12. Nuclear Regulation in Japan after Fukushima

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First, I want to express my condolences to the Japanese people on the horrific events of the earthquake and tsunami of March 11, as well as my admiration of the bravery of the workers who have been, and still are, fighting to control the ensuing effects of those events on the Fukushima Dai-ichi nuclear power plants.

Among the many things being examined in the aftermath of the Fukushima accident is the organization of the nuclear regulatory structure in Japan In particular, experts both within and outside Japan have called for the consolidation of all regulatory activities in Japan under a single independent authority. I have long believed that this would be a good idea, and I would like to use this opportunity to discuss this proposal.

My own understanding of regulatory issues comes from about 15 years working at the US Nuclear Regulatory Commission (NRC), including almost 5 years working for a Commissioner, and from 3 years as Deputy Director-General of the OECD Nuclear Energy Agency (NEA). I also have an appreciation of the situation in Japan based on two assignments in Tokyo. The first was as a liaison from the US Nuclear Regulatory Commission (NRC) to its counterpart regulatory organization within the Agency for Natural Resources and Energy (ANRE) of what was then the Ministry of International Trade and Industry (MITI). The second was as a visiting researcher at the Tokyo Institute of Technology, where I did a comparative study of nuclear regulation in Japan and the United States.

I believe Japan needs to consider the following as it addresses the reform of the regulatory system:

1. Independence is critical, but independence has several dimensions.

Independence is important for many government functions, but it is particularly critical where the public health and safety is concerned. The regulatory organization must be structured to be independent of pressures to make decisions based on economic or other factors.

The discussion of independence usually focuses on independence from the regulated industry. This is important, but at the same time, a regulator must also be independent of other government agencies and from the political process. That is, safety decisions must not be unduly influenced by special interests of any kind.

2. Independence does not mean isolation.

When I joined the NRC, I had a boss who thought that talking to people from industry was talking to the “enemy.” Fortunately, most people at NRC did not think so. In fact, the prevailing philosophy was that it was important to gain an

understanding of the facts and opinions of all interested parties, including licensees. This perspective was captured in NRC's Principles of Good Regulation, which I further discussed in an earlier essay for JANUS.

3. A counterpart to independence is the need for transparency.

The other side of the coin is that the regulatory process must be open and transparent. This is particularly important in helping the public understand that decisions are arrived at on a logical, objective basis and are not influenced by special interests. Transparency can take several forms, including soliciting public input through formal processes, holding meetings open to the public, providing the public access to communications with licensees and other stakeholders, and providing reports that document the technical bases for decisions and the disposition of all the issues raised from public comments.

4. Regulation across an area should be consistent and coordinated.

One special problem in Japan is that there are currently 3 organizations involved in the regulation of nuclear activities — the Nuclear Safety Commission in the Prime Minister's office for basic nuclear safety policy; the Nuclear Industrial Safety Agency (NISA) in the Ministry of Economics, Trade and Industry (METI) is responsible for inspection, oversight and enforcement for nuclear power plants; and the Nuclear Safety Division of the Ministry of Education, Sports, Culture, Science and Technology (MEXT) for experimental and research reactors. Although these three agencies do work with each other, the fact that the regulatory activities are in separate organizations makes coordination and consistency more difficult to achieve.

5. There are several ways to implement an independent regulatory organization.

Most countries with nuclear power plants started out with regulatory organizations that, like Japan today, were part of the agencies that had developed nuclear power. Over time, these arrangements raised questions about the credibility of the safety oversight, and many countries have restructured their regulatory organizations, although in different ways, to separate them from other government functions as well as from a chain of command that could allow inappropriate political influence.

Therefore, as Japan looks at reforming its regulatory structure, they will have to evaluate a variety of structures in place around the world and to choose a structure that that will work within the context of the organization and operation of the Japanese government.

6. Japan will need to address some special government characteristics.

There are two characteristics of the Japanese civil service that will bear special attention. The first is that most government positions are held by generalists rather than specialists in a field, and the second is the system of *amakudari*, whereby there is an institutionalized outplacement of individuals from government to industry at the end of their government careers. Both of these characteristics present difficult challenges, as the practices cross the whole government system and cannot be reformed completely in the short term.

However, consideration must be given to the effect of these characteristics on the government's independence and transparency in nuclear regulation, and ways must be found to limit or

overcome the concerns they raise for nuclear regulation.

7. Institutional reform is only one step.

Reorganizing the nuclear regulatory structure and making fundamental changes in the way a government agency operates are big steps. Some would question why they are necessary. After all, it is hard to say how, if at all, the regulatory structure or operations affected the course of the accident and its aftermath. However, whether or not these factors would have affected events at Fukushima, a number of allegations and concerns have been raised that suggest that there are underlying problems in the way the system has worked in the past. Furthermore, these factors have definitely affected public confidence in the willingness and ability of the government to make the tough decisions a regulator needs to make. That alone makes the effort to reform the system necessary and important.

I do want to end with one caution – the regulatory structure is only one element of a large and complex system associated with nuclear safety. Reforming the organization will not by itself guarantee absolute safety, or even absolute public confidence. I should note that the US NRC, despite all the barriers and precautions to assure independence, is still periodically criticized for being too close to industry. I can, of course, argue that many of those criticisms are unfounded, but that is not the point.

The point is that regulatory reform must be part of a larger and ongoing process of change. It is one step of many, and like the other steps, will require continued attention to ensure that the spirit of the reform is sustained. This is a large task and a very important one. It could have a profound effect on the future economic and social wellbeing of Japan, and I wish Japan every success as they embark on this path. Gambatte kudasai!

I will continue to address this issue in my blog at: http://www.nukepowertalk.blogspot.com/

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