Indira Gandhi Center for Atomic Research
Remarks by Chairman Stephen G. Burns
Chennai, India
November 9, 2016

Thank you for inviting me here to speak with you today. It is a pleasure to see you and I'm pleased for the opportunity to speak before you. Thank you to Director Bhaduri

Let me start today by talking a bit about my background and the structure of the U.S. Nuclear Regulatory Commission, as well as my role as Chairman.

I'd also like to touch on the situation currently facing the U.S. nuclear power industry. The NRC and the industry are in a period of dynamic change. Just a few years ago, we were preparing for a tremendous upswing in interest in building and operating new nuclear power plants, and the NRC began hiring more staff. For a variety of reasons, that wave has been more of a trickle. And while we do have some new plants under construction and several applications in various stages of review, it's not nearly what had been anticipated.

At the same time, the economics of the energy sector have significantly changed. We're seeing an acceleration in plants closing and entering decommissioning long before their licenses expire. With the low cost and abundance of natural gas, producing electricity via nuclear power simply isn't profitable in some areas of the country. Some argue that the market under-values nuclear energy capacity.

More on that in a moment.

Also, as you know, the NRC has also done quite a bit of work related to lessons learned from the Fukushima Daiichi accident, and I'd like to highlight that work. Finally, I'm going to talk a bit about what is facing us in the future – the possible future of advanced and small modular reactors.

As some of you may know, I had a long career as an attorney at the NRC. I retired in 2012 after 30+ years – a career that spanned many of the nuclear industry's biggest challenges, including navigating the aftermath of the Three Mile Island accident and the terrorist attacks of Sept. 11, 2001.

From the NRC, I moved "across the pond" and served as Head of Legal Affairs of the Nuclear Energy Agency (NEA) of the Organisation for Economic Co-operation and Development in Paris. However, I was nominated by President Obama, and confirmed by the U.S. Senate as an NRC Commissioner in late 2014. After but a few months, the President appointed me Chairman. It is an exceedingly rare journey for a career staffer at the NRC.

The NRC is headed not by a single administrator, but by a group of five Commissioners who serve staggered five year terms, so one Commissioner is ending their tenure every June 30th, unless re-nominated. The designation of a Commissioner as Chairman is solely at the discretion of the President.

As Chairman, I have equal responsibility and authority in all decisions and actions of the Commission as do the other Commissioners. I do have some additional responsibilities as Chairman, though, including serving as the agency spokesperson.

At the moment, we have two openings on the Commission, but we can function just fine as a three-member body. We would anticipate those openings being filled at some point in the new administration's tenure. However, I have no more information on that timeline at the moment.

What has been on my plate since returning to the NRC?

Since I began as Chairman, the Commission has held mandatory hearings, evaluated the staffs' reviews and authorized issuing combined licenses for five new reactors at three different sites. Just a few weeks ago, the newest unit, at Watts Bar in Tennessee, came fully online.

Meanwhile, one energy company has already announced they will be seeking what we call a subsequent license renewal application for a second 20-year renewal to its operating license. If approved, the plant's reactors could continue in operation until the 2050s.

Late last year, another company also announced that it expects to submit a subsequent license renewal application for one of its sites.

However, as applications for new units are docketed or licensees seek to extend their licenses, others are closing or indicating their intention to do so. I believe this well illustrates the "push pull" inherent in the industry.

Nineteen reactors are currently shut down with six in active decommissioning. The remaining 13 are in SAFSTOR, often considered "deferred dismantling." In this state, a nuclear facility is maintained and monitored in a condition that allows the radioactivity to decay; afterwards, the plant is dismantled and the property decontaminated.

Six reactors have announced they will be shutting down in the next three years, including Fort Calhoun in Nebraska, which ceased operation just last month.
However, indicating the uncertainty that exists in the sector, one plant appears to be reversing course and may remain operational under different ownership, pending NRC review of the license transfer application.

I'd like to note that 10 power reactor licenses have been terminated after decommissioning and meeting NRC criteria for unrestricted use of the land. It is safe to say that reactor decommissioning is – and will remain for some time – a dynamic area for the NRC.

Even five years later, I believe no discussion of nuclear power is complete without talking about lessons learned and implemented since the accident in Japan.

The most safety significant enhancements and the physical resources the NRC required for the U.S. operating fleet will be largely completed, acquired, integrated or installed by the end of the year.

I've had a chance to see what the U.S. nuclear industry has done at the more than a dozen sites I've had the opportunity to visit over the past two years. I've also seen firsthand one of two fully operational national response centers that resulted from an industry response to the accident.

The national response centers contain extra equipment to duplicate plants' emergency diesel generators, pumps, hoses and so on in each of two regional locations.

This equipment would maintain plant safety functions for an indefinite period if an event disabled a plant's installed safety systems. These are impressive and important improvements.

The NRC's next step is inspecting the work that has been done and ensuring the plants maintain their progress. We are adapting our inspections and other processes to cover these enhancements, and updating our assessment process.

We are now incorporating the Fukushima-related work into our ongoing inspection and oversight processes.

In addition, the NRC has concluded that many of the lower-priority lessons learned have already been addressed by other actions and research.
The staff is developing a paper with a path forward for resolving the remaining lower-priority recommendations, with plans to deliver it to the Commission by the end of this year.

As I've said before, I firmly believe U.S. plants are better prepared for extreme events now than they were in 2011.

Even as the industry sees the closure of some plants and the reduced interest in new, full-sized light water reactors, there is considerable energy around small modular and new non-light water reactor designs.

The NRC is working closely with U.S. Department of Energy (DOE) and the industry to pursue a multi-part strategy to prepare for efficient and timely reviews of non-light-water reactor technologies. The strategy was presented to the Commission in June and was open for public comment through early September. We expect the final document to be issued by the end of the year.

There are challenges inherent in preparing to review novel designs; for example, our obligation to receive fees for work done on applications. But we can be certain that the NRC will be fully ready to meet any challenge posed by new reactor applications.

And of course, no matter what we are discussing – with new reactors being built, new designs being conceived, existing plants being closed – the U.S. Nuclear Regulatory Commission upholds its important safety mission on behalf of the American people. It's our job and we do it willingly and well.

Thank you again for giving me the opportunity to speak with you today.