

Energy Environment Policy at USJI Seminar on February 1, 2010

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Thank you Professor Matsuoka. I would like to first make some brief remarks, from the electric power industry's point of view, regarding energy policy and Co2 emission cuts. Japan's electric utilities have been attempting to make significant contributions in the areas of energy security and climate change initiatives over the last several decades.

To speak more simply, I will first comment of what we have done in the past and are doing now, and then go on to our plans for the future.

The electric power industry is essentially an energy conversion sector, converting fuels to energy, which is different from other industries, such as steel or cement. Considering this unique characteristic, I will explain some things on both the power supply and power consumption sides.

On the power supply side, the power companies are fully responsible for the consequences of our activities.

We have made every effort to develop nuclear power as a source of electricity for more than a half century. The result is that nuclear power represents 26% of total electricity generation in Japan, while coal represents 25%.

Thermal power generation is still the main source of electricity in Japan, but we feel that we have a good record in regard to efficiency in power production. In the process of electricity generation a very large amount of energy is lost. The thermal efficiency factor is the conversion figure of actual generated energy from the total energy input.

Tokio Kano of the Upper House of Japan's Diet made a presentation last month at the Reischauer Center of SAIS , and according to his analysis, Japan's coal generation efficiency was 42%, which is 10 percentage points above that of China and India's coal power plants.

If China, India and the United States upgraded their coal power plants' efficiency, it would be equivalent to a 4% CO₂ emission reduction worldwide. This is not an exaggeration, but reality.

The power consumption side in Japan is beyond the control of the power companies, as it is in the United States and elsewhere. Our company has been promoting energy conservation and the development of energy efficient appliances, such as the heat pump air conditioner and a heat pump water heater system.

Mottainai is a very common word in Japanese, and everyone, old and young alike perfectly understands it and takes directions from it.

My comments so far have been about our past and current efforts to deal with energy efficiency and climate change, but we are making even more efforts to meet the challenging target.

I would like to explain our action plan from 3 different perspectives: the domestic power production side, the domestic power consumption side, and lastly our overseas activities.

First, as to the domestic power supply side, the most crucial and fruitful effort is to increase nuclear power generation from our nuclear power plants. In these plants our utilization factor is 65%, compared to 90% for the U.S. nuclear plants. This is the equivalent of having Japan's plants shut down for 130 days a year.

If we can raise our utilization factor to the U.S. level, we can cut our CO₂ emissions by 60 to 70 million tons, which is equivalent to 5% of total CO₂ emissions in Japan.

Further, in recent years, battery technology and its feasibility for small and large batteries has developed remarkably. This is a very good opportunity to develop renewable energy, such as wind and solar. Electricity from these renewable sources are not stable, which is not good for the power grid, but improved batteries can store this energy and remove this disadvantage.

As to the power consumption side, the key players of this sector will be the variety of customers themselves. For example, the spread of the use of the electric vehicle in the marketplace will depend on not only technological developments, like the battery, but also on the drivers' life style.

Thanks to innovations in battery technology, the electric vehicle will be able to compete with the convenience of the gasoline vehicle in the near future, but we will have to change our life style, even with the electric car.

Electric utility companies are in a position to promote efficient equipment for home, office, and industry use. Such equipment, however, is basically more expensive, and so decisions about using such equipment is a final decision made by each consumer. Energy and global climate change policy should be consistent with consumer behavior.

Lastly, I will touch on our overseas activities. As I mentioned in regard to coal power, the improvement in thermal efficiency is the key to reducing CO2 emissions. By using the framework of Asia Pacific Partnership “APP “ or other direct forms of cooperation, we can make the best use of our experience, technology, and know-how in the developing countries such as India and China, and even in the U.S.

Japan’s thermal generation system is a proven, efficient technology which is relatively cheap and sustainable and can be consistent with economic development.

Going back to the electric vehicle, TEPCO proposed a quick charger demonstration facility, not only in Japan, but also in the U.S., something cosponsored by the U.S. utilities , the US automobile makers and the US battery manufacturers. Japan and the U.S. have a common background in terms of their power supply systems, as both countries use 100 and 200 volt systems.

There are just some examples of possible global cooperation in the power sector. We are always open to discussing and exploring all kinds of possibilities in order to achieve our mutual goal of reducing CO2 emissions.