



# NRC NEWS

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## **“A Roadmap for Development and Deployment of New Nuclear Plants in the USA”**

**Remarks by Dr. Nils J. Diaz, Chairman  
U. S. Nuclear Regulatory Commission  
to the  
2006 ANS Annual Meeting  
ICAPP ‘06 Opening Plenary  
Monday, June 5, 2006**

Good afternoon. It is a pleasure to join you today, at the ICAPP ‘06 to discuss the need for and the ongoing development of a new infrastructure for deployment of new nuclear plants. I want to thank the session chairs, Admiral Bowman and Mr. Hattori, for their efforts and kind words. I also want to thank and recognize the leadership of ICAPP ‘06 General Chairman, Dr. Samim Anghaie. We all know that someone always pays a stiff price to get something good accomplished, and Samim has done just that, many times over. Thank you, Samim.

This afternoon, I titled my remarks, “A Roadmap for Development and Deployment of New Nuclear Plants in the USA,” fully aware of the expectations it could convey for a sophisticated, detailed, creative roadmap of the industrial and regulatory infrastructure needed to support the potential deployment of new nuclear power plants. Here is my roadmap.

- Start at: Simplify
- Make sure to dwell at: Standardize
- Make frequent stops at: Communicate

If you need further directions, do it again. Of course, at every turn, all the twists and stops need to be managed, by themselves and in combination.

The NRC is establishing an infrastructure with new tools and new processes utilizing the anticipated standardization by reactor design. The NRC infrastructure would then itself become standardized to enhance safety, regulatory decision making and timeliness. A word about timeliness is appropriate.

I recently testified at a U.S. Senate hearing on new nuclear plants, emphasizing the NRC’s preparations for the anticipated submittal of license applications. I pointed out that the Nuclear

Regulatory Commission has a statutory responsibility for comprehensive and timely licensing reviews of new nuclear plant applications. I want to emphasize it here: The NRC has the responsibility for comprehensive and timely reviews of applications. This is not a may, a might, a could, a should or a will; it is a shall, and it shall be dealt with accordingly.

Furthermore, it has always been my personal opinion and conviction that we owe the people of our nation the very best regulatory system possible to enable the beneficial uses of nuclear energy. The bottom line is clear: we work for the people and their well-being and we will ensure their safety.

Let me turn to nuts and bolts.

In 1992, 10 CFR Part 52 established the framework for new reactor licensing reviews, including early site permits, design certifications, and combined license applications. Part 52 is designed for early resolution of issues, which reduces the applicant's risk while ensuring a high quality safety review, completed in a timely fashion. Part 52 should be used for early resolution of issues, and then be coupled with the right tools and deployment infrastructure. The recently proposed revision of Part 52 will be better because it will reduce ambiguities and, I believe, enhance needed flexibility at the front end. It is important to note that reactor licensing is not at all new for the NRC or the industry, although reviewing combined license applications (COL) will use a new and different framework, consistent with the law, to conduct the necessary safety and environmental reviews. This framework is intended to result in a combined, one-step, construction and operating license if all requirements are met.

The benefits of standardization should be realized at the front, middle, and end of the review process. I want to note the potential for significant improvements in timeliness that abound in the middle, where Requests for Additional Information (RAIs) and sets of issues for technical resolution can dwell. I believe there is a 12 to 18-month block of time there crying to be saved.

The NRC continues to put in place a comprehensive licensing infrastructure to conduct the review of anticipated combined license applications. I am also confident the NRC will continue to find efficiencies in the schedule and ways to enhance the quality of the safety evaluation. Currently, we are preparing for the 13 announced combined license applications for a probable 20 units, beginning in 2007. Graph 1 shows an anticipated work load. We are also aware of three additional applications for a probable five units that have not yet been publicly announced. I am hearing a rumble of a second wave. Therefore, the staff is planning to implement a design-centered approach to facilitate review of multiple standardized combined license applications in parallel. I believe this system approach to licensing is crucial to completing timely reviews for multiple applications. It is based on the use of "one issue, one review, one position" for multiple applications, and it will optimize the review effort and the resources needed. The benefits of a design-centered licensing review would be enhanced by the full participation of multiple entities in ensuring that pertinent components of the applications are standardized. A schematic representation of the sequencing and use of the design-centered review approach is shown in Graph 2.

Moreover, to prepare for the construction of new reactors licensing in accordance with 10 CFR Part 52, a new construction inspection program (CIP) is being developed. This program will cover all aspects of new plant construction and operation from early site preparation work, through construction, to the transition to inspections under the reactor oversight process (ROP) for operating reactors. Half of the associated inspection procedures are in place and the remaining procedures are under development and are scheduled to be in place well before the start of on-site construction activities. To

gain staff efficiencies and facilitate knowledge transfer, all construction inspection management and resources will be located in a single region which will schedule all construction inspections nationwide.

This morning I hinted, in my own polite manner, that every conductor and musician engaged in this multi-orchestra performance must be cognizant and responsive to every pertinent score and schedule. The nation's expectation for great performances can then be realized. Uncertainty is for every orchestra to manage, and predictability can only be achieved with accountability, from beginning to end, by and from everyone. I am convinced that the NRC is doing well in its preparations. We will need the continuing support of Congress, and we will need for the industry to ensure that license applications contain the necessary and sufficient documentation for the NRC review to be finished in a timely manner.

I have been addressing the NRC's national obligations. The NRC is also working with international regulators on a multinational design approval program intended to leverage worldwide nuclear knowledge and operating experience in a cooperative effort to review reactor designs that have been or are being reviewed and approved in other countries. The first stage of the MDAP has already begun. It involves enhanced cooperation with the regulatory authorities in Finland and France to assist the NRC's design certification review of the US EPR. Follow-on stages of the MDAP could foster the safety of reactors in participating nations through convergence on safety codes and standards and other technical matters, while maintaining full national sovereignty over regulatory decisions. Preliminary work to more fully develop the framework for consideration of a Stage 2 is underway at the NRC and the Organization for Economic Co-operation and Development's Nuclear Energy Agency. It is my expectation that the MDAP will be reviewing standardized designs, which will undergo multinational analysis to establish the safety case for their design approval. After the multinational design approval, licensing will be each country's responsibility, in accordance with their requirements. I sense its time is coming.

It is my personal opinion, reflecting the recent discussions in which I have participated with national and international leaders, that a community of nations is very serious about rapidly adding new nuclear generation. Certainly the why is very important, but it is the how, including the built-in safety, the schedule and cost that many in this meeting have the opportunity, indeed the obligation, to influence. Many have been waiting for this opportunity for a long time, and are anxious to get going. I would be concerned with ending well what has begun.

Thank you for the opportunity to share my views with you.