

Special Bulletin

A Japanese Perspective on the International Energy Landscape (149)

November 6, 2013

IEEJ International Nuclear Energy Forum

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On November 5, the Institute of Energy Economics, Japan, sponsored its international nuclear energy forum under the theme of “How to restore confidence in nuclear energy after Fukushima.” At the outset of the forum, Ryosei Tanaka, Parliamentary Vice Minister of Economy, Trade and Industry, delivered a special speech. Later, discussions took place in Session 1 on how we can restore people’s confidence in nuclear safety and risk management and in Session 2 on nuclear fuel cycle backend problems or how we can allay concerns over nuclear waste and fuel recycling. Keynote speeches were made by Itaru Yasui, President of the National Institute of Technology and Evaluation, in Session 1 and by Irena Mele, Special Advisor to the Director of Nuclear Fuel Cycle and Waste Technology at the International Atomic Energy Agency, in Session 2. Later in each session, world-renowned experts in this area made speeches and held panel discussions.

The forum was attended by six speakers/panelists: William D. Magwood, IV, Commissioner of the U.S. Nuclear Regulatory Commission; Paul Howarth, Managing Director of the British National Nuclear Laboratory; Bertrand Barré, former Head of the Nuclear Reactors at the French Alternative Energies and Atomic Energy Commission known as the CEA; Lauri Muranen, Secretary General at the Finnish Energy Council; Jean-Pol Poncelet, Director General of the European Atomic Forum known as FORATOM; and Hajimu Yamana, professor at the Kyoto University Research Reactor Institute. They had vigorous discussions on how to recover confidence in nuclear energy and the backend problems. I here discuss impressive key points of discussions at the forum.

First, the forum gave me an opportunity to reaffirm that for Japan that faces the great challenge of restoring confidence in nuclear energy after the March 2011 Fukushima Daiichi nuclear plant accident, it is important to acquire various useful knowledge and experiences from intellectuals and experts from throughout the world. In Session 1, a panelist noted that how to address or tolerate nuclear and other risks is susceptible to social, cultural and historical backgrounds and that Japan might lack experience in figuring out risks quantitatively and objectively. Japanese society thus often takes an “all-or-nothing approach” toward risks, tending to pursue “zero risk,” the speaker said. Against such backdrop, Japan might have been caught in a trap of the “nuclear safety myth”. In this sense, a key future challenge may be how to widely develop probabilistic risk assessment and its recognition in Japanese society.

Based on this point, some forum participants noted that efforts to restore confidence in nuclear safety should include not only the enhancement of engineered safety at nuclear facilities and equipment but also human and social measures to secure and train personnel in equipment operation and crisis management, ensure information transparency and improve information transfer or communication capacity. Particularly, improvement in communication/information transfer is one of the key confidence restoration measures. Enhancing the transparency and openness of information and improving information transferors' communications capabilities are key future challenges.

The most important thing for restoring confidence in nuclear energy is the steady operation of an independent, reliable nuclear safety regulatory body, U.S. NRC Commissioner Magwood noted memorably. In a sense, this is a starting point. Without such body, confidence in nuclear energy cannot be restored. In this respect, Japan's new Nuclear Regulation Authority has great roles to play. Great expectations are placed on the regulatory body. I hope to see the NRA play a central or leading role in restoring confidence in nuclear energy while learning lessons from past efforts by the NRC and other foreign nuclear regulators.

Another impressive point of the forum was that foreign experts reaffirmed that citizens should coolly and objectively discuss and share advantages and disadvantages of nuclear energy, including reasons why nuclear energy is required. This indicates the importance of discussions based on the viewpoint of the best energy mix in Japan.

The backend problems discussed in Session 2 are also very important for considering future nuclear policy. There are many challenges including processing and disposal of spent nuclear fuels, disposal of radioactive waste and nuclear cycle problems. These challenges are at issue in considering the future course of nuclear energy.

While refraining from dipping into the details of the discussions on these challenges, I would like to note that nuclear experts from throughout the world impressively cited specific cases and country-by-country conditions in making the following points: (1) responses and efforts to address the backend problems differ far from country to country, (2) despite such differences, various practical technical options have been taken for disposal of high-level and other radioactive waste and the nuclear fuel cycle, (3) efforts to develop technological options in response to the backend problems are making progress, and (4) the problem is how to form nationwide and local consensus based on important political and strategic decisions.

Regarding the fourth point, forum participants pointed out that the presence of an independent, reliable regulatory body is again basically important, that a consensus-forming process based on information disclosure and secured information transparency is indispensable, and that the actual and steady achievements in present backend efforts including the safe management of spent nuclear fuels are basically important as a reference. It is important that multiple foreign experts noted Japan has many lessons to learn from overseas cases where forward-looking backend measures have been taken.

As discussions are made on Japan's energy policy revision toward the end of this year, it may be needless to say that these discussions should be based on the realities after the Fukushima accident and Japan's unique conditions. Nevertheless, discussions covering a wide range of viewpoints from throughout the world are also indispensable for the energy policy revision. I would like to see policy discussions that effectively utilize useful arguments and proposals made at this international forum on nuclear energy by intellectuals and experts from throughout the world.

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