

# KEIZAI KOHO CENTER SYMPOSIUM

## Forum focuses on U.S. climate change policy

The Daily Yomiuri

The United States is so dominant in almost every aspect of global affairs that international efforts to battle climate change cannot be effective without considering the position of the world's largest energy consumer and greenhouse gas emitter.

To shed light on possible U.S. solutions to the issue of global warming, the Keizai Koho Center, a Tokyo-based nonprofit organization, invited senior researchers from leading U.S. think tanks to speak at a symposium on their country's approach to climate change and energy security. The symposium was held at Keidanran Hall in Otemachi, Tokyo, on Feb. 1.

The participants were: Sarah Ladislav, fellow in the Energy and National Security Program at the Center for Strategic and International Studies; Jason Bordoff, policy director of the Hamilton Project at the Brookings Institution; Peter Ogden, senior national security and foreign policy analyst at the Center for American Progress; James Bartis, senior member of Rand Corp.; Paul Saunders, executive director of the Nixon Center; Akihiro Sawa, professor at Tokyo University; and Taishi Sugiyama, senior researcher at the Central Research Institute of Electric Power Industry.

Akihiro Sawa opened the symposium by mentioning that the participants had "hotly debated most of the relevant issues...from different standpoints and from different perspectives" for about an hour beforehand.

At the first session, which dealt with what domestic measures the United States was taking to deal with global warming, Sarah Ladislav pointed out in a keynote speech that her country was responsible for 22 percent of global carbon dioxide emissions.

"Like many people around the world, Americans are concerned about the economic, security and environmental impact of their energy production and use," she said.

Touching on the recent history of U.S. energy policy, Ladislav said, "Over the last 25 years, U.S. energy policy has not changed very much—we have benefited from global energy markets, world-class energy companies, and relatively cheap and readily available energy."

She said gasoline prices in the United States had risen 23 percent on average since 2005 and it now had to import nearly 60 percent of its oil needs. Oil imports will either remain steady in the future or increase, she added.

"The traditions of U.S. energy policies have been to encourage new sources of supply, reduce demand through greater efficiency and to manage geopolitics, build strategic stocks, encourage market principles and to invest in clean energy technologies," she said. "But these pillars must be updated to accommodate new circumstances in energy and climate realities."

"At the same time, the trends that have changed the world realities with regard to global climate change and energy security have driven other movements on energy and climate [issues] among companies, states, in the Congress and in the courts."

### U.S. public opinion changing

Ladislav noted that in January last year, major businesses with a high awareness of corporate social responsibility joined hands with environmental groups to launch the U.S. Climate Action Partnership, under which they recommended a cap-and-trade system throughout the economy, and stressed the importance of

getting all major emitters involved.

"Public opinion is changing as well. In fact, some polls show that these [climate change policies] are top priorities among voters," Ladislav said. "Polling also suggests that the public is willing to pay to address these policies—but it's not clear yet how much they're willing to pay."

"For those who have been waiting for the United States to recognize how important it is for us to address global warming and to reduce its consumption of energy, these trends are encouraging. No matter who wins the [U.S.] presidential election, climate and energy policy will be a priority and the policies of tomorrow are very likely to be different from the policies of today and yesterday."

Jason Bordoff agreed, saying: "It has no doubt been evident to all of you that the related topics of climate change and energy security have escalated rapidly in their importance to the American public in just the last few years."

In the second keynote speech at the first session, Bordoff asked: "The question then is what do we do about it? Obviously the United States alone cannot address climate change."

He said Americans often lump the relationship between climate change and energy security and energy prices together and "assume that policy goals are kind of overlapping in their implications."

"In many ways, they obviously do overlap," Bordoff said. "Oil is responsible for 44 percent of energy consumption, so lowering America's oil use helps on multiple fronts: mitigating climate change, improving energy security, mitigating our economic vulnerability to oil price shocks."

"But I think in some important and under-appreciated ways, at least in the United States, these issues are distinct. For example, climate change is a long-range problem because carbon stays in the atmosphere for up to 200 years; energy security and price shocks are much more immediate."

"Also, effective climate policies will not necessarily do very much relatively speaking to curb oil use because a carbon price will have a much larger impact on things like coal than it will on things like oil. A \$27 per ton CO<sub>2</sub> tax, for example, would triple the price of coal but increase the price of oil by only 30 percent."

### Use market mechanism

"Some policies are in direct conflict with one another," he continued. "The most notable is coal to liquid technology, which would reduce oil consumption but emit more carbon in the process. And it's also worth noting that...effective and efficient policies to address climate change...will have the effect of increasing—not decreasing—energy prices though this can be minimized in various ways with the revenue gains from a carbon tax or cap-and-trade system, as I will discuss."

"Given these competing concerns, let me focus on what I think the best strategy to address climate change and promote energy security. The first and most important step is to use a market mechanism to put a price on carbon either through a cap-and-trade system or carbon tax."

"Second, the government needs to increase and redirect public investments on basic research and on long-run speculative energy technologies—I think those sorts of technology investments look quite different in a world in which you do price carbon as opposed to a

world in which you do not.

"On the other hand, a price instrument like a carbon tax gives you certainty about what the government is going to do to the price you pay for electricity or other forms of energy but [there is] uncertainty about how much progress we are going to make against climate change."

"I think in reality the best option is sort of a hybrid approach that minimizes short-run price volatility, for example, by issuing more permits at a specific price or by allowing firms to bank or borrow permits over time because this is a long-range problem after all."

Regardless of what pricing mechanism is used, the effect will be to raise "the cost of carbon intensive forms of energy," Bordoff said, adding, "It's really important for people in the United States to be aware that some people, as a result of this, are going to be hit harder than others. Low-income people, in particular, spend a higher percentage of their income on energy and they are going to feel the pain more acutely of a market mechanism."

### U.S. needs to take leadership

"Whatever approach we use, though, we need to do much more in the United States to take a leadership role in combating climate change and I'm hopeful that in the near future we will make more headway in this regard and, working with our friends across the world, such as all of you, we will be able to combat this most global of problems," Bordoff said.

In a question-and-answer session, Sawa asked what the U.S. position in international climate change negotiations was likely to be under a new administration, compared to the Bush administration.

"There's a fairly strong opinion," Bartis replied, "that the message that Jason [Bordoff] and Sara [Ladislav] have given you—that the United States is heading toward a market-based mechanism—is true and I think that is the most likely outcome, although we can never guarantee anything. We don't expect, as Sara mentioned, that there'll be action during this year of elections because it's a very sensitive issue. Americans and our politicians and our businesses are still learning about what the true costs are, what the impediments are. There hasn't been a full examination of these various processes."

In this connection, he said Japan should "keep its powder dry and carefully watch the [U.S. presidential] election."

For his part, Paul Sanders said: "The question that is much more important is—how much of a reduction will the United States commit to internally through the political process that leads to that agreement? I...don't think any of us would be willing to take a position today on how steep that reduction is going to be through whatever bill or other measures emerge from this process."

"Because that is really going to be the decisive factor in defining our international strategy, I think it's very difficult to make predictions about our international strategy."

It's really going to depend on what we come up with ourselves and how that relates to what others want to do and what they already have. I guess it's one of the unique advantages or it's an advantage

the United States has that very few other countries have, that we can go through this process domestically and make a decision and then we're in a position internationally to argue relatively strongly on the basis of what we've already decided domestically."

### Nuclear power options limited

James Bartis said: "We don't have the experience of the European Union. So if you look at our electric power system, over 50 percent of our power is from coal. Nuclear energy is not on the table for us. There may be a couple of nuclear plants built in the next 10 or 15 years, but I doubt many more will be. So we don't have one of the big options that's available for Europe and Japan to address reducing our emissions."

In a second-session keynote speech, Peter Ogden brought up "a couple of the areas I think have become of heightened concern when you start to overlay the political and climate maps that we have."

"The top concern," he said, "may be in South Asia and, in particular, Bangladesh, which we know is extremely vulnerable to environmental impacts and, according to the IPCC [International Panel on Climate Change] report, is going to be particularly susceptible to almost every one of the impacts of climate change from rising sea levels that will contaminate coastal aquifers and make it extremely difficult for people to sustain themselves, to greater frequency of extreme weather events, which will again displace large populations that live in the coastal regions."

### International implications

Citing perceptions in the U.S. intelligence and national security communities, Ogden said they "fear Bangladesh is the most likely next ground for Al-Qaida affiliates to set up operations because of these circumstances."

"There is a second category of countries when we are talking about security challenges," he said. "This is one that I believe my colleagues are going to discuss and we have discussed a lot in the international climate negotiation context, and that is the geopolitical arrangement, in particular China."

"When China released its climate change strategy in 2007, I know that most people, from an environmental standpoint, don't think it's adequate and don't think it's going to avert any of the consequences of global warming that we need to avert. However, if you think about it from a political and geopolitical standpoint, it was quite important because...it was an official acknowledgment of the fact that climate change, insofar as it exacerbated various kinds of environmental damage, was a component of one of the chief causes of social unrest within their country."

### Area of top concern

He added: "While I think it's clear that at this point there are lots of very immediate environmental concerns and that climate change at this point is probably not the top [concern] domestically within China, what the Chinese leadership has done is they have folded the climate problem domestically into that other basket of issues. And this is an area of top concern."

"The question then becomes whether the domestic pressure within China to respond to these environmental concerns combined with international pressure to prioritize among these environmental challenges."

"It can go in more than a couple [of directions on climate change] but from the geopolitical standpoint, it [could] respond to the social unrest that is going to continue to occur due to these various environmental factors through increased crackdowns on its population, by trying to control information, prevent organizing or removing nongovernmental organizations that are active in their country. That is going to have serious implications for the West really and Japan's relationship with China."

"I would contend that really for the United States and Japan that this could be and should become one of the fundamental principles of our bilateral relationship—to make sure that the new arrangements within Asia promote a rise of China that is peaceful and that strengthens the international community."

### Japanese concerns legitimate

In a keynote speech, Bartis said Japanese government and industry leaders had also expressed "deep concern that a post-Kyoto [Protocol] framework involving deep reductions in greenhouse gas emissions would jeopardize Japan's competitive position, especially with regard to China and India. These economic concerns are legitimate."

"But there is another important reason why the developing country problem must be addressed," he said. "As you know, Prime Minister [Yasuo] Fukuda has called for a halving of global greenhouse gas emissions by 2050. If we assume for the moment that this is the appropriate goal, global emissions of carbon dioxide would need to be cut to about 15 billion tons per year."

"But today, China alone is already emitting a third of this amount. And China is still growing. With 20 percent of the world's population, China is already past its possible per capita share for 2050. Can we expect China, India or any major developing economy to accept a binding emissions cap? Almost surely the answer is no if the cap is near their current emission levels. But probably the answer will be yes if the cap is very high. But that means that the cap will have no impact over the next 10 or 15 years."

"In addition, the combination of a high cap and international carbon trading will likely be a massive flow of money from developed nations to the high-cap developing countries. Neither the United States nor Japan is likely to support a cap-and-trade system that results in the heavy subsidization of, for example, China's industrial base with the net result being a more competitive China than it is with regard to our two nations."

### Get developing nations involved

Bartis suggested "an approach for persuading developing nations to participate meaningfully in a post-Kyoto framework."

"This approach has three components," he said. "The first component is equity or fairness. The second is responsibility. And the third is motivation."

"To be equitable and fair, we should not expect developing nations to adopt per capita caps that are below those of the developed nations. Prime Minister Fukuda's suggestion of a 50 percent reduction in global greenhouse gas emissions by 2050 requires that all per capita emissions in all countries would be very low. Now, since I have not seen a cost-benefit analysis of this suggestion versus other reduction levels, I

do not know whether a 50 percent cap reduction is a good target, but let us assume for the moment that it is the right number. If it is, I believe it would be very difficult, if not impossible, to establish an equitable approach today to allocating binding long-term targets to all nations."

### Binding caps inappropriate

"I say this because 40 years is a very long time. Many things—both good and bad—can happen between now and then. Many developing countries have crucial needs that require attention and investment besides the threat of global warming. Examples include...reducing poverty and raising living standards, improving sanitation and health care, and addressing environmental problems that today are posing immediate threats to the health and welfare of their citizens. For these reasons, I suggest that over the next 10 or 15 years, it's inappropriate to even consider binding caps on the greenhouse gas emissions of developing countries."

Saunders called in a keynote speech for "greater coordination" among consuming countries.

"This is not an easy thing because many consumers feel that they are in competitive relationships with one another and it certainly is a sellers market at this point," he said. "While consumers may not be able to have enormous influence as a group or working in various combinations of different groups, it is likely that they would be better [by intensifying their coordination] than alone or even being pressed into competition by the supplying countries."

He added: "One of the best ways to address the role of energy suppliers is in domestic policy. This is certainly what we see in the United States in our energy security debate. We need to use less oil; we need to conserve energy in other ways so that these dependencies are less threatening to our economies."

In the second keynote speech in the second session, Taishi Sugiyama said, "The result of American domestic debate may not be compatible with the Kyoto regime," he said. "The Americans will have to come up with their own domestic emissions standard by themselves."

"Therefore, the United States will move along its own unique path. So two systems will exist in parallel, a Kyoto Protocol-type system and an American type. In the near future, we're most likely to see those two systems running in parallel."

"In July, Japan is going to chair the Group of Eight Toyoko summit [in Hokkaido]. The Europeans have asserted that there should be some kind of numerical targets set at that time, an ambitious goal. A lot of people are saying that numerical targets must at least be discussed...in the short term, but once you do that, and listening to the debate earlier today, I feel that maybe the system that emerged would not be acceptable to the United States. In other words, Japan would commit to something considered unacceptable by the United States."

"We should negotiate a post-Kyoto framework, but that's going to happen after the G-8 summit. At the Toyoko summit, therefore, how should we position ourselves in the overall scheme of things? With short-term, numerical and ambitious targets? Is it safe to go along with the European argument? Or should we take time and look into a post-Kyoto arrangement or framework likely to be more widely appropriate? These are the positions Japan needs to choose from."



Jason Bordoff



Akihiro Sawa



James Bartis



Taishi Sugiyama

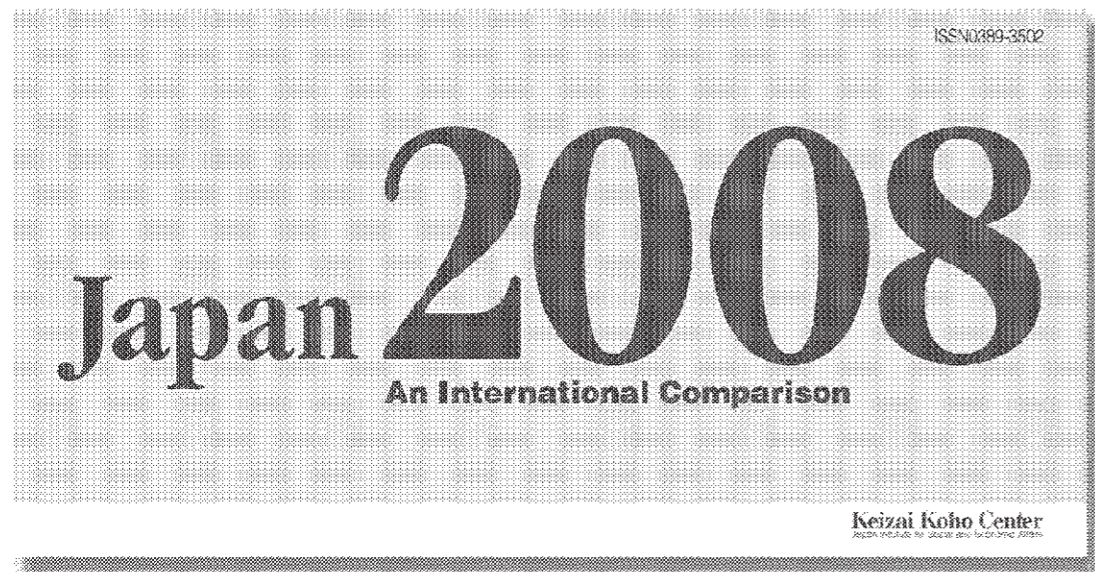


Sara Ladislav



Paul Saunders

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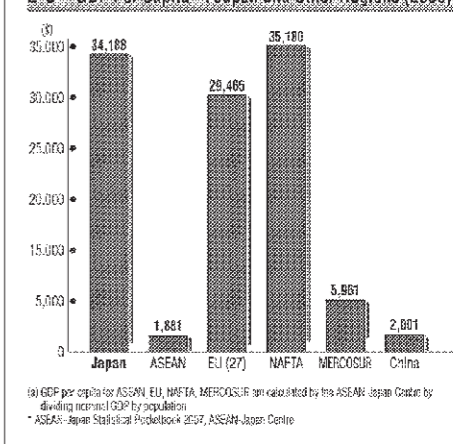
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### 7-6 Natural Gas Reserves, Production, Consumption (2006)

Proved Reserves <sup>(1)</sup>	Production <sup>(2)</sup>	Consumption <sup>(3)</sup>
Total: 6,405.5	Total: 2,955.3	Total: 2,850.6
Russia 1,682.1	Russia 612.1	US 619.7
Iran 959.0	US 524.1	Russia 432.1
Ostar 855.2	Canada 187.0	Canada 96.6
Saudi Arabia 248.7	Iran 105.0	UK 90.8
UAE 214.0	Norway 87.6	Germany 87.2
US 208.2	Algeria 84.5	Iran 87.2
Nigeria 183.9	UK 80.0	Japan 84.6
Algeria 159.0	Indonesia 74.0	Italy 77.1
Venezuela 152.3	Saudi Arabia 73.7	Saudi Arabia 73.7
Iran 111.9	Netherlands 61.9	Ukraine 66.4

### 2-6 GDP Per Capita<sup>(1)</sup>: Japan and Other Regions (2006)



### 9-19 Real Residential Price Indices

