

## JAIF Chairman Takashi Imai's New Year's Speech at the JAIF Exchange of New Year's Greetings

Japan Atomic Industrial Forum, Inc. (JAIF), held its Exchange of New Year's Greetings on January 11 in Tokyo.

FOCUS introduces speech by JAIF Chairman Takashi Imai at the gathering.

### **Speech by JAIF Chairman Takashi Imai**

Happy New Year, ladies and gentlemen.

At our gathering at this time last year, I talked about the bright future for nuclear energy in Japan. The situation has changed dramatically since then and many have been left feeling heavy and discouraged.

It is exactly ten months today since the Great East Japan Earthquake struck. The central government declared last December 16 that the accident at the Fukushima Daiichi Nuclear Power Station had been brought under control – that Units 1, 2 and 3 were in cold shutdown. Yet we continue to face three serious challenges.

### **Three Challenges - Decontamination, Compensation, Decommissioning**

The first is decontamination so that evacuees in the area can return to their homes. The second is compensation for those who have been economically affected by radioactivity. The third is decommissioning of Units 1 through 4.

For decontamination, JPY450 billion has been earmarked in a 2012 national budget. I fear it will not be enough.

Regarding compensation, the government established the Nuclear Damage Liability Facilitation Fund (NDF) to handle payments of

compensation and provided a delivery bond of JPY 5 trillion. JPY890 billion of the bond has already been converted to cash and given to the Tokyo Electric Power Co., (TEPCO) to be used for damage compensation payments. As of now, the total amount that will eventually be needed cannot be estimated.



Regarding decommissioning, NDF has received JPY 5 trillion in government loan guarantees. According to media reports, NDF is considering borrowing two trillion in the financial markets using the government's guarantee, loaning an additional one trillion to TEPCO, and injecting one trillion to TEPCO to strengthen its balance sheet in anticipation of decommissioning, etc. Given that power rate hikes, restarting of its reactors at its Kashiwazaki-Kariwa Nuclear Power Station,

etc., may be involved in this, the matter is now in a very delicate stage. Decommissioning is expected to take some 40 years. Completely new technology will be needed to remove melted fuel and decommissioning the reactors. Very substantial manpower and a huge amount of money will be required. Issues reach beyond the closed framework of a single country. I personally think Japan should tackle decommissioning as an international project, bringing together the wisdom of the world. It would be useful to establish an international research center for decommissioning in Fukushima Prefecture, which would help not only in the restoration of the prefecture, but in the development of global human resources as well.

**Recovering People's Trust in Nuclear Power**

The most important question for the revival of Japan's nuclear power is how to recover people's lost trust now that the "nuclear safety legend" has collapsed. The government is preparing to launch a new nuclear regulatory organization. The nuclear industry must also reform itself. Results of various accident investigations have been released. It is very important to study them carefully. But in reducing the accident to one word, it is "cooling." I think the essence of the accident was the total loss of ability to cool the shut down reactors continuously. The most important realization to come from this is that all operators must have multiple equipments and facilities and the ability to manage a crisis so as to achieve cold shutdown of their reactors in the event of any natural disaster.

Importantly, to the end of regaining trust, electric utility companies must release all data and information on problems and technical factors, swiftly determine what will be added to current measures, announce those plans and take action. After gaining back confidence in that way, there are, I think, three things to be done promptly.

**Three Things to be done promptly – Restart, Construction, Fuel Cycle**

First is to restart existing reactors where

periodic inspections have already been completed. Second is to determine how to deal with plants still under construction or being planned. Third is to resolve fuel cycle and backend issues.

Regarding restarts, if nothing is done, every reactor in Japan will be out of service within this fiscal year (by March) – meaning power shortages and rate hikes. As a result, Japanese industry's competitiveness will be weakened, accelerating the hollowing out of industry as production shifts to other countries. Domestically, employment will be lost and trade deficits, in the red for the past two months, may well be prolonged. As such shifts and changes will be difficult to reverse, any actions must be taken as soon as possible. But justifying restarts based only on the stress tests advocated by former Prime Minister Kan will be difficult. In addition, as I mentioned, measures are needed to ensure a continued cold shutdown state under any circumstances. The government will have to act promptly and persuade local municipalities. The industry will have to proactively come up with relevant measures on its own responsibility and with its own recognition of the need.

On the second issue – plants still under construction or being planned – construction will have to proceed after modifying designs to incorporate equipment according to the highest safety standards, sharing all relevant information and obtaining understanding and support from local municipalities. Construction of nuclear plants hereafter can be expected to be in very severe circumstances. Nevertheless, in light of the fact that the government has decided to export nuclear reactor systems, I think it is necessary that equipment and safety systems meeting the highest standards be installed, focusing on replacement of aged reactors domestically, and development of human resources to be engaged hereafter.

The third thing I mentioned is the fuel cycle and backend issues. Together with spent fuel to be removed from the Fukushima Daiichi NPS as part of decommissioning, spent fuel currently stored at nuclear power stations around the country and that generated in the future, the total amount will be huge. Consequently, having sufficient interim storage

facilities is crucial. Spent fuel is deemed to be a quasi-domestic energy source and reprocessing and reusing it is quite important. The reprocessing facility in Rokkasho is preparing to resume active tests. I think it is best for Japan to proceed with final disposal after implementing the fuel cycle and improving safety. The matter of a final disposal site has been pending for a long time. This may be the time for the nuclear industry will unify its voice and speak out to pursue the final disposal.

## **Importance of Nuclear Power**

Not surprisingly, given the magnitude of the effects of the accident at the Fukushima NPS, there are voices in Japan in total opposition to nuclear power generation. But I think the conveniences of any civilization always come with risks – automobiles and accidents, for example.

When nuclear energy is turned to weaponry, the destructive results are seen such as in Hiroshima and Nagasaki. However, in its peaceful use, there have been only three major accidents, including Fukushima. At the same time, use of radiation has increased significantly in the world of medicine and is of great help in fields of material analysis and the like.

Nuclear generation is also, as is frequently said, essential in dealing with global environmental problems. Natural energies such as solar power cannot be key power sources for some time. Therefore, many people have noted that if we stop using nuclear generation and go back to fossil fuels, global warming will accelerate, with serious consequences in the future.

Energy security is another important consideration. Only a few countries, including Germany, Italy, Switzerland and Belgium, have declared that they will stop using nuclear generation. Most have taken the position that they will continue its use, safely. Given such recognition of the importance of nuclear generation to the world, I wonder if it is even fair for Japan to make a decision only for itself.

As I noted, the government has made a

decision to export nuclear plants as national policy. For this, as well as for the environmental and energy reasons, all parties will have to do all that they can, with determination and full awareness, to complete the nuclear technology whereby cold shutdown can be achieved and safety ensured in any circumstance.

I value this opportunity today for all of us to get to know each other better, and appreciate having been allowed to express my personal views.



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