

**Commissioner Stephen G. Burns Remarks**  
**Advanced Reactors Workshop**  
**April 25, 2017**

Thank you for that introduction. I'm happy to be here once again for the third of these advanced reactor workshops and to be joined by Acting Assistant Secretary Ray Furstenau from the Department of Energy (DOE). Welcome back to those of you who have joined us in the past and welcome to those of you who may be attending for the first time. Thanks to all of you for being part of this workshop today.

At the NRC, a significant amount of progress has been made since the second workshop was held in June of last year. We have listened to what the advanced reactor community has had to say about the need for an efficient and predictable regulatory review process, and we have responded.

We developed an overarching vision and a strategy to achieve that vision. Our strategy includes the development of implementation action plans which we have laid out in considerable detail both in writing and in a series of public meetings. These action plans include near-term activities as well as activities for the mid- and long-term.

We have also worked with our partners at DOE in the development of advanced reactor design criteria akin to the light-water reactor General Design Criteria found in our current regulations. In addition, the NRC staff recently published security design considerations for advanced reactors in the *Federal Register* to seek comments from our stakeholders.

The NRC staff has been engaging our Advisory Committee on Reactor Safeguards on many of these topics. Most importantly, we have been asking you, our external stakeholders, for input on all of these items. I was pleased to hear about the broad participation that we saw in the industry working group and the stakeholder comments on the advanced reactor design criteria. I hope that broad participation will continue on other initiatives.

As you will hear much more detail from other NRC speakers today, we have transitioned from the planning stage to the execution stage. We are in the process of implementing our near-term implementation action plans, and we are identifying activities to be pursued under the mid-term and long-term action plans. And we are continually engaging with the advanced reactor community to discuss priorities and identify additional areas that may need attention.

The advanced reactor community is diverse. It includes vendors that are pursuing many different concepts and these vendors have varying levels of nuclear reactor design experience. There are also a multitude of organizations old and new that are engaging with the NRC staff on generic technical and process issues. I encourage you to collaborate and cooperate with one another to the extent you can to bring us ideas and proposals for resolving generic issues that will have the greatest benefit to the community at large.

I cannot stress enough how much we need your input to ensure success going forward. If you are an advanced reactor designer and you have been sitting on the sidelines up until now, this is the time to get in the game. If you've identified a problem that you believe needs fixing, we'd love to hear your proposal for a solution. If there's a technical or policy issue that needs to be addressed to make progress, present your proposed resolution to us. The staff is doing all they can to provide opportunities for your input, and they are ready and willing to listen to your ideas.

I've previously talked about how I view the NRC's role in this endeavor, and I believe it's worth repeating here. Most recently, I spoke at the Advanced Reactors Technical Summit at Argonne National Laboratory that focused on innovation in the nuclear sector: assessing the promise of advanced reactor technologies and the pathway to their deployment. I noted that the goals of

“better, faster, easier, and cheaper” – are goals long sought in technology and industry since the dawn of the Industrial Revolution and into this post-industrial age.

But, the NRC’s job, as a regulator, is to work methodically, consider all aspects, be skeptical, challenge assumptions, and delve into the data. Our job is to focus on “adequate protection” of the public and “reasonable assurance” of safety as we assess these emerging technologies.

As I have stated before, this balancing act – what I have called the regulatory craft – is vital for the NRC to master, particularly so in an age of innovation. This is where we find ourselves now with the review of the first small modular reactor design underway and applications for advanced reactor designs on the horizon. We can regulate appropriately without stopping progress. But we cannot abandon our mission and step aside. The regulator must regulate for the protection of the communities around nuclear facilities.

Ensuring the safe and secure use of nuclear material to generate electricity has been and will always be the first and foremost consideration in any of our reviews. We can’t simply rely on bald assertions that a particular design or technological innovation is “safer” or “accident proof.” However, novel and innovative designs may yet prove to be both, and we do encourage designers to bring us designs and features that can support our basic regulatory obligation in even better ways.

Of course this doesn’t mean that the NRC can’t continue to be faster, more efficient, and more risk-informed. We continue to look at our processes, to evaluate our effectiveness, and to be flexible in our process when it’s appropriate to do so. And we should not stop challenging ourselves to ensure our approaches are risk-informed.

We have consistently said, and I shall repeat it here, that the NRC could begin reviewing a non-light water design tomorrow. However, we recognize that more could be done to make the process more effective and efficient, and we are working diligently to address this challenge. As I mentioned earlier, we have made great strides in the months since our last workshop.

But we cannot meet this challenge without your help. We need to hear from reactor designers about your plans. I agree that having a plan for NRC review of advanced reactor submittals is vital to the agency’s success. But it is equally vital for each reactor designer to have a licensing plan and to share that plan with the NRC.

Many of you are doing this at a high level in response to our requests for information. As you begin to share your more detailed licensing plans with the NRC staff, I encourage you to be as realistic as possible. We all have a tendency to want to “shoot for the moon” when embarking on a new project. There are plenty of examples of entrepreneurs who have set themselves up for failure with unrealistic expectations.

Consider carefully all of the steps needed to prepare your submittals for NRC and then consider the resources you have to devote to the NRC review of your applications. Set your schedule goals accordingly. This is the best strategy to ensure that the NRC has the right set of experts available at the right time to review your submittals and interact with you in the most efficient way possible.

In summary, let me reiterate that the NRC is doing its best to respond to the needs of the advanced reactor community. But we need your ideas for solving problems, your proposals to resolve technical and policy issues, your prioritized action item lists, and your licensing plans. This is the time for everyone with a stake in the outcome to get in the game.

Thank you for your attention and participation today.