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## **Chairman Stephen G. Burns Remarks Aspen Institute Forum on the Future of Nuclear Energy August 11, 2016**

Thank you for inviting me here today to talk about the NRC, its regulatory role, its relationship with the industry and the future of nuclear technology.

The big question, from my perspective, is this: is the NRC ready? Are we in a position to review licenses for small modular and advanced non-light water reactors should they, in fact, become the next big thing in the industry? Let me begin by quoting the headline of a press release: Nuclear Regulatory Commission Directs Staff to Take Experimental Steps to Improve Licensing Process.

Sounds good? The press release goes on to outline an approach to licensing nuclear plants that includes working with applicants before the application is submitted, emphasizing the need for quality applications, streamlining the review sequence and increasing public participation in the process.

That press release was dated October 20, 1978: 2 months after I started working for the agency in my “first” NRC career. So, nearly 40 years ago, the NRC was pushing itself to do its job in a new and better way. And frankly, we always have.

The NRC is again taking a hard look at itself and asking not just are we going to be ready for new applications for new designs but are we doing the best in executing our licensing and oversight role over the operating fleet now?

I spoke to NRC senior leaders a few months ago and I told them: It’s time to ask ourselves Do we really need that rulemaking? Do we really need a particular request for additional information? Is a certain process really necessary? Is our approach leaning too far in the direction of seeking “zero risk” a standard that is not attainable and, as a reminder, not our legal mandate?

I believe the regulator must continue to be assertive, focused above all else on safety and security, but we can still examine what we do in a thoughtful and productive way. And we should always keep in mind that resources spent on activities with little safety or security benefit are resources that aren’t being spent on more important and risk-significant activities.

I believe this approach and a flexibility to meet new challenges will serve us well as interest in the advanced non-light water reactor grows.

Dr. Jennifer Uhle, the NRC's director of the Office of New Reactors, will share more detail with you later today, but at very high level -- within available resources, the NRC staff is pursuing a multi-part strategy to prepare for efficient and timely reviews of non-light-water reactor technologies. The staff recently completed the first draft of that strategy, entitled "NRC Vision and Strategy: Safely Achieving Effective & Efficient Non-Light Water Reactor Mission Readiness," it was presented to the Commission at a public meeting in June. The Staff is soliciting public comment on the document through September 9, 2016 and plans to issue the final document by the end of 2016.

As you may know, the President's FY 2017 budget request includes \$5 million in non-fee-recoverable activities to execute this strategy. If Congress appropriates this funding, it will help the NRC prepare for effective and efficient safety reviews of advanced reactor technologies.

My mention of this potential funding in March was dubbed "Orwellian doublespeak" by The New American. The author asserted the funding would be used only for "progress-stifling rules" that "haven't kept pace with next generation technology." Along those lines, Llewellyn King, who used to own the trade publication Energy Daily, wrote an op-ed last November underscoring his perception of the NRC. He described us as an agency so "sclerotic, pusillanimous and risk-averse that it has priced new reactors out of the possibility of being built in the U.S."

Let me be clear on this while being prepared to evaluate these applications admittedly presents some challenges for the NRC, I believe the agency has the capacity, and the necessary licensing and oversight authority and the will to review any such applications we receive under our existing framework. And to conduct such reviews in a way that meets our mission and our responsibility for us to function as an independent, credible regulator. Our role is not to be a rubber stamp for any idea that might be floated. Rather, we should be asking tough questions but the right ones about new technologies for which our affirmation of safety is sought.

To that end, we're working closely with Department of Energy (DOE) and the industry to prepare for future small modular and non-light water reactor technologies. I should also mention that any new non-light water reactors designs that come to us won't be entirely without precedent.

The Atomic Energy Commission or AEC, our predecessor agency, licensed three sites using non-light water approaches Fermi 1, a sodium-cooled fast reactor which operated from 1963 to 1972 and two high-temperature gas reactors at Fort St. Vrain and Peach Bottom 1, which operated from 1973 to 1989 and 1966 to 1974 respectively.

It has been done. I believe we can certainly do it again.

I should also remind you that the confluence of regulations, new technology and the nuclear power industry has always existed. The industry was born regulated. From its very beginning, as the vision of the peaceful atom was realized in nuclear power plants, a strong regulator was deemed essential to ensuring public health and safety through rigorous licensing and oversight of nuclear technology- however beneficial it might be. And the international paradigm for peaceful uses of nuclear energy, as expressed in the Convention on Nuclear Safety, emphasizes not only the operator's ultimate responsibility for safety, but also the importance of an independent, technically competent regulator.

As pointed out in the book *Hostages of Each Other* (1994), written by Joseph Rees about the birth of the Institute of Nuclear Power Operations, “the nuclear industry is no stronger than its weakest link.” This insight had particular meaning domestically after the Three Mile Island accident. Now, though, I believe this to be true on a global scale. You’ve all heard the phrase – a nuclear accident anywhere in the world is a nuclear accident everywhere. We also know the fallacy of the “it can’t happen here” mentality and the danger of complacency. I believe Fukushima Dai-ichi underscored the principle that you must continue to be systematic in addressing external hazards, human performance, and operational contingencies and must always take a questioning attitude in support of safety and security.

As the regulator, this applies both to how we provide oversight to the operating fleet and how we review new license applications. Thorough, systematic, reliable independent oversight is vital for our credibility; it’s what engenders trust. It gives the public confidence that we are, indeed, protecting health and safety and the environment. And frankly, I believe it is clear that over its 40 year history, NRC has lent stability to the regulatory environment that has ensured the safe, secure use of nuclear power within that framework, and that the industry can function and innovate now and in the future.

But I don’t believe our regulatory independence means isolation. We need to continue to communicate and recognize that safety and security is the mission of both the NRC and the industry.

So might I suggest that the nuclear industry continue to engage with DOE and NRC as we go forward, as cooperatively as possible with due attention to our different roles, with our shared value of safety foremost in our minds and actions. I believe that within that paradigm, there is plenty of room for innovation and the appropriate management of risk – both on your side and on ours.

That said, I should mention that the NRC recognizes the challenges posed by the economics facing the nuclear industry. Those challenges are leading to announced closures of some plants in the United States, which is being echoed around the globe. To some degree, as the regulator, the economics of nuclear power affects us only insofar as the plants have the necessary funding to safely and securely operate and maintain the facilities in accordance with NRC requirements. In other words, regardless of economics, licensees cannot cut corners when it comes to safety. Cost cannot be a factor when establishing regulations deemed “necessary for adequate protection.” But cost can be considered with safety enhancements and, in fact, the enhancements must result in a substantial increase in overall safety to justify the costs.

In response to its economic challenges, the industry unveiled a multi-year nuclear industry initiative in late 2015 to identify efficiency measures and adopt best practices and technology solutions to improve operations, reduce generation costs and prevent premature reactor closures. The industry has stated that they believe their initiative, referred to as “Delivering the Nuclear Promise,” is similar to and compatible with the NRC’s Project Aim initiative. Project Aim was launched by NRC in 2014 to enhance the agency’s ability to plan and execute its mission while adapting in a timely and effective manner to a dynamic environment. And, yes, Project Aim has led us to identify efficiencies and areas in which we are able to reduce our staffing and funding with no adverse impact on safety. These savings have been reflected in our budget for the current and coming years.

As I have often emphasized, adequate protection is not zero risk. The bottom line is always “how much risk are we willing to take?” How much risk is acceptable? How safe is safe enough? New requirements or proposed regulations need to clearly show a nexus to the agency’s goals and be truly necessary to achieve those goals.

I believe the Commission must find a balance that ensures regulations are neither too lax nor too burdensome. The NRC needs to be a predictable and stable (but not static) regulator consistent with its Principles of Good Regulation: Independence, Openness, Efficiency, Clarity, and Reliability.

I’m going to stop now and take your questions. Again, thank you for inviting me to speak with you today.