NRC NEWS

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Remarks Prepared for NRC Commissioner Dale E. Klein
"A Regulator's Perspective on the Globalization of the Nuclear Industry"
World Nuclear Association
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Thank you.

I am pleased to be to provide a regulator's perspective on the global marketplace in nuclear energy.

We all know that the various steps in the fuel cycle, the design and construction of nuclear power plants, and the manufacturing of parts and components, have all become international enterprises, as this conference, and in fact, this panel, demonstrate. My colleagues sharing the podium with me are vendors or suppliers of nuclear energy in this marketplace. So, in a sense, some of them are competitors. But vendors in the nuclear marketplace also have a common agenda. Their goal is to design or build reactors or reactor components with the implicit assumption that this is the most significant step in the production of nuclear power. This agenda, and this assumption, is something they also share with many of you in the audience, particularly those of you from nations looking to enter the field of nuclear energy for the first time.

As a regulator, I have a different agenda and different assumptions. Or maybe I should say, different priorities. I do not believe that the design and construction of a nuclear power plant is the most significant step toward creating a domestic nuclear energy program. In fact, I will go even further and say that in my opinion there is no such thing as a turn-key nuclear power plant. I say that because I believe that the safe and secure operation of a plant is at least equally important to its design and construction. And, furthermore, I believe that neither the safe design, construction, nor operation of a plant can be considered separately from the regulatory infrastructure of the nation where the plant is located. I think Anne would agree with me that my colleague, and fellow regulator, Andre Lacoste would express a similar point of view.

So how should we understand the relationship between international nuclear suppliers and national regulators? On the one hand, those of us who are regulators must be aware that the decisions we make in our home countries can have a profound effect on global energy policy. At the same time, industry must figure out how to operate in an environment where numerous different regulatory bodies have different methods and approaches.

When nuclear power was a largely domestic industry, as it mostly was in the United States when our currently operating plants were built, this was not an issue. But today, large multinational nuclear firms seeking to built standardized plants in more than one nation may be confronted with a number of differing standards, codes, and regulations regarding the construction of the plants. This can obviously be viewed as a burden, leading to duplicative work and higher costs.

As a regulator, I am more anxious to see that these different regulatory regimes are not viewed as potential loopholes than can be exploited at the expense of high safety and security standards. In my time at the NRC, I have said many times that "an accident anywhere is a accident everywhere," so I want to help promote nuclear safety everywhere around the world. For this reason, I would encourage more standardized plant design and construction as a means for improving safety. Standardized design applications are easier to review and help regulators share information and best practices and standardized plants are easier to inspect. Regulators should also work together to harmonize our requirements, realizing that each country will have different regulatory structures.

To address this, an international movement to harmonize designs for new nuclear power plants is already being undertaken through the Multinational Design Evaluation Program, or MDEP. Through MDEP, the U.S. and nine other nations have been working to leverage knowledge and experience on nuclear power plant design, and promote global convergence in associated codes, standards, and regulations. With good communication, and a willingness to cooperate, MDEP has made excellent progress over the last several years. In part, this is because technical convergence is comparatively easy. After all, chemistry, physics, and engineering do not change from one country to the next. But there are also other considerations, such as rules about operator training and promoting safety culture, that may also affect how plants are licensed and allowed to operate.

Of course, every nation possessing nuclear power can and will determine its own final standards for both safety and security. And interpretations of how to conduct regulatory oversight, or promote safety culture, are more likely to differ from nation to nation compared to specifications for rebar, for instance. In the United States, we have found the practice of stationing Resident Inspectors at each and every nuclear plant to be a highly effective way to provide regulatory oversight. It also has the benefit of promoting public confidence in the safety of nuclear power. This practice arose in part because the U.S. has 104 nuclear plants spread out across a large area. So while a Resident Inspector program works well for our country, we recognize that nations that are smaller in size, or which have fewer plants, may use different oversight strategies.

I don't know whether we can build on the foundation laid by MDEP to promote harmonization in these less objective, non-technical areas. My purpose today is not to suggest any specific proposals or courses of action, but rather to lay out some challenges and issues that we need to confront. I do think it is clear, however, that maintaining open lines of communication among regulators will become more important than ever. The more we can harmonize our requirements and exchange information, the more we will improve the regulatory process.

Before I conclude, let me reiterate a point I made at the beginning. While there may be different national approaches to nuclear safety and security, each nation must have the capacity to understand and enforce its own standards. This is especially true of new entrants to the field of nuclear power. It is not enough to rely on the design certifications of other regulatory bodies. After all, plant design and construction is only the first step. Regulators must also oversee a plant's safe operation. So there must a certain level of training and skills within each nation's regulatory body. For instance, you are aware that China is building several Westinghouse AP1000 plants. But they are not relying solely on the NRC's certification of those designs. We have provided training and analytical tools to the Chinese regulators regarding our licensing approach, so that they understand the process, and not merely the outcome.

There are, of course, many other topics I could touch upon, but let me stop here, and conclude by thanking you for your kind attention, and the opportunity to comment on a regulator's role in nuclear power.