

In pursuit of "Japan as a Low-carbon Society"

Speech by H.E. Mr Yasuo Fukuda, Prime Minister at the Japan Press Club 9 June 2008

Introduction

The past, present and future

Last week I made brief visits to the Federal Republic of Germany, the United Kingdom (UK) and the Italian Republic. With exactly one month to go before the G8 Hokkaido Toyako Summit, I had very useful exchanges of view with the leaders of four European countries.

Ironbridge, in the UK, where the world's first iron bridge was built in the second half of the eighteenth century, is preserved as a World Heritage site.

Recognised as the start of the Industrial Revolution, the construction of the Iron Bridge was made possible by the use of coke, a fossil fuel that replaced charcoal to make the mass production of steel possible.

The energy source that underpinned the Industrial Revolution as symbolized by the Iron Bridge subsequently shifted from coal to petroleum. Through the use of fossil fuels, humanity has managed to build modern society at breakneck speed to this day.

Yet at the beginning of the twenty-first century, we face the depletion of natural resources and global warming. Our society stands at a major crossroads.

We can proudly look back on the achievements of the Industrial Revolution more than two hundred years ago. However, what is now at stake is how future generations will look back upon us in two hundred years' time.

Against the backdrop of these changes in history, today I should like to speak on the issue of global warming.

Transforming into a low-carbon society

As the Intergovernmental Panel on Climate Change (IPCC) has repeatedly warned, if we fail to address the issue global warming, it will force future generations into a critical situation.

Moreover, the world's heavy dependence on fossil fuels, which lies behind the issue of global warming, is already giving loud warnings to the current generation.

When I was working for an oil company some forty

years ago, the price of crude oil was just a dollar per barrel. It has been said since that time that Japan's rapid post-war growth was made possible by cheap energy in the form of petroleum. Today, however, the price of oil has surpassed 130 dollars per barrel. In addition, the surge in energy prices, together with other causes, has triggered other serious issues including the rise in food prices and the difficulty of securing sufficient supplies of food.

Now is indeed the time when we must free ourselves from our dependence on fossil fuels since the wake of the Industrial Revolution. We must greatly shift the country's helm towards a low-carbon society for the sake of future generations.

This is not an issue for Japan alone. Global warming is a global problem which knows no borders. Hence a broad, world-level perspective is the first requirement when discussing global warming.

At the same time, it is each Japanese citizen that will bring about a low-carbon society. Indeed, we should not forget that each member of the public is a stakeholder and a protagonist in this undertaking. We cannot achieve a low-carbon society without national action.

Achieving a low-carbon society requires a dual perspective: the need for a global undertaking, and at the same time that for grass-roots action by the whole nation.

Stepping forward with confidence

Such transition to a low-carbon society is undoubtedly a major challenge confronting our generation. Yet we cannot meet this test only by viewing it as a burden upon us.

First, we should view the transition to a low-carbon society as "a new opportunity for economic growth".

Countermeasures to global warming will create new demand, new jobs and new income. A low-carbon society is one that offers great opportunities for economic activity that is compatible with the environment.

The emerging global view that CO₂ emissions are a lia-

bility will assure an international competitive edge to Japanese technology related to energy conservation and the environment, which boasts top levels of energy efficiency.

Secondly, clues on how to achieve a low-carbon society already exist in Japan's inherent qualities and its traditions.

At the source of Japanese culture lies the idea of coexistence with nature. In the process of economic growth we once did suffer from environmental degradation. Yet by learning from our mistakes, we succeeded in building one

of the foremost economies in the world under the banner of environmental harmony.

The spirit of *mottainai* will certainly serve as a keyword in low-carbon societies to come.

With such points in mind, we need not flinch. Indeed, now is the time when we should take the first step towards a low-carbon society with full confidence.

Now I should like to give my views on the concrete policies necessary for the transition. First, though, I point to the goals Japan should seek to attain.

Japan's long- and mid-term goals

Long-term goals

The effects of global warming are already apparent. In order for us to avert these dangers, we must stabilize CO₂ concentrations at a fixed level.

For this we must halve global CO₂ emissions by the year 2050. This reduction target forms the crux of the "Cool Earth Programme" which Japan has proposed to the world. I aim to have this goal shared by the G8 and other major economies.

It is impossible to meet this goal unless *all* countries tackle the issue of global warming one way or another, not just the main carbon emitters. It is also obvious that in this process developed countries should contribute more than developing countries. For its part, Japan will set a long-term goal of reducing, by 2050, 60-80% of its current level of emissions, so as to bring about a low-carbon society that we can proudly present to the world.

I believe it is incumbent upon Japan, as one of the countries which has achieved development prior to others, should bear a heavier responsibility in this struggle to save our planet.

Mid-term goals

In order seriously to achieve our long-term goal of halving CO₂ emissions by 2050, it is vital that the world's total emissions peak out in roughly the next ten to twenty years.

Since this period is rapidly approaching, we can no longer afford to waste time making empty calls, or on a target-setting game which serves only as political propaganda.

It is now the time to start well-founded discussions to set targets for each nation, targets in whose certain attainment we can respectively take responsibility. The sectoral

approach which I proposed at the World Economic Forum meeting in Davos is none other than a methodology for achieving such a realistic solution.

The European Union (EU) has set the goal of reducing emissions by 20% compared to the 1990 level by 2020. This will require a 14% reduction from the current (2005) level. Advanced in the field of energy conservation, Japan has already achieved energy efficiency rates that greatly exceed those of the EU countries. Notwithstanding, Japan recently announced that it is possible for it to achieve a further reduction of 14% from the current level, a reduction of the same order as that to be made by the EU.

Japan's emission levels since 1990 have fluctuated somewhat, but the reality it has been on a slightly upward trend. A 14% reduction by the year 2020 will not only entail a definitely peak-out of Japan's emissions within the next year or two as well as surely achieving the 2008-2012 targets provided for in the Kyoto Protocol. We must achieve even bigger reductions by 2020 and continue to lead the world in energy conservation as a global leader with the highest standards.

The number I am quoting is by no means conjecture. It was calculated through a rigorous application of the sectoral approach, considering in great detail to what extent we would realistically be able to introduce the most advanced energy-saving and renewable-energy technologies that are expected to exist at various points in time. The potential emissions reductions were each tallied up, resulting in this percentage figure.

Setting aside the cost involved, this was the first attempt in the world to present a concrete picture of what is feasible at least technically.

In setting quantified national emission reduction targets, I will strive to gain the understanding of nations around

the world on this sectoral approach. In concrete terms, we should persuade other nations to analyse the actual extent of their reduction potentials by applying a sectoral approach like Japan's and to report on the results at the Fourteenth Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP14) due to be held in December this year.

As for the base year, there is debate on the wisdom of maintaining the year 1990 which is two decades ago. Given this and other points of discussion, a common methodology should be established, bearing in mind other countries' assessments of the sectoral approach. Japan, for

its part, intends to announce its quantified national target at an appropriate time next year.

In any event, in order to achieve the goal of having total world emissions to peak out in the near future, it is essential to have a "total participation" framework that includes all the major economies, not just the EU and Japan.

Japan will negotiate tenaciously in order to build international agreement on "fair and equitable rules" which are approved by all. The premise of such rules will be greater contributions by developed countries compared with developing countries.

Concrete policies

We must squarely face the current state of the global environment and, instead of repeating empty calls, step up real action that will actually reduce greenhouse gas emissions. This is my sincere belief.

What then can we do to accomplish this? The concrete policies I have formulated consist of four main pillars.

First, developing innovative technologies while disseminating existing advanced technologies;

Second, framework-building to move the entire country to lower carbon emissions;

Third, active roles to be played by local regions; and

Fourth, having each citizen as protagonist in reducing emissions.

1. Developing innovative technologies while disseminating existing advanced technologies

Innovative technologies

The first pillar is the importance of technology. We shall not be able to halve emissions by 2050, let alone reduce them by 80% no matter how extensively we disseminate existing technologies on energy conservation and other relevant areas. The challenge we face cannot be overcome without technological breakthroughs.

The key lies in whether we succeed in developing innovative, carbon-free technologies that do not presently exist. Such developments will require a tremendous amount of effort and a certain number of years.

Yet despite the announcement of bold targets to achieve 50% or 60-80% reductions by 2050, we hear very little about concrete measures for developing innovative technologies. Rather, the funding allocated worldwide to this purpose has now fallen to half its peak level at the time of the second oil crisis.

The situation in Japan, however, is different. Comparing research and development investments in the energy sector in 2005 by national governments around the

world, one finds that Japan has spent much more than the United States or European countries. In other words, more than any other nation in the world, Japan is seriously expending effort to develop innovative technologies that will be the key to saving the future of our planet.

At the Davos Conference in January, I announced a "Low-carbon Technology Plan" through which Japan will invest 30 billion dollars over the next five years, as well as the establishment of a financial mechanism called the "Cool Earth Partnership" through which Japan will provide 10 billion dollars in order to assist measures to be taken in developing countries.

Towards the future, as an advanced nation in terms of the environment, Japan intends to provide generously world-leading energy-saving technologies and knowledge to developing countries and major economies such as China and India. However, Japan's efforts alone will not be sufficient to resolve the issue of global warming. The entire international community must be involved.

As a means to assist developing countries to address the

issue of climate change, Japan is working with the US and the UK to establish a new multilateral fund. For its part, Japan will contribute up to 1.2 billion dollars. I intend to make use of the G8 summit process and other opportunities to call for a greater number of countries to contribute.

Although the global circle to assist developing nations is progressively expanding, I must point out the delay in efforts to develop innovative technologies.

Thus in order to further accelerate efforts to develop innovative technologies, I intend to propose at the G8 Hokkaido Toyako Summit an “International Partnership for Environment and Energy” which would encompass collaboration with international organisations.

The purpose is to share a global roadmap for technological development which looks thirty to forty years ahead and which would cover innovative technologies in solar cells, carbon dioxide capture and storage (CCS) technology, as well as next-generation nuclear power technology. By having each country work on its respective area of advantage, the international community will work in unison to advance technological development.

A scheme will be created through which the achievements of this partnership will be shared also with developing countries as a common international asset.

Disseminating existing advanced technologies: renewable energy

In order to achieve a low-carbon society, we will need to make full use of existing advanced technologies until innovative technologies are developed.

If we were to reduce our emissions by 14% from the current level by 2020, as I outlined earlier, we must increase to above 50% the ratio of “zero-emission power supply”, consisting of renewable energy sources that include solar, wind and hydro energy, biomass and untapped energy sources, as well as nuclear power. At the same time, we must also achieve several ambitious goals, such as introducing next-generation vehicles at the rate of one in every two new units sold.

In particular, Japan currently trails Germany in the prevalence of solar energy power generation, an area in which Japan was renowned. In order to regain the global top spot in terms of solar power energy generation, I hereby set the goal of a tenfold increase by 2020, and of an increase to forty times the current level by 2030.

The calculations are that, in order to reach these goals, power utilities need to install some of the world’s biggest mega-solar power generation facilities on a nationwide basis, while more than 70% of newly-built, privately-owned homes need to use solar energy.

While sustaining technological development to reduce costs and to ensure systemic stability, we must also consider bold measures to support the introduction of solar energy as well as new pricing systems, taking as an example the burden of 500 yen per month per household borne in Germany.

As for nuclear power, there are active moves in both developed and developing countries alike to introduce nuclear power stations owing to their zero emission of CO₂ and the recent steep rise in energy prices. A major role expected of Japan amidst such international trends is to promote its nuclear energy policy based on the most fundamental premise of ensuring safety and security on the one hand, and to provide Japan’s excellent safety technology as well as convey its strict position on nuclear non-proliferation on the other.

Disseminating existing advanced technologies: energy conservation

We should now turn to the way we use energy. Owing to its industry’s technological prowess and the *mottainai spirit*, Japan has the most efficient energy structure in the world.

Japan can contribute to the world by further advancing this low-carbon move and to spread this around the world.

In order to do this, a major leap in energy conservation is of the essence.

For example, we will work to replace all incandescent light bulbs with energy-efficient ones by 2012. Fluorescent light bulbs produce sufficient brightness while reducing energy consumption to a fifth, and they last ten times longer. By also replacing tube (CRT) televisions with liquid crystal TVs, accelerating the introduction of water heaters, air-conditioners and refrigerators that make use of energy-saving technologies such as heat-pump technologies in which Japan is at the forefront, we can significantly reduce CO₂ emissions while reducing electricity fees.

I now also intend to press ahead with a wide range of low-carbon policies, including the development of systems for mandatory energy-efficient housing and office buildings, accelerating the introduction of renewable energy to office buildings, and promoting housing which lasts two hundred years.

We will also establish standards and mechanisms to facilitate the flow of public and private funds into eco-businesses and good environmental social infrastructure projects, aiming to make Japanese finance and capital markets a top runner in terms of environmental friendliness.

2. Framework-building to move the entire country to lower carbon emissions

The second pillar is framework-building to move the entire country to lower carbon emissions.

Emissions trading

The Government must certainly play a major role in solving environmental issues. Yet it is the private sector that bears the actual burden of reducing emissions. Hence, there is a need to ensure active use of methods which encourage the development of technologies and the reduction of emissions by pricing CO₂ transactions and making full use of market mechanisms.

As one such method, an emissions trading scheme (EU ETS) was introduced within the EU in 2005. Japan should not devote endless time and effort merely to find problems with the scheme. I believe we should rather shift to a more proactive approach, for example propose a more effective set of rules.

It is with this in mind that from autumn this year we will begin an experimental introduction of an integrated domestic market of emissions trading with the inclusion of as many sectors and companies as possible.

Only by having direct experience can one offer persuasive views when the rules of emissions trading are drawn up. It is essential to make effective rules that actually lead to reduction efforts and technological development, while at the same time develop a healthy market which is based on real demand and does not lend itself to money games.

I intend to use the experience thus gained, to clarify the conditions which need to be met, the issues of design that must be dealt with and other relevant matters in the event an emissions trading scheme is to be fully introduced. I will duly consider the type of system that is appropriate for Japanese industries, which are focused on technology and manufacturing.

We will design a system that enhances Japanese qualities, and will exercise leadership in international rule-making.

Tax system reform

Policy instruments to accelerate carbon reductions by making use of market mechanisms are certainly not limited to emissions trading. As a means to encourage voluntary efforts to reduce emissions in the private sector, we

need proactively to consider using the tax system and bring about a "visualisation" of emissions.

When a fundamental reform of the tax system is considered this autumn, we will not limit consideration to the expenditure purposes of revenue which is to be re-allocated from road construction to general purposes. We will conduct a comprehensive review of the system with a view to promoting a low carbon society, including consideration of an environment tax, and thereby promote greening of the tax system.

This will be done from a broad perspective, and will include the possibility of introducing tax incentives for restricting CO₂ emissions from cars, household appliances and housing construction.

Furthermore, developed countries should play a central role in studying the right form of global environmental tax, on which the international community would collaborate, as a source of revenue to be used jointly for developing innovative technologies and assisting developing countries.

Visualisation

It is not just the industrial sector which needs to take responsibility for its carbon emissions. Each member of the public must take considered and responsible action in order to bring about a low-carbon society.

For this we must visualise CO₂ emissions so as to provide the necessary information for consumers to take suitable decisions.

In the UK, a carbon footprint system, which measures and labels the amount of CO₂ that is emitted in the course of the production, transport to disposal of goods, and a food mileage system are being experimented, and there are moves to expand these on an international scale.

From the coming fiscal year, I intend to begin the experimental introduction of similar systems so as to enable Japan to engage actively in international rule-making and to achieve further reductions in emissions. I will instruct the relevant ministries and agencies to make preparations in this regard, and I will ask industry to cooperate. Once fully launched, this undertaking should be among the most extensive in the world.

3. Active role of local regions

The third major pillar is the role to be played by local regions.

The importance of agriculture and forestry in a low-carbon society is without precedent. Increasing the self-sufficiency level in food will cut CO₂ emissions which occur when transporting food from abroad. The promotion of forestry will increase natural absorption of CO₂.

In future, local regions that play host to agricultural and forestry industries have an extremely important role also as a supplier or supply base of domestic energy such as biomass.

Achieving a low-carbon society means nothing other than local regions taking the lead in this direction. This would lead to local self-sufficiency in the production and consumption of both food and energy.

Although not widely known, a recent survey shows that as many as seventy-six municipalities already have more

renewable energy resources than required to satisfy local consumer demand for power. By expanding such moves throughout the country we will be able to lead the world in this respect.

In order to expand such regional efforts and to have excellent examples replicated, we will select some ten environmental model cities from around the country and take innovative measures with broad support from the central government.

Large cities, medium-sized cities, small cities, agricultural villages and mountain villages throughout the country would each seek locally-suited methods to achieve major emissions reductions. Japan as a whole will achieve major reductions by creating a virtuous cycle, with the central government, various local regions and the people all supporting such efforts and each making use the lessons learnt.

4. Having each citizen as protagonist

The fourth and final pillar is making each citizen the protagonist in this endeavour. The creation of a low-carbon society requires each citizen to act with an understanding of the meaning and importance of this goal as well as of the methods and burden involved.

The Japanese people are not to be spectators who merely sit back and observe the move towards a low-carbon society. Each citizen is an actor and protagonist. To achieve a low-carbon society it is essential for people to have knowledge, to envision a new society, to act and to propagate.

Enlightened people are already taking dynamic steps. In order to enable such people to do more and to reach out, the government should provide a framework which will induce people to alter their conduct in a way that promotes a low-carbon society. It should also provide the opportunity to alert those who are yet unaware the importance of such steps.

Education plays an extremely important role. We must introduce systems to teach and to learn about low-carbon and sustainable societies during compulsory education as well as at every level and occasion in the life-long process of learning.

We also need to change our lifestyles to bring about a

low-carbon society. One way to share this awareness among the entire population is to introduce summer time. The ruling parties are among those who are studying this matter and I hope they will reach a conclusion as soon as possible.

I should also like to establish a “Cool Earth Day” as another way to change people’s way of thinking.

The G8 Hokkaido Toyako Summit will begin on 7 July, which is the day of the Tanabata festival. There is a movement underway to encourage people around the country to turn their lights off all together at night on that day, admire the beauty of the Milky Way and remind ourselves of the importance of the earth’s environment.

This should not be a one-off event. I thus wish to designate 7 July as “Cool Earth Day” and make it a day not just to turn off the lights but for all Japanese citizens to make various efforts to remind themselves of the path they should take towards a low-carbon society.

Furthermore, we will look to NGOs and community groups around the country to play a leading role in communicating to the people around them about the importance of the environment, spread the message and carrying people forward. I intend to assist and expand such dynamic efforts.

Conclusion

Today, I outlined my thoughts on what Japan should do in order to achieve a low-carbon society.

I believe more detailed policy proposals will shortly be prepared by the Advisory Panel on the Global Warming Issue. Today I explained my own views on the basic approach that should be taken in addressing global environmental issues, based on the discussions by the Panel and within the ruling parties, as well as on exchanges I have had with members of non-profit organizations and other experts.

The Fukuda Cabinet is currently tackling head-on a range of major issues, including reform of the social security system, fundamental reform of the tax system, integration of consumer policy, and reform of the civil service. A common thread that links all of these efforts is the need to rise above traditional methods and modes of thinking: without doing so we cannot devise solutions that are truly suited to meeting the challenges of the present day.

Global environmental issues cannot be resolved by some spectacular measure. The industrial sector and each member of the public must change their mode of thinking, and it is paramount that we work with countries around the world to move things forward in a steady and sustained manner. This issue can only be resolved by changing all of the following: economies, societies, communities and lifestyles.

Just as the Iron Bridge, built in the UK more than two hundred years ago, is now a World Heritage site and conveys to us today the successes of our ancestors during the Industrial Revolution, we must ensure that our descendants shall look back proudly two hundred years hence at our efforts as representing a "Low-carbon Revolution".

Working seriously for this Low-carbon Revolution will enable Japan to enhance its standing in the international community. By leading the world in this way, we can further strengthen the Japanese economy. That is all the more reason why we must achieve a low-carbon society.