

**U.S. Nuclear Regulatory Commission
Chair Christopher T. Hanson
Remarks for the
Mexican Nuclear Society Conference
November 14, 2022
(As prepared and not presented)**

Good morning, buenos días. It's my pleasure to join you here in beautiful Veracruz at this 33rd meeting of the Annual Congress of the Mexican Nuclear Society. It's particularly meaningful for me given the recent entry into force of the U.S.-Mexico Agreement for Cooperation in Peaceful Uses of Nuclear Energy and the impending 200-year anniversary of the establishment of diplomatic relations between the United States and Mexico.

Mexico is one of the United States' most vital partners, and I'm pleased to be with you to voice my strong support for this relationship and in particular, for our cooperation in civil nuclear energy and safety.

As many of you may be aware, the NRC has a longstanding relationship with our regulatory counterpart in Mexico, the National Commission for Nuclear Safety and Safeguards. In fact, Director General Nuñez-Carrera and I will have the pleasure of renewing our bilateral arrangement, first signed in 1981, here on the margins of the Annual Congress.

With this occasion in mind, I'd like to focus my remarks today on a few topics of mutual interest to both the NRC and CNSNS: the role of the regulator, nuclear power plant license renewal and aging management, and the importance of international cooperation.

My hope is that my remarks will give you some insight into the NRC's posture in the ever-changing nuclear landscape as well as lead to a dynamic and engaging question and answer session.

Ukraine

Like all of you, I have been monitoring the situation in Ukraine with grave concern. My heart goes out to the people of Ukraine in this increasingly desperate time. The Russian Federation's violation of Ukraine's sovereignty, independence, and territorial integrity is a tragedy with wide-ranging impacts. The unprecedented nature of Russia's actions on Ukrainian nuclear safety, security, and safeguards hits especially close to home for the NRC.

The NRC will continue to remain engaged with its U.S. Government colleagues and the IAEA to monitor the situation at Ukraine's nuclear power plants and lend assistance to our Ukrainian regulatory partners. We will continue our long-standing support to Ukraine as it works to protect, sustain, and—if needed—restore the safe and secure operation of its nuclear facilities.

Regulatory Independence

I'll begin with a topic that's extremely important to me as the head of a regulatory agency—regulatory independence. First, a little history. Since its creation almost 50 years ago, the NRC has functioned as an independent agency that regulates the safety and security of civilian nuclear installations and radiological materials in the United States.

This was a deliberate decision, as prior to 1974, the NRC was part of the Atomic Energy Commission, or AEC, an organization with an expansive role that included funding and promotion of nuclear power in addition to regulatory responsibilities.

When Congress reorganized the AEC, the promotional and oversight functions were separated. The U.S. Department of Energy took on the promotion and development of nuclear energy. And the Nuclear Regulatory Commission was given a singular focus—safety—separate and apart from the Department of Energy.

The basic principle of independence is key to allowing the NRC to prioritize the protection of public health and safety and the environment while it oversees the U.S. nuclear fleet and civilian uses of radiological materials.

Our agency does not have a stake in the success or failure of facilities we regulate, and that allows us to fulfill our important mission without distraction or bias. Independence from the nuclear industry and other parts of the government allows us to maintain public trust, a critical element of a successful, trusted regulator.

Adequately Resourced Regulators

The NRC's financial structure also sets it up to be independent. Our funding is separate from the U.S. Department of Energy or any other Executive Branch agency. We primarily collect fees from licensees and applicants, receiving only a small percentage of our overall budget from the U.S. Congress. This allows us to make safety and security decisions with fewer opportunities for bias and politicization.

I know that having a secure source of adequate funding is a challenge for many of the NRC's regulatory counterparts, particularly in countries with relatively small programs. Being adequately financed is key to our success; without an assured financial base, we would be unable to hire the right experts to enable us to accomplish our critical nuclear safety and security mission.

Having a workforce that has relevant technical experience and significant knowledge in the areas we regulate is crucial to allowing the agency to function.

I know this is a key area of focus for my Mexican colleagues and I applaud the work of our counterparts at CNSNS in workforce planning and retention, which is crucial to the success of any nuclear regulatory program.

The NRC is not alone in the view that an independent, adequately resourced regulatory body is key to maintaining a safe and secure nuclear power program—this concept is found in International Atomic Energy Agency and Nuclear Energy Agency best practice guidance and reflected in the structure of competent regulators with proven safety records worldwide.

Coordination

Independence, however, does not mean isolation. We work closely with the U.S. Department of Energy and other branches of the U.S. government to maintain awareness of promotional activities and current political and market influences on the nuclear industry.

We also coordinate with different stakeholders to gain feedback on our processes and regulatory structure. This allows us to be prepared for changes and adapt when we need to. It also helps us assure we do not create unnecessary impediments to nuclear development and innovation. This is particularly apparent right now in our work on advanced reactor technologies and small modular reactors.

Our coordination includes engagement with the nuclear industry—especially on complex technical issues that affect the broader nuclear fleet in the United States. The NRC is currently engaged with numerous small modular and advanced reactor developers. We have reviewed and approved one SMR design certification, we are reviewing an advanced reactor construction application, and we are engaged in very useful pre-application engagements with several other developers.

There is a lot of attention on new technologies, but I am not going to go into detail on them today. Instead, given some of the themes in this week's conference, I want to spend some time on the regulation of the long-term operation of existing nuclear power plants.

Operating Reactor License Renewal

In the United States, nuclear power plants are initially licensed for a 40-year period. If a utility would like to operate beyond this initial license, it must apply to the NRC for a license renewal for an additional 20-year period.

If the utility is then interested in continuing operations past the initial 20-year license renewal, that is, from 60 to 80 years, they then need to apply for an additional 20-year license—what the NRC refers to as a subsequent license renewal, or SLR.

The NRC staff received its first SLR application in January 2018, and has received SLR applications for 15 plants since. We've issued subsequent license renewals for 6 units at 3 sites, and the NRC staff is currently completing the remaining reviews.

Based on discussions we've had with licensees, SLR applications will continue to be submitted to the NRC in the coming years, keeping our staff busy for some time.

The NRC's SLR reviews make safe long-term operation of nuclear power plants possible by focusing on key technical issues to manage the effects of aging. We've found that clear and direct communication with licensees is key for this process, considering the detailed information the licensee must submit to the NRC for review.

The NRC's SLR review is not solely focused on technical analysis. An environmental review must be performed by NRC staff to assess the impact of the action on its surrounding environment. The NRC staff has begun rulemaking activities to update NRC environmental review guidance to explicitly address SLR.

We oversee all operating U.S. plants, including those granted subsequent license renewals through our risk-informed, performance-based inspection and oversight program. Our reactor oversight process is a mature and effective program with over two decades of operational experience and inspection data. We continue to make improvements to further focus our inspection resources on areas of greatest safety significance, taking risk into consideration. The evaluation of aging management programs continues to be at the forefront of NRC activities to ensure the continued safe operation of reactors operating beyond 60 years.

I will note that the NRC has had several technical exchanges on this complex topic with CNSNS, and I appreciate their willingness to share their experiences. We welcome the opportunity to further engage with our counterparts in Mexico on long term operation.

International Cooperation

With this cooperation in mind, I'd like to conclude with a few thoughts on the value of international partnerships. I firmly believe that international cooperation is vital to the success of a nuclear regulator's domestic safety mission—this cooperation helps us learn from one another, ensures timely sharing of operating experience, and advances global nuclear safety, security, and nonproliferation goals.

To help guide the NRC's international work, we publicly released our International Strategy for 2021-2025 last year. The Strategy's overall goal is to foster and maintain collaboration with international counterparts and multilateral organizations to positively influence global and domestic nuclear safety and security.

I strongly believe in the Strategy's objectives, and our current international activities are prioritized with these objectives in mind. The NRC is actively engaged in a wide range of bilateral and multilateral activities that we believe contribute to enhancing the safety and security of nuclear activities worldwide.

These activities range from personnel exchanges with mature regulators to providing capacity building assistance to embarking nuclear power countries to NRC participation in highly technical multilateral working groups. All these activities help us learn from one another and build lasting connections.

Lately, the NRC's collaboration with the Canadian Nuclear Safety Commission on small modular and advanced reactors has gotten a lot of attention, and our collaboration will continue with other countries pursuing new technologies. But the NRC's collaboration with its partners has been consistent for decades, which enables us to take on these new challenges.

I have made international engagements a priority—and particularly engagement with our regional partners in Latin America and the Caribbean on the peaceful uses of radioactive sources for human health and development.

I believe that by working with our regional partners, such as CNSNS, we can further not only our own domestic programs by sharing valuable information regarding institutional safety and security priorities, but also continue to meet our shared safety and nonproliferation goals around the world.

I will continue to strongly support regional engagement with our regulatory counterparts and encourage you to do the same—both bilaterally and multilaterally.

With that I will conclude my remarks by once again thanking you for the invitation to address you today; this is my first official trip to Mexico as Chair of the NRC, and I could not think of a more appropriate event to start my time in country.

I welcome any questions you may have. Thank you.