming issue cannot be resolved by one country or by one region. It cannot succeed without the collaboration of the whole international community. The world as a whole must share the sense of crisis caused by global warming, and all nations must take part in emissions reduction efforts to build a low carbon society.

## **3. Thoughts to be shared by the world**

A substantial emission cut is indispensable in order to realize a low-carbon society. To that end, the world must commit to an ambitious reduction target. “Halving global emissions by 2050” is such a target.

“Halving global emissions by 2050” is a reduction target that constitutes the core of the “Cool Earth” initiatives advocated by Japan. If unmitigated, global emissions would double. That is why this target that strikes a chord with the world cannot be achieved by ordinary reduction efforts. Making the existing cutting-edge technologies available to people around the world is not enough to overcome this extraordinary difficulty. We must also develop innovative technologies that are completely different from those in existence, and spread them. Taking advantage of its cultivated technologies, Japan’s public and private sectors must make contributions by strategically promoting such technical development and prevalence in coordination with the international community.

In that process, we must make sure that “global greenhouse gas emissions peak out in the next 10 to 20 years” by making good use of the sectoral approach to further utilize the existent technologies. This is a strong message from Japan to the world expressed by Prime Minister Fukuda at the World Economic Forum in Davos this year.

Achieving these objectives require an effective framework in which all major economies participate. The issue of global warming is closely related to the issues of economic growth and energy security, all of which are priority policy agenda for every country. All countries, regardless of whether they are developed or developing, should collaborate toward “halving global emissions by 2050” under the principle of “common but differentiated responsibilities”, taking into account of the situation of each country. Otherwise we would not be able to avoid the dangers brought about by global warming.

#### **4. Resolve of Japan**

Japan, as a developed country, bears heavy responsibility in achieving global reduction. Japan has achieved economic growth with a world-class energy efficiency rate by using various ecology-conscious products (eco-products), and superior industrial technologies that got the country through the two oil crises. The Japanese people’s philosophy of ‘*Mottainai*’, meaning “do not waste what is valuable”, has also contributed to such energy-efficient economic growth. As a result, Japan’s greenhouse gas emission accounts for four percent of the world total while the GDP of Japan accounts for nine percent. However, we must also recognize the fact that Japan accounts for four percent of the global emissions but has only two percent of the world population. It is natural for Japan, which became wealthy ahead of many countries in the era where there were no restraint on carbon, to make further efforts in the international campaign for emissions reduction by making use of its excellent technological prowess.

Realizing a low-carbon society by overcoming many challenges will strengthen Japan’s competitiveness, mitigate our dependence on energy imports, produce new business opportunities and employment, and build high-quality social capital.

We must establish a low-carbon society as soon as possible not just for the Earth but none other than for Japan itself by utilizing our excellent environmental technologies and past record of overcoming the oil crises.

This way of thinking is spreading among other industrialized nations. The European Union (EU), out of rising public opinion on global warming and its need for energy security, has imposed strict targets, and has begun mobilizing all policy instruments to achieve the targets. In the United States, state governments, the industrial sector and others are moving toward a drastic change, following public opinion.

This is the situation in which Japan now stands. Japan, with the pride of being an environmentally advanced nation, should take leadership in the international community by injecting all available means. We should establish a foothold for a low-carbon society faster than any other country at the forefront of international efforts for energy efficiency and less carbon, and thereby demonstrate to the world a model state that is affluent and suitable for the 21<sup>st</sup> century.

To that end, Japan, as expressed by Prime Minister Fukuda, should pursue a 60-80 percent reduction from the current level as a long-term goal by the year of 2050. To make this possible, we need to steadily develop innovative technologies.

A mid-term target should also be ambitious, while making it equitable and effective with a bottom-up sectoral approach.

The G8 Hokkaido Toyako Summit is critical to such a strategy. At the summit, we should urge the emerging economies to take part in the next framework. Such emerging states include China, which has already become one of the top-class major economies in the world, and India, which is said to exceed Japan before long in terms of emissions.

For the involvement of emerging economies, developed countries such as Japan and the United States, along with the EU, are required to actively take countermeasures against global warming in unity, through the declaration of reduction targets, technology transfer through the sectoral approach, financial aid to highly-motivated developing countries and the launch of assistance through the co-benefits approach (countermeasures against air pollution, water shortage and water pollution control; reduction of chemical fertilizer nitrogen and phosphorus use, etc.). There are high expectations, both in and outside Japan, for the G8 Hokkaido Toyako Summit as a venue to making a roadmap to realizing such goals.

## **5. Basic philosophy toward a low-carbon society**

The global warming issue is not limited to the carbon problem. It is an issue related to fundamental elements of the Japanese economy and society that encompass the environment, resources, energy, food, water and industrial structures(including future businesses). In other words, addressing the global warming issue means thinking about the shape of Japan in the 21<sup>st</sup> century and how we are going to build a new nation. We should discuss the issue from a “comprehensive and long-term national strategy,” point of view. This is an excellent opportunity for the government to launch various national and international initiatives.

Participation by all the people of Japan is necessary for a transit to a low-carbon society. This is not just because changing a society requires the participation of all of its members, but also because carbon emissions are the responsibility of all sectors in the country. Another reason is that transition to a low carbon society results in considerable effects on every sector in Japan. A limited, short-term strategy will not work. The sequence of finely detailed policies under a “comprehensive and long-term national strategy” is the key to achieving various policy objectives simultaneously.

Transition to a low-carbon society may be accompanied by huge additional social costs. We should devise a Japanese-like system in which the burden of this new cost is broadly shared at a commensurate level, not only by the industrial sector but also by the private-level. Japanese people must understand that a low-carbon society we want to realize is not to be seen as an extension of the current familiar lifestyle.

We all have to be ready to accept the changes in our lifestyle resulting from the transition.

## **6. Toward the realization of a low-carbon society**

### (1) Innovation in “Technology,” “Energy,” “Funds,” and “Society”:

Innovation in technology, energy, funds and society (system) is indispensable for the realization of a low-carbon society.

#### (a) Technological innovation

On the technological front, well-balanced efforts are important. For example, while pursuing innovative technological development, we should spread domestically and internationally the existing excellent technologies regarding eco-products and production management.

Although we tend to associate innovation with large companies, what is important is that innovation is shared by all sectors of the society including medium- or small-sized enterprises. It is also important to green not just new fields but every possible industrial field, so that they can develop and supply products and services suitable for a low- carbon society.

In order to achieve a long-lasting economic growth while pursuing a low-carbon society, technologies to support it, innovative ones in particular, are of critical importance. Japan has led the world with innovative technologies such as solar photovoltaic, hybrid vehicles and heat pumps. To make Japan’s leadership more solid, we need to further promote policies that place emphasis on technologies we have cultivated through past efforts.

We need to steadily and continuously implement the technology roadmaps described in the “Environmental Energy Technology Revolution Plan” and the “Cool Earth - Innovative Energy Technology Program.” To this end, daring resource allocation such as strategic budget injection is necessary. In addition, support for commercialization and protection of intellectual property rights must be fully implemented.

These precursor technologies and products contribute to the creation of not only business opportunities but also a low-carbon society on a global basis. The need for energy-conserving and environmental technologies is rising around the world. In addition, global warming prevention is becoming a new area for a competitive edge. Armed with world-class environmental and energy-conserving technologies, there is a great chance that Japan can act as a world leader in this field.

Contributing to global greenhouse gas reduction will become the source to Japan's economic growth and innovation, thereby creating a virtuous cycle between the environment and the economy. Innovation needs patience as well as considerable labor and funding. Therefore steady efforts and dedications are indispensable for the outcome to be successful. As a result of such efforts, global warming countermeasures will create new demand, new employment and new income. Transition to a low-carbon society is an opportunity for new economic growth.

(b) Innovation in energy

The creation of a low-carbon society involves efforts in the field of energy, and requires innovative solutions to the way we produce and the way we use energy.

The basic direction of energy innovation can be summed up as the following two points: (1) lowering carbon emission in energy production (the widespread use of low-carbon energy and the improvement of efficiency in fossil fuel use); and (2) using energy more efficiently, or enhancing energy conservation.

First, the producing method. Nuclear power generation can stably supply low-carbon energy at minimum cost. While securing thorough safety as a prerequisite, we should place nuclear power as the core of low-carbon energy, and promote the improvement of capacity factor, increase its share in total electricity generation and develop new technologies.

Japan is also expected to provide other countries with advanced technologies for safe nuclear power generation given that not only developed countries but also developing countries are actively introducing nuclear power plants. At the same time, Japan must show its determined stance on nuclear non-proliferation.

Fossil fuels, while efforts to lower its carbon emissions by improving efficiency is necessary, continue to play an important role when we consider energy security, stable supply and convenience.

Japan, in cooperation with other countries, should actively pursue new technologies related to the utilization of coal, such as the clean coal technology and carbon dioxide capture and storage (CCS: underground storage of CO<sub>2</sub>).

In the long term, renewable energy sources, such as solar, wind, geothermal, medium/small-sized hydraulic and biomass, becoming a part of the basic energy supply will be a decisive factor in making Japan a low-carbon society. We need to further strengthen policy incentives to realize this. In addition, we should not forget utilizing unused energy such as solar thermal, snow ice thermal and urban waste thermal in regions throughout Japan.

The next issue is how we use energy. Japan aims to attain the world top-level energy efficiency rate in all areas of industry, transport, services and household. To achieve that, businesses should conserve energy by, for example, introducing renewable energy through installation of solar panels on their buildings and factories. They also should disclose environment-related information, and actively reach out to consumers. In addition, they assume a role to develop and present the people with more energy-conserving products and services. The people, on the other hand, should positively shift to energy-conserving products and services such as fluorescent light bulbs, liquid crystal display (LCD) televisions and boilers/air conditioners/refrigerators with heat pump technology, and thereby increase the energy efficiency of their lifestyles. They also need to abolish “*Mottainai* energy consumption” by switching off unnecessary lights and air conditioners, reducing standby electricity and stopping idling.

#### (c) Innovation in funds

A large amount of funds need to be injected to create new technologies and industries. Private financial institutions play a great role in such funding. When we look at the world today, huge amount of money have already begun to move toward infrastructure development for a low-carbon society. Institutional investors have begun to select environment-friendly enterprises as their investment targets. This type of investment must be standardized in Japan too.

Private financial institutions should be determined to take the lead in this transition to a low- carbon society, and actively inject funds into projects that contribute to greenhouse gas reduction, recognizing that the field of the environment gives them new business opportunities.

The social responsibility of finance is becoming greater and greater. The financial sector needs to disclose environmental information as well, so that consumers can choose eco-friendly financial institutions. For the realization of a low-carbon society, checks on financial institutions should be reinforced through such information disclosure.

But because risks that the private can take are limited, private funding is insufficient to promoting the transition to a low-carbon society. It is the responsibility of public funds to bridge the gaps. Public funds, including those secured by tax reform for a low-carbon society, need to be mobilized even more into fields with more public characteristics.

Further promotion of collaboration between public funds and private funds is very important: the government primes the pump with public funds that will act more like risk money, inducing larger amount of private funds. Overseas, a movement called the Public Private Partnership (PPP: public funds, private funds, partnership) has already begun.

(d) Innovation in society

On the other hand, social innovation is also important to fully spread the existent technologies. Social innovation will need to be promoted at the household and individual level as well as at national, regional, organizational (e.g. company) levels.

“Carbon pricing” is an important tool in such social innovation. In order for all members of the society to cooperate in building a low-carbon society, a “mechanism” to motivate them is required. It is a mechanism that makes people and businesses perceive the fact that carbon emission is no longer free. That means that newly identified carbon cost is included in the price of goods and services. The payment of this carbon cost makes people aware of their responsibility for their own carbon emissions.

The content of international competition is also beginning to change. New criteria based on a new sense of value, that is, criteria based on carbon, are emerging in the world. This means the beginning of a new competition in which carbon is an implicit cost. For Japan to survive against this novel international competition, it is critically important for Japan to aggressively take part in the process to formulate rules for the 21<sup>st</sup> century, and to anticipate the changes in international viewpoints.

At the same time, the reduction of “CO<sub>2</sub> spreading beyond borders” can never be effective or efficient without international cooperation. We therefore should increase commonality between our domestic policies and foreign policies. We need to put effective policies into practice in an international arena with due consideration given to both cooperation and competition. We need to, in particular, make special efforts for assistance to developing countries.

In doing so, we should not forget the importance of establishing a disciplined market. Utilizing market mechanism to reduce carbon, may spur speculative action. Japan, with vitality of the private sector as its driving force, is a “nation based on ‘*Monozukuri*’ (manufacturing) and free trade” as well as a “nation supported by high value-added industries leveraging intensive technologies.” Excessive rent seeking in the market would cause trouble to many market participants, and also trample the will of people who sincerely take part in carbon reduction. We should not forget measures to prevent such a situation from occurring. We also should study a system to tax cross-border rent seeking activity, in step with international movements to tax such activity.

New policy methods such as a domestic emissions trading system and an environment tax need to be considered in this context. We must continue to discuss and examine a domestic emissions trading system that is suitable for our country through trial implementation, while carefully monitoring the situation in Europe and the United States at the same time.

## (2) Efforts by respective players for a low-carbon society

The realization of the four innovations for a low-carbon society requires efforts by every player such as the state, regions, businesses and households.

### (a) National efforts

The state must present a solid vision of, and roadmap for, a low-carbon society, and make consistent and long-lasting efforts with a diverse policy mix of all available instruments such as regulations, economic means, the promotion of voluntary efforts, information disclosure, the development of high-quality social capital and more purchases of eco-friendly products (green purchasing).

Specific examples are as follows:

Building a framework to promote “visualization” so consumers can make the appropriate choice, by urgently formulating rules for carbon footprint, carbon offset and carbon accounting;

Using means of budget appropriation, incentive tax cut, regulations and other methods to strongly support the wider use of products and services that can reduce CO<sub>2</sub> considerably, as well as renewable energy, such as energy-conservative home appliances, the next generation vehicles, energy-conservative houses, heat pumps and solar photovoltaic..

In addition, the state itself should implement the wider introduction of renewable energy including solar energy and energy-conservative measures, and lead the utilization of carbon offset.

The Government of Japan is furthermore expected to take the lead in international negotiations to encourage other countries' commitments to emissions reduction.

(b) Regional efforts

(i) Model cities for the environment

At the regional community level, promoting various regional efforts and providing opportunities to exchange information and learn about each others efforts, will allow each region to make full use of their characteristics to realize a low-carbon society. In a low- carbon society, low-carbon regions and cities are linked by transportation networks with low carbon emissions, thereby constituting one "low-carbon nation."

Low-carbon regions and cities will be designed to emit little carbon for transport of personnel and goods within its own boundaries. People there consume locally-produced foods, and fully utilize local energy such as biomass, solar, wind and geothermal power. They recover and enhance their relationship with nature and the local community, and lead a light life with a light burden on the Earth.

The "model cities for the environment" are the precedent for such a low-carbon society. The shape of a regional low-carbon society depends on the size of the region, the natural environment, industrial structure and the lifestyle of residents. The "model cities for the environment" need to clearly show the public various versions of a regionally-modified low-carbon society. Each regional community in the country will draw upon the model that best fits their situation or characteristics and will make efforts to realize its own custom-built low-carbon society.

A variety of trial measures will be implemented in the "model cities for environment" in advance of other regions. It is important, there, to take countermeasures tailored to each sector such as city/transportation system, natural environment, house/office and energy/resources/industry. We must keep in mind that those measures should be promoted in an integrated manner without sectionalism under a comprehensive vision to realize the ideal regional low-carbon society.

At the same time, the model cities should work in cooperation with other cities in and outside Japan that are actively taking environmental countermeasures, thereby contributing to the world's efforts for less carbon and a 'low carbon world'.

(ii) Role of agriculture, fishery and forestry

Agriculture, fishery, and forestry, which are the foundation of many regional economies, have an important role to play in building a low-carbon society. Domestic food production means less energy expended on transport, which in turn results in less carbon. It also leads to increase in the food self-sufficiency ratio, which would be critical in the case of a future food crisis that may occur due to the surging food demands of developing countries such as China and India. There is more necessity in which farming and forestry serve as a supply depot for domestic energy such as biomass fuels, and play an important role as carbon sinks.

Many of the regions that are supposed to play such an important role are now exhausted. However, they can be revitalized through national and local governmental support for agriculture, fishery, and forest management, and efforts by business enterprises. Japanese people should acknowledge this situation, and recover their connection with local food ingredients and wood. If many consumers start to consider food and wood mileage as an important standard and shift towards locally produced items, Japanese agriculture, forestry and fishery will be revitalized so that they can play their role in the low-carbon society.

Centered on the environment, this relationship between town and country will create a flow of people and money from the urban to the rural. As a result, rural areas will be revitalized with more employment opportunities. Through carbon pricing, agriculture and forestry will acquire additional values as carbon sinks, and come to stand upon their own feet as industries.

(c) Efforts by businesses, households and individuals

Businesses, households and individuals are required to change their business styles and lifestyles in a way that fits a low-carbon society. It is important to materialize "*Mottainai*" spirit (too precious to waste) and to "reduce," "convert" and "offset" energy/resource consumption. To this end, everyone should make various efforts using his or her wisdom and imagination. Such efforts include frequent daily energy-conserving efforts, the wider use of IT (information technology), the use of public transportation systems and car sharing, the promotion of 3R (reduce, reuse and recycle), the installment of solar panels and the utilization of Green Certificates.

In order to actively advance energy-conserving measures and the introduction of renewable energy with cooperation from many people, we need to develop a social system where people can easily fulfill responsibilities associated with their own carbon emissions. Although the enlightenment of people is important, it is also important to construct a mechanism in which enlightened people can put their notions into practice. For example, national and regional governments should require the labeling of carbon-related information such as lifecycle CO<sub>2</sub> amount on commodities and services. On the other hand, incentive measures that economically reward sincere efforts are also necessary. In short, we need bold policy initiatives to induce everyone to participate in a low-carbon society.

## **7. Changing peoples' mindsets and the responsibility of politics**

Promotion of changes in the consciousness of the people is indispensable for the transition to a low-carbon society. Under the principle of "live while respecting the limit of the finite Earth," the people must have a new way of thinking to accept necessary social reforms and lifestyle changes. In order to foster this mindset, new national movements must take place in cooperation with the people themselves. Such movements include the use of environment household accounts, the shift away from incandescent lamps, the introduction of daylight saving time and a simultaneous black out (lights out). Another urgent task is to enhance environmental education to our children, the bearers of the future low-carbon society. These efforts cultivate not only awareness but also the ability to "link knowledge to action."

It is the responsibility of politics to provide and guide the way to a low-carbon society. Politics must clearly show the direction in which governments, people and businesses should move. Doing so enables everyone to take action with ease. Nobody would squarely address the global warming issue if policies changed every year.

Giving aspirations to the people is the responsibility of politics. Adding vitality to the society is another important role of politics.

## 8. Message to the people

The shift to a low-carbon society cannot be realized without the support and involvement of the people. The first step we would like to take is to share the an image of a low-carbon society. The ideal image of a low carbon society is as follows.

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International efforts have made it possible to contain carbon emissions within the range the Earth can assimilate, and threats of global warming have virtually disappeared. We are full of a sense of relief that we can happily and proudly hand over the Earth to future generations.

As for the peoples' lives, 'local production for local consumption' has widely spread throughout the country, and anxiety for future food problems have mitigated. Large steps have been taken regarding the use of renewable energy, thereby bringing us some relief in terms of energy security. Recycling is thoroughly put into practice, and life space is very comfortable with houses featuring the best energy-conserving technologies. Public transportation such as trains, buses and LRT (light rail transit) as well as vehicles independent of fossil fuels are everywhere, and many people are riding bicycles safely.

Japanese farm villages, fishing villages and mountain villages have overcome the difficulties they had been suffering from and have revitalized, and smiles have returned to the residents' faces. Town and country have deepened exchanges of funds and personnel, and they have become much closer. The Japanese archipelago seems to be truly united.

A sense of solidarity is also spreading throughout the world. Everyone has become the crew of Spacecraft Earth.

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The generation of our grandchildren may say, "You really worked hard for us despite a lot of difficulties. Thank you very much." Or they may say, "Why didn't you do anything when you knew well what the outcome will be? What was more important to you than us?"

The choice between the two lies in the hands of each and everyone of us.

**We must act now to realize the dream!**