The Fukuda Vision on Climate Policy:
A Step in the Right Direction but Woefully Inadequate

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Synopsis

Japan has been trying to meet the first phase of the CO_2 reduction goal of 6% cut in the Kyoto Protpcol mainly by planting trees and buying emission rights from developing countries, without much investment in the power generation. Though the Fukuda Vision announced in early June 2008 showed some progress, it still hesitates much government investment in the stage of original power generation that can substantially reduce CO_2 emission. The EU and the major European countries have set ambitious goals for reducing CO_2 emission by 2020 and are investing heavily in electric power generation. Japan had better learn from Europe and take bold steps into the age of renewable energy, making massive investment in electric power generation using renewables.

１．Japan's Approach for Achieving the Kyoto Goal

Under the Kyoto Protocol, Japan is obliged to cut the Greenhouse Gas emission by ６% from the 1990 level by 2012. In specific numbers, since Japan's GHG emission in 1990 was 1,261 million tons, Japan must reduce the GHG to 1,185 million tons by 2012. However, since Japan's GHG emission rose to 1,359 million tons in 2005, Japan must reduce the GHG emission by 174 million tons, equivalent to a cut of 12.8% from the 2005 level in the next four years.

Some 90% of the GHG in Japan is the CO_2 emitted in the process of energy generation, delivery, and consumption. Though there are five other elements (the N_2O, CH_4 and the three fluorine related gases) that compose the GHG, since the contribution of those non-CO_2 greenhouse gases to global warming is relatively small, though not negligible, I will mainly focus only on the CO_2 originated in the energy generation, transmission and consumption in this short memo to make the issues simpler.

The figure for the CO_2 emission originated in energy generation in Japan in 1990 was 1,059 million tons. In order to achieve the Kyoto goal of ６% cut from the 1990 level, Japan must reduce the CO_2 emission to 995.46 million tons by 2012, whereas the CO_2 emission in 2005 was 1,201 million tons, an increase of 13.4%, instead of decrease. In order to achieve a decrease of ６% from the 1990 level, a dramatic cut of 20.6% will be needed within the next four years. That is extremely difficult for a number of reasons.

In the Table 1, the left hand bar shows what will happen if Japan does nothing to cut the CO_2 (business as usual). By 2010, CO_2 will increase by slightly higher than the 1990 level. The right hand bar shows how Japan will achieve the Kyoto goal by 2010. There are three factors that contribute to the cut in CO_2 (and the other warming gases) :

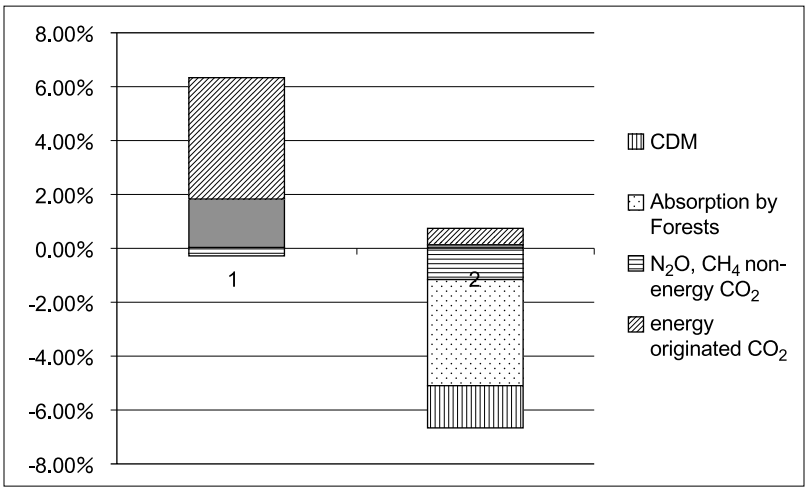
１) to plant more trees, improve the forest management, and absorb 47.67 million tons of CO_2, contributing to 3.9% cut in CO_2 from the 1990 level,

２) to buy emission rights of 20 million tons mostly from developing countries, estimated to a total cost of some ４ billion dollars over the next five years (assumptions : exchange rate 100yen＝ $1.00, the emission right is 25euro per ton

Table 1 Japan's Plan for Implementing the Kyoto Target
(6% cut from the 1990 level by 2012)
Source: METI white paper on Energy 2007

2010 predict
(business as usual)

2010 goal: industry (−8.6%)
home & office (+10.7%)
transportation (+10.5%)
energy transformation (−16.1%)



energy originated CO_2 (+0.6%)
3 fluorine gases (+0.1%)
N_2O, CH_4, Non-Energy CO_2 (−1.2%)
Absorption by Forests (−3.9%)
CDM (−1.6%)
(0.6+0.1)−(1.2+3.9+1.6)=−6.0

total: +6% total: −6%

based on the most recent quotation in the European market), contributing to 1.6% cut from the 1990 level, and

3) to decrease CO_2 emission from non-energy originated sources, cut in N_2O emission, and cut in CH_4, the total of those contributing to the equivalent of 1.2% cut of CO_2 from the 1990 level.

1)+2)+3)= make a cut of −3.9−1.6−1.2=−6.7

The sum of 1)+2)+3)= makes a cut of 6.7% cut, overachieving the Kyoto goal by 0.7%. However, this overachievement is offset by two factors:

4) increase of CO_2 emission originated in energy generation by 0.6% from 1990 level

5) increase of 3 fluorine gases emission, equivalent to the CO_2 emission increase of 0.1% from the 1990 level.

４)＋５)＝＋0.6＋0.1＝＋0.7

１)＋２)＋３)＋４)＋５)＝－6.7＋0.7＝－6.0

Thus Japan should be able to achieve the Kyoto goal by 2010.

If we try to understand the relative weight of those three efforts for CO_2 cut, Japan plans to achieve the ６% reduction of CO_2, １) 63% of the reduction by planting trees and better maintenance of forests, ２) 27% by buying emission from developing countries, and ３) only 10% by changes in the domestic economic activities. Trees and LDCs (less developed countries) play a very significant role (90%) in Japan's Kyoto plan. In the meantime, the energy-originated CO_2 emission will still increase by 0.6% from 1990 to 2010.

Japan has a huge forest area owned and maintained by the Forestry Agency, an arm of the Ministry of Agriculture, Forestry and Fishery, and the Agency has enough employees for planting and taking care of trees in a way that the CO_2 absorption by trees will be enhanced as planned. The process of buying emission rights from developing countries is called as the Kyoto Mechanism or CDM, Clean Development Mechanism ; Japan has been buying the CO_2 emission rights from many developing countries since the Kyoto Protocol was ratified, based on the plan and budget mentioned above. Hence, the heavy reliance on tree planting and buying into the developing countries is the feature of the Japanese approach in meeting the goal of Kyoto. The actual cut in CO_2 emission from home, office and transportation plays a relatively small role.

Another unique point in Japan's approach is that the target year the government has chosen and declared for achieving the short term goal is 2010, instead of 2012, as the Kyoto protocol stipulated. The government has not announced the target figures exactly for 2012 yet. Quite possibly, the two years after 2010 and before the end of 2012, are reserved to provide some room for additional measures in case Japan will have failed to achieve the goal of Kyoto 1st phase by 2010.

Using the sectoral data, we will investigate why Japan's targeted reduction in CO_2 emission in the domestic economy is so low.

As Table 2 shows, from 1990 to 2005, CO_2 emission in Japan increased in every sector except for the industrial sector which showed a 6.1% decrease. As a result, the total CO_2 emission increased by 13.4%. Against this background, a drastic reduction of CO_2 by 2010 from those domestic sectors such as offices, household, and transpor-

Table 2 Japanese Government Plan for CO_2 reduction in 2010

	base year 1990 (a) Mil. Tons	as of 2005 (b) Mil. Tons	change fm (a) to (b) %	range of goals for 2010 c)	Change fm a) to c) %
CO_2 Originated in energy Total	1,059	1,201	+13.4	1,076…1,089	+1.6…+2.8
industry	482	452	−6.1	424–428	−12.1…−11.3
offices	164	239	+45.4	208–210	+26.5…+27.9
Home	127	174	+36.4	138–141	+8.5…+10.9
transport	217	257	+18.1	240–243	+10.3…+11.9
energy trans-formation	68	79	+16.5	66	−2.3

Source : Ministry of Economy and Trade, Plan for Implementing the Kyoto Protocol

tation, is not feasible because those increase reflect a better quality of life that people naturally want as income rises. Though the CO_2 emission per capita and per a unit of GDP is still low by the global standard, starting from the low level, people tend to emit more CO_2s as they stay at home, move and work in offices in search of a more comfortable life. Office space, houses and even cars are becoming bigger in Japan compared with the most recent past, consuming more electricity and energy, thereby emitting more CO_2 along the way.

As a result of what we might call “the natural increase of energy consumption with the rising income and technological innovation”, the trend of increase in energy consumption continues. The right end of the Table 2 shows the projection by the Japanese government of CO_2 emissions from 1990 to 2010. The only sector that is projected to decrease CO_2 emission is industry, while all the other sectors except energy transformation (that is new energy that does not emit CO_2) show an increase to the year 2010.

How much of the CO_2 emission is attributable to the increased use of electricity that emits CO_2 in the process of power generation?

Table 3 provides some clue. On the surface of it, the sectoral composition of CO_2 emission in Japan is the following : 35% by industry, 20% by transportation, 18% by offices, 13% by home and 14% by the rest. However, if we look deeper, another pattern emerges. Out of the 35% share of CO_2 emission by industry, a) 11

Table 3 Composition of CO_2 Emission by Sector, in %
Of which caused by electricity

Industry	35	a)	11
Transportation	20	b)	1
Offices	18	c)	10
Home	13	d)	8
Others	14		
Total	100	a+b+c+d=30	

Source: METI 'Plan for Implementing the Kyoto Protocol'

percent point is caused by electricity. The contribution of the electric power generation, the original emitter of CO_2, is counted here as the industry's emission, though the industry sector did not emit new CO_2 through the process of industrial production using electricity itself. The role of the original electric power generation in the CO_2 emission is playing an important role in Japan's overall CO_2 emission.

In a similar vein, if we add up the contribution of the original CO_2 emission by the power generation in the other sectors, b) transportation, c) offices and d) home, total share of the original electric power generation in the entire CO_2 emission in Japan is 30%.

(a)+(b)+(c)+(d)=11+1+10+8=30

In other words, 30% of Japan's CO_2 is coming from electric power generation. It means if the energy source of Japan's electric power generation can be totally changed from the CO_2 emitting fossil fuels (such as coal oil, and LNG) to non-CO_2 emitting renewable (such as wind, solar, thermal and the like), Japan can reduce its CO_2 emission by 30% immediately, without affecting the energy usage in its whole economic activities.

Therefore, if a political decision is made to convert the method of electric power generation to renewable energy sources, by, say, 2020, Japan can easily clear the goal of 30% reduction by 2020. 30% is the goal of CO_2 reduction adopted by the EU, provided that the other major countries join a new international framework for CO_2 reduction.

Let us look at the specific numbers. The 30% cut is from the total emission of 1,201 million tons as of 2005 (13.4% increase from the 1990 level) to 840.7 million tons; if Japan makes this change, Japan's CO_2 reduction will not only far outperform the Kyoto goal of 6% reduction from the 1990 level, but also Japan will clear the

goal of 30% cut proposed by the EU, as a higher option, if there will be a major international agreement.

Needless to say, Japan will not be changing the way of electric power generation completely. Japan does not have to rely entirely on changing the method of electric power generation alone in order to achieve the Kyoto goal or its successor agreement to be concluded by December 2009. The other measures for CO_2 reduction will also work : fuel efficiency of cars, better cooling and heating system of offices and homes, and more efficient use of energy in the manufacturing process.

However, this simple simulation shows the enormous potential of the changes in electric power generation can bring, which amounts to about 30% of Japan's total CO_2 emission, in reducing the CO_2 emission. Japan had better start tackling the electric power generation sector if it is to meet the international goal of CO_2 emission which is becoming higher and more ambitious each year under the leadership of the European Union.

2. Fukuda's Vision Statement on June 9th 2008

On the 9th of June 2008, Prime Minister Yasuo Fukuda held a special press conference and made a relatively long speech on Japan's climate change policy called as the Fukuda Vision. The major points Mr. Fukuda made in the vision statement include the following :

1) By 2050 CO_2 emission should be cut by 60 to 80% (higher than the figure his predecessor Prime Minister Abe mentioned : 50% cut by 2050)

2) By 2020 Japan can reduce the CO_2 emission by 14% from the present level. (The present means 2005 in this statement, and this 14% reduction from the 2005 level by 2020 was described as equivalent degree of reduction to the EU's goal of 20% reduction by 2020 from the 1990 level, because the EU's base year of 1990 makes the actual cut by the EU appear higher than it really is. In 1990 the Eastern European countries were still using the inefficient and much CO_2 polluting, outdated facilities under the socialist system. Sharp reduction of CO_2 emission from the socialist inefficiency was a relatively easy business, making the rate of reduction appear much higher than it really is. It made the same percentage cut from the same base year more difficult for the other countries, such as Japan. That is the Japanese government's position.)

However, he did not present the 14% cut as Japan's final goal. Though his Minister for Environment, Mr. Kamoshita, during a seminar held in Tokyo in May 2008, casually broached the figures, "between 25% to 40% by 2020", the figures identical to the ones suggested in the Fourth Assessment Report of the IIPC, Mr. Fukuda only said 14% cut from the present level by 2020 is entirely possible even by using only the currently available technology.

3) Japan's own goal for CO_2 reduction by 2020 will be announced sometime in 2009 after further deliberation within the government. Not on this occasion of June 2008.

4) Japan will provide up to $1.2 billion to the global fund for assisting the developing countries in combating climate change to be established jointly by the US and the UK.

5) Japan will propose to establish a new Partnership for International Cooperation in Energy and Environment with the help from other international organizations.

6) Japan will dramatically increase electricity generation from solar power to 40 times higher level than from the current level (1,421 MW in 2005) by 2030, thereby regaining the number one country status in the world for producing electricity generated from solar power, the position which Japan lost to Germany in 2005.

7) The base year from which to start the reduction of CO_2 emission, currently set to 1990, had better be reset to 2005.

8) The whole tax system in Japan should be reviewed and revised in a way that would promote CO_2 reduction.

9) From the fall 2008, Japan will introduce a domestic emission trading system on a trial basis.

Assessment of the Fukuda Vision

The speech is a step forward in the right direction in many ways. The Fukuda Vision included several new positive changes:

(1) Japan's numerical goal for carbon reduction by 2020, 14%, has been announced for the first time, though the figures are not final.

(2) The numerical goal of carbon reduction for 2050 has been raised to a slightly more ambitious goal of 60–80%.

(3) A major change in the electric power generation was announced by

introducing much more solar batteries.

(4) Though unspecified, tax incentives will be provided for reducing CO_2 emission. The details of the tax incentives will be hammered out in the coming months and, quite possibly, many of them will be enacted from fiscal year 2009.

However, compared with the many bold steps taken by the EU and several European countries, Fukuda Vision is still inadequate for reducing the CO_2 reduction and meeting the goals of 25% to 40% reduction by 2020 suggested by the Fourth Assessment Report of the UNIPCC released in April 2007.

3. EU: Taking the Lead in the Revolution on Energy Generation

The examples of the European leadership for the global reduction of CO_2 can be shown by those decisions and actions explained below.

1) The **EU** has agreed on the 20/20 goal in January 2008: a) to reduce the CO_2 emission by 20% by 2020 from the 1990 level b) to improve energy efficiency by 20% c) to raise the ratio of renewable energy over the entire energy consumption to 20% d) all those three goals to be achieved by 2020.

If there will be a major international agreement on carbon reduction involving all the major countries, the EU's goal of CO_2 reduction by 2020 will be raised to 30%.

These decisions are the figures for the EU as a whole. Some of the actions taken by individual EU member countries are also noteworthy.

2) **Germany** will reduce CO_2 emission by 40% by 2020 from the 1990 level, far higher goal than the 20% for the EU as a whole. According to the speech in the Budestag in January 2008 made by Mr. Gabriel, the German Minister for Environment, Germany's share of CO_2 reduction in the entire CO_2 reduction of the EU has been 75%; this makes Germany by far the number one leader in the EU's effort on combating climate change.

Germany is already the number one country both in solar power generation and in wind power generation as a result of the Renewable Energy Sources Act. In 2005 Germany outperformed Japan in solar power generation, becoming number one in the world in the solar power generation. (Mr. Fukuda expressed much chagrin rather blatantly in his speech for allowing Germany to overtake Japan's number one position, which is an unusual behavior for him.)

What is more remarkable than the Prime Minister's competitive spirit with

Germany is the fact that Germany has tapped the almost unlimited solar power in the Sahara desert by reaching an agreement with the Algerian government. In July 2007, the construction has started in the heart of the Sahara desert for solar power generation plant. The Sahara desert has the potential of supplying the total energy need for the entire world by using only ７% of the desert area for laying solar panel. The plan of the New Energy Algeria, the company that builds the plant and supplies electricity, is to lay cables through the desert, crossing the Mediterranean, reaching the sea shores of Italy, going through Switzerland and finally connecting to the power grid in southern Germany. It plans to start sending electricity in the year 2012. This is a truly remarkable change in the history of electric power generation for mankind.

３) The **UK**'s epoch making Climate Change bill has passed the Parliament in spring 2008. and will become law by summer 2008. It will obligate the UK government to reduce the CO_2 emission by 60% from the 1990 level by 2050. As a medium term requirement for reaching the long term goal, the UK must reduce the CO_2 emission by 26−32% by 2020 from the 1990 level ; this is also a higher goal than the one for EU as a whole, that is 20%.

In order to help achieve this high level of CO_2 reduction, according to the statement on 10th December 2007 by Mr. John Hutton, Minister for Department for Business Enterprise and Regulatory Reform, the government will build some 7,000 maritime wind farms which will generate electricity of 25 gigawats by 2020, enough to supply all the electricity for 25 million households ; this will cover all the homes in the UK, a country with a population of some 60 million people.

Other than the advances in maritime wind power, a few more things are worth mentioning in the UK.

A number of companies are working on the CCS project, Carbon Capture and Storage, with support from the government ; within the next few years, those CCS could start operations on a commercial basis. It will help the UK's effort for CO_2 reduction in a decisive manner. (Norway's Statoilhydro has started the CCS operation in April 2008.)

Though the completion of the project can be some years away, another interesting project is going on : the Zero Carbon House. The idea is to build a house which does not emit CO_2 on a net basis as people spend life in that house, by installing solar photovolatics, ground source heat pumps and many other devices.

Pilot houses are built in Scotland and on Britain's most northerly island of Unst.

4) **France** is in a unique position in the EU's climate policy. 80% of the electricity generation is made by nuclear power plants, emitting no CO_2. In the list of countries by ratio of GDP to carbon dioxide emissions, France ranks the 8th in the world. In this ranking, countries that emitted less CO_2 in producing the same amount of GDP are ranked higher, indicating its advances in reducing CO_2 emission as the economy grows. Those seven countries other than France that are listed higher in this ranking are either absolutely less developed (Chad, Mali, Cambodia, Afghanistan), or developed but small with not much manufacturing activities (Switzerland and Iceland) or developed and highly industrialized but relatively small (Sweden). Hence, we can make an observation: France has reached the stage of low carbon economy, first among the major developed countries.

Nonetheless, France must, starting from that low carbon economy, also further reduce its carbon emission and implement the directive of the EU. In order to reduce CO_2 emission by 20% from the 1990 level by 2020, France will introduce more bio fuels, stricter regulations on automobiles and more wind powers. On 13 November 2006 France has revised its Climate Plan 2004-2012 and decided to reduce greenhouse gas emission to one fourth from the already relatively low level of 2004 by 2012.

France has introduced a 'Charter for Environment' in the Preamble of the Constitution in March 2005. The charter is made of ten articles, symbolizing the French commitment to environmental protection.

As a long term goal, in 2006 Mr. Chirac, then president of France, declared that by 2020 France will be operating the Fast Breeder Reactor on a commercial basis; it will make the nuclear fuel cycle in France to completion.

5) Summing up the brief introduction of the European policy initiatives, some commonalities can be pointed out: the major countries are eager to invest in the original source of power generation. This is because it is more effective and sometimes even easier to cut the CO_2 emission at the original stage than trying to reduce emission at the middle (manufacturing and distributing) stage and the conservation at the final stage (household consumption, buildings, offices and transportation). Government fund is poured in the primary power sector in an unsparing manner in Europe. That makes a stark contrast with the Japanese approach.

４．The Sources of Japan's Meager Policy Initiative

The Fukuda vision still places too much emphasis on the energy saving efforts at the final consumption stage (such as asking for saving 1 kilogram of carbon per day for each family, and encouraging people to join the 6％ CO_2 reduction club and the like) and boastfully brags about how energy efficient the Japanese power sector and manufacturing industries are. Fukuda mentioned several times about 'Japan's Environmental Power', by which he means the energy efficiency and the least CO_2 emitting process of manufacturing and power generation in Japan's private sector, as the most advanced in the world ; in theory, that power can be transferred to other countries to help them combat climate change. For instance, though it is not in the Vision Speech itself, in the Energy White Paper 2008 of the Ministry of Economy, Trade and Industry (METI), this figure is cited :

Japan's coal power plants are designed and operated very efficiently by achieving a very high temperature in the burning stage and are becoming more so in recent years. In 2006 coal power plants in Japan generated 244 billion KW of electricity but emitted only 246 million tons of CO_2 under the best practice. If this very low level of CO_2 emission were transplanted and implemented in the US, China, and India, the CO_2 emission in the three major CO_2 emitting countries will be diminished from 1,948 to 1,562 MT (the US case by 387 MT) and from 2,269 to 1,493 MT (the China case by 776 MT), and from 572 to 388 MT (the India case by 184MT), respectively. The added sum of CO_2 reduction under the hypothetical case of US, China and India adopting the Japanese level of efficiency in coal power generation will be some 1.3 billion tons (387＋776＋184＝1,347), a huge amount of reduction, given the fact that the annual global CO_2 emission is about 6.3 billion tons and the world is trying to reduce it by 3.2 billion tons by 2050 in order to stabilize the global temperature.

Similar figures showing the highest energy efficiency of Japan are cited for cement and steel making industries, the two largest emitter of CO_2 in the manufacturing sector.

However, what is important is the mandate for Japan to cut the CO_2 emission by 25 to 40% from the 1990 level by 2020. The energy efficiency of Japan compared with the other three major emitters is correct only as a matter of mathematical

exercise and has no practical policy relevance for now. Whatever is the high level of energy and CO_2 efficiency, Japan must share the burden, and make further cuts from the present level. That is a fact of life in the world we live today. In order to make further reduction, a major investment in the original power generation stage is urgently called for. Asking for energy conservation and more energy efficiency at the consumption stage might have worked when we were talking about 6% cut for the Kyoto target by 2012. Today, we are facing the need for a much deeper cut by 2020. By 2050 we in the developed countries might have to cut the CO_2 by 80 to 90% from the 1990 level, eventually.

Though Mr. Fukuda stressed the need for more solar power generation, his policy stance is still reluctant to government investment in the power sector. Why is it so?

We can think of three factors. One is the general stance on fiscal policy.

1) Fiscal policy stance

The root of the misplaced policy stance by Mr. Fukuda seems to be in the policy guideline established under Prime Minister Koizumi in the summer of 2006, which is usually dubbed as Hone-Buto 2006 in Japanese. The guideline says, "On energy related expenditure in the general budget, --- the amount of increase should be zero growth or lower than zero for the next five years in nominal terms."

Five years starting from 2006 covers till the end of year 2010. Mr. Fukuda has not abandoned this binding guideline, the shackles of Koizumi, for budget making till 2010. To the best of my knowledge, Japan is the only developed country in the world that intends to slash the budget for energy even in nominal terms till 2010, while the inflation is resurging everywhere.

Mr. Koizumi has been a great campaigner for smaller government in Japan, bringing an unprecedented landslide victory for the Liberal Democratic Party with two-thirds majority in the Lower House in the September election of 2005. Mr. Koizumi's line of thinking chimed very well with President Bush and the American Republicans' right wing philosophy ; it created a high level of personal trust between the two leaders. Mr. Koizumi should be duly credited for bringing that trust and harmony in the bilateral relationship.

However, under the acute energy and environmental crisis of the present, we need a different policy stance. We need an historic perspective and a grand design.

２) Weak historic perspective

This leads us to the second factor : lack of historic perspective on energy.

We must recognize that mankind is entering into an historic, third energy revolution. From ancient times to the 18th century, mankind had the age of lumber, essentially cutting trees to get energy for living. The first energy revolution occurred around the beginning of the 19th century, when the main source of energy shifted from lumber to coal. The 19th century was the age of coal and the peak era for the British Empire based on the industrial revolution. The second energy revolution came at the end of the 19th century when the major source of energy changed from coal to oil. The 20th century was the age of oil and the American domination. The third energy revolution is right here with us. The 21st century and afterwards will be the age of renewables.

In the age of the third energy revolution for mankind, massive input of government money is needed for investment in renewable energy sources. The public sector must provide public goods for the new energy and related infrastructure. The incessant attack on government spending based on the belief, the smaller the government, the better always, is a passe.

Mr. Fukuda's Vision Speech of June 9th is a step forward in the right direction. But the step is so awkward that he could not even announce Japan's target of CO_2 reduction for 2020, even though this occasion was the most important one in the final run up to the Summit in early July in Hokkaido, the northern most island in Japan. The numerical goal for Japan's carbon reduction by the year 2020 was initially planned to be announced in January at the Davos World Economic Forum when Mr. Fukuda delivered a speech on climate change. Because of the disagreements within the Japanese bureaucracy, he could not come out with specific numerical goals, which he explained on that occasion (in an article in the Financial Times) "I am now determined, in the very near future, to spell out" Japan's numerical targets for the 2020 CO_2 reduction. It was to be announced shortly afterward because his staffs at the two different Ministries were at loggerheads on specific numbers. Even during the summit days in Japan, his staffs were still debating and the conclusion may be reached in some time 2009.

This is hardly a sign of strong leadership. On the 8th of July when the summiteers adopted the underwhelming declaration on climate policy, The Financial Times of London ran a one page advertisement provided by an environmental

advocacy group. It said : "Hello, Kiddies. Fukuda, Harper (Canada's prime minister), and Bush are blocking climate targets for 2020 that scientists say must be enacted to prevent a climate catastrophe. Now, over 200,000 citizens of more than 190 nations have signed this message to the G８ leaders : The world can't wait for urgent action on climate change, and it is your responsibility to take the lead. We urge you to set binding targets to cut green house gases by 2020, in line with what scientists say is needed to avert a climate catastrophe. Rich countries must help developing countries adapt and embrace a clean energy future, and all must do their fair share to reduce emissions in time. Our common humanity demands nothing less."

(See Exhibit 1 at the end of this paper for the Fukuda article and the advertisement.)

On January 25th, some six months before the G８ summit in Japan, Mr. Fukuda contributed an article for the Financial Times, one day before he delivered a speech at Davos. In it he wrote, "Indeed, I have an aspiration that future generations will remember the new framework (to be decided at the G８ summit in Japan…added by Fukushima) in association with my country, as was the case with the original Kyoto protocol."

His aspiration was dashed by his own irresolute style of bureaucratic politics.

The delay in the decision for numerical goals for 2020 is basically due to the different views held by the METI, Ministry of Economy, Trade and Industry which has the regulatory authority over energy and electric power, and the Ministry of Environment which is more eager to prevent the global temperature from rising even higher. Mr. Fukuda could not bring about much visible results in the communique adopted at the G８ summit, because he could not propose any numerical goal for the cut in CO_2 emission by 2020. It was a summit without much impact because it only vaguely mentioned that 50% cut of CO_2 from the current, 2008 level, not from the 1990 level, by 2050 is a shared goal.

However, on the 30th of June, one week before the summit, Japan's National Institute for Environmental Studies, a research arm of the Ministry of Environment, published a book titled "Japan's scenario for a low carbon economy" ; it asserted that Japan can reduce CO_2 emission by 70% from the 1990 level by 2050 with many graphs and charts to verify the feasibility of its higher goal for CO_2 reduction. The authors are sixty scientists who were also the coauthors of the UNIPCC Fourth Assessment Report, FAR, published in April 2007, the epoch making three books written by 2,500

scientists from all over the world. There is some disarray in the climate policy of the Japanese government.

Mr. Fukuda needs a major break with the Koizumi legacy and make a decision for a major investment in the power generation. It is no time for Japan to relax in complacency and to indulge in an obsolete, right wing, fiscal ideology, while allowing the bickering on fiscal policy and climate policy to keep going on among the bureaucracies.

３) Weak sense of a global mission

The third factor can be the relatively weak sense of the global mission. Mr. Fukuda and many policy makers in Japan are always thinking too much about the promotion of national interest, and less concern for the global interest of preventing the climate change. The Japanese policy makers' concern including Mr. Fukuda is always the maintenance and enhancement of the competitiveness of Japanese industries, and those policy makers take the utmost care so that the Japanese economy will not lose the competitive edge by accepting too high a standard for cutting emissions imposed by the other powers at the expense of Japan.

This is natural for a political leader elected by national constituents. All the national leaders will try to promote the national interest, first and foremost, in international negotiations, as they believe it to be in the national interest. The reason for President Bush's decision to move out of the Kyoto framework was that he believed the Kyoto will hurt the American economy.

However, in the Climate Change and energy policy, we must pay some price and provide international public goods : to leave a livable earth for our posterity. We may have to provide the technology and money at a huge discount price to other countries which do not have them in order to prevent the acceleration of global warming. We need not only a keen sense of national interest but also some sense of global mission in the deliberation on energy and climate.

The EU and its major member countries are willing to take bolder initiatives and to pay higher price than Japan or the US under President Bush. It can be explained by the fact that the EU is a unique association of nation states ; the political leadership in the EU and the leading member countries are trained to think slightly beyond the national interest by their routine dialogues, negotiations and decision making. The EU has nurtured and developed, to a certain extent, a sense of a global mission for building a better world. That global mission of the EU is

reiterated in the Lisbon Treaty. That might be one of the strength of the European Union over the other national developed countries in standing up to a global challenge such as the climate change. Europeans have shed much blood before reaching this higher plane.

Exhibit 1 Financial Times articles

FINANCIAL TIMES FRIDAY JANUARY 25 2008

Financial Times 2008-1-25

How we can take firm action to cut carbon

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As I prepare to attend the annual gathering of the World Economic Forum in Davos, Switzerland, I fear that recent instability in the world economy might hijack the debate and dominate the agenda.

Indeed, the aftermath of the US lending binge has caused ructions all over the world, including in Japan where stock prices have fallen sharply and the yen has begun to appreciate. I should stress that Japan's economic potential is still formidable and I invite more investment into our country. For what one sees in Davos is the world's largest bazaar for investor relations.

Yet the baggage I intend to carry to Switzerland is much larger than that. Combating climate change and fostering development, particularly in Africa, are two of the issues that Japan, as chair of the 2008 meeting of the Group of Eight leading industrial nations, is pushing hard to address. The collapse of the US housing bubble and the ripple effects that is causing must not be allowed to distract the attention of Davos attendees from the urgency of these matters.

Last month, when the international community met in Bali, Indonesia, to discuss the post-Kyoto framework for tackling climate change, I set my delegation a goal: to work hard to reach an agreement on launching a process that can lead to a new international framework.

Under the existing Kyoto framework, large-scale carbon emitters in both the developed and developing world have gone unhindered. The new framework must be more inclusive. Bali succeeded in launching a road map to a framework in which China, India, the US and other mega-emitters can be included.

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It achieved this important agreement by, temporarily, setting aside the debate about precise targets for carbon reduction that would otherwise have acted as a wedge. Other participants seem to have agreed with Japan's strategy, since the much-reported debate on future numerical targets ended up taking very little time.

Yet the debate on targets cannot be postponed indefinitely. That is why I am now determined, in the very near future, to spell out how Japan will set its own national target to reduce greenhouse gas emissions. In so doing, Japan can act as both a catalyst and a locomotive to further the road map so that the post-Kyoto framework will involve not a limited few but all responsible members of the international community. Indeed, I have an aspiration that future generations will remember the new framework in association with my country, as was the case with the original Kyoto protocol.

In order to help further that aim, I will unveil another Japanese initiative to help push the road map: the establishment of a financial mechanism to help developing countries, including African nations, to adapt to as well as mitigate the effects of climate change.

Such financial aid is indispensable. In an Africa that is increasingly prone to droughts and floods caused by climate change, it is often young children that must walk miles from home merely to get a bucketful of muddy water. It is my wish that they should carry books not buckets, and grow up in an age that can break the malicious cycle between climate change and poverty.

More broadly, we must couple the fight against climate change with the fight against poverty and infectious diseases in Africa. That is the reason behind Japan's new initiative and my own stress on African development. In May, I will chair the fourth Tokyo International Conference on African Development, or Ticad IV, to be held in Yokohama, where I will push just such an agenda.

This year is the centenary of the birth of mass production, mass consumption and mass disposal, the first embodiment of which was the Ford Model-T that came into being in 1908. There began the age of the mass use of petrol. But, after only a couple of generations, the end of that era is already in sight.

We all know we must change our ways of living. A carbon-free society can no longer be a mere fantasy. It is the shining house on the hill for which we must all reach.

Davos is a gathering of the world's wealthiest and most powerful. But it is also a forum for the planet's most innovative ideas. Those coming to Davos must help enlighten the world as to how: how can we climb the hill to reach the shining home sooner rather than later?

The writer is prime minister of Japan

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