



UNITED STATES NUCLEAR REGULATORY COMMISSION

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Commissioner Christopher T. Hanson
(as prepared and not as presented)**

INTRODUCTION

Hello and welcome to everyone who is here today. I will add my congratulations to Chairman Wright on his appointment. I want to thank the Chairman and my fellow Commissioners for their continued collegiality. Our ability to work together and move forward even when we disagree is critical to the functioning of the agency and our ability to meet challenges head-on.

As always, I would like to start by thanking my team for their wise counsel, unwavering dedication, and good humor. My sincerest thanks to: Molly Marsh, Jessie Quintero, Olivia Mikula, Tony Nakanishi, Lisa Dimmick, Kathleen Blake, Mandy Mauer, Patty Jimenez, Caty Nolan, Becca Susko, and Ken Armstrong.

Further, I would be remiss if I did not thank the many people who worked tirelessly to assure the success of this conference. To the Regulatory Information Conference planning committee and our many staff volunteers, thank you.

As I have for the last three years, I want to recognize our Ukrainian colleagues here today. I continue to be in awe of your strength, courage, and determination in the face of horrific, unwarranted, and illegal aggression. I continue to stand with you, and I remain personally committed to assisting the State Nuclear Regulatory Inspectorate of Ukraine as you build a future that includes a free and fully restored Ukraine.

Last year, I said “[r]eflexively doing things the way we have always done them is not going to work. I expect every leader in the NRC [Nuclear Regulatory Commission] to look closely at the ‘why’ of our policies, processes, and procedures and then develop more efficient and effective ways to accomplish our safety mission while making room for the increased scope of work.” I still believe that, and I’ve seen lots of signs the NRC staff believe it too.

But let’s be clear, efficiency has been part of this agency’s story from the very beginning—featuring prominently in the NRC’s very first report to the Executive Branch in 1975 and evolving over the last 50 years to move us forward. You have heard all this, including from me, a few times over.

A speech focused solely on the changing energy landscape risks missing the full import of our current moment. Everyone in this room understands that we are living through a consequential time, one with implications far beyond nuclear.

So instead of making the case for change this year, I am going to make a case for the things that need to stay the same while we change. For upholding the principles that are critical to institutions like the NRC. Because we cannot hope to meet our future at full strength if we lose sight of what is really important.

As Ronald Reagan said, “[g]ood citizenship and defending democracy means living up to the ideals and values that make this country great.” We are a Nation of ideals, and these ideals permeate the work we do every day.

The very first law passed in 1789 by the United States Congress established an oath of office for civil and military officials. It was very simple: “I do solemnly swear that I will support the Constitution of the United States.”

Today’s version dates back to the Civil War and Reconstruction. Every public servant and current or former military member surely remembers their very first day of service, and the oath they took:

I do solemnly swear that I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties of the office on which I am about to enter. So help me God.

I have a picture hanging in my office of my swearing in ceremony when I recited that oath, through a mask, at the very beginning of my time at the NRC. It serves as a pointed reminder of the duties that accompany the position with which I continue to be honored.

My speeches over the last almost five years seem to keep returning to a few key themes—the importance of institutions, service, diversity and inclusion, public trust, and confidence. I want to continue to build on these today because they are more important than ever.

Indeed, my very first RIC speech, delivered in an empty room due to pandemic protocols, was fundamentally about the importance of the institution that is the United States Nuclear Regulatory Commission. I was, and continue to be, an institutionalist. And I also believe institutions need to be in a constant process of reform. We are humans after all, and our institutions often reflect back on us our frailties, prejudices, and short-sightedness. Part of the moment we find ourselves in as a country is a product of some institutions’ failures to adapt and meet our country’s needs.

Yet, flaws and all, institutions provide a structure for human endeavors large and small, transmit values and norms, and they are stable, lasting, and consequential when they stay true to their foundations. It is up to us to make sure that the institution that is the United States Nuclear Regulatory Commission both evolves to address the current moment in our energy landscape and maintains its core values as we chart a course forward.

What are the foundations of our agency, exactly? Let us look directly at President Gerald Ford's statement accompanying the passage of Energy Reorganization Act of 1974, the Act that created the NRC: "[t]he highly technical nature of our nuclear facilities and the special potential hazards which are involved in the use of nuclear fuels fully warrant the creation of an independent and technically competent regulatory agency to assure adequate protection of public health and safety."

In taking a cue from President Ford—as fine a son of Michigan as any—I want to discuss three key elements in more detail—independence, technical competence, and protection of the public.

INDEPENDENCE

First, independence. As a five-member, bipartisan Commission, the agency was deliberately structured by Congress to promote independence from outside influences that might turn the focus away from safety. This was a purposeful lesson learned from the days of the Atomic Energy Commission and implemented through the creation of the NRC. As President Ford stated shortly before the newly minted NRC opened its doors in 1975, "[t]his new Commission will devote its full attention to assuring the safety as well as the reliability of this critically important source of energy."

Later, in 1991, the agency adopted the Principles of Good Regulation seeking to affirm those behaviors that would "ensure that our regulatory activities are of the highest quality, appropriate, and consistent."

The first of these principles is Independence. It reads: "[n]othing but the highest possible standards of ethical performance and professionalism should influence regulation."

And just in the past year, we received direction from Congress in the form of the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act, once again confirming this principle of independence. Congress directed us to update the agency's mission statement consistent with the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974 and notably did not change the NRC's fundamental safety mission or expand our authority.

Often emulated around the world, our independent structure allows us to ask hard questions and make lasting, defensible decisions. It allows us to appropriately regulate with safety as the focus, assuring not only that we fulfill our obligation to keep the public safe, but also provide civilian nuclear energy with a social license.

However, as our Principles of Good Regulation caution, independence does not mean isolation. The energy landscape has changed significantly over the last five decades. And to make the best decisions possible, we cannot ignore the state of the world around us. Nuclear safety and security do not stop at national borders.

Our country has a long history of collaboration with our global partners. The Atomic Energy Act of 1954 anticipated international partnerships. Section 101 of the ADVANCE Act recognizes the importance of continued engagement on the world stage, like sharing information and contributing to exchange programs and cross-border training initiatives.

Long before the NRC came into being, the United States recognized a very important need. The need to come together, not just as one Nation, but as people of the world to promote the safe use of nuclear energy for peace. In his seminal “Atoms for Peace” address to the United Nations in 1953, President Dwight Eisenhower said:

It is with the book of history, and not with isolated pages, that the United States will ever wish to be identified. My country wants to be constructive, not destructive. It wants agreements, not wars, among nations. It wants itself to live in freedom, and in the confidence that the people of every other nation enjoy equally the right of choosing their own way of life.

Eisenhower was not just making a promise to America about the kind of leadership he sought to promote. He was making a promise to the world, a promise to promote peace and prosperity for all.

One of my favorite stories about the work we do here at the agency shows how this promise has been carried forward. The New World Screwworm is a parasitic fly that is attracted to open wounds on any warm-blooded animal. When its eggs hatch, the larvae burrow into living tissue for development.

Many of us do not know anything about screwworms or the level of devastation they can cause to livestock. I certainly did not before my trip to meet our regulatory counterparts in Panama. The reason that most people in the U.S. do not know anything about the screwworm problem is because this destructive parasite has been functionally eradicated from North America for over 60 years.

How? Innovation, international collaboration, and a shielded cobalt-60 source the size of a coffee can. Since the early 1960s, the United States has partnered with the countries between our southern border and Panama to gradually eradicate screwworms in North America.

Today, in a joint effort between the United States and Panama, millions of larvae made sterile by that cobalt-60 source are released over the Panama-Colombia border monthly. About \$15 million in U.S. funding saves billions of dollars in agricultural damage each year.

The source is licensed by the Panamanian regulator; the license is right there on the wall in the chamber where the sterilization happens, signed by the Minister of Health. I’m proud that the NRC has supported the regulator in radioactive source tracking, inspections, and licensing over the last two decades.

As Eisenhower put it: “[i]f a danger exists in the world, it is a danger shared by all—and equally, that if hope exists in the mind of one nation, that hope should be shared by all.”

In the spirit of President Eisenhower’s promise in his “Atoms for Peace” speech, the NRC has positioned itself as a global leader in nuclear safety and security. We have done this by

sharing our decades of experience, by creating relationships with regulators around the world, and by offering assistance when possible. We may be independent, but independence does not dictate that we abandon our post and leave behind the promises we have made to the world.

TECHNICAL COMPETENCE

Second, technical competence. In my first RIC speech I talked about the importance of following the data and linked data to our safety mission. Following the data is the best way to assure a safety organization maintains its focus. But to be valuable, data must be collected, interpreted, and applied appropriately to regulatory decisions.

The legacy of knowledge that this agency has built up over five decades is one of our greatest assets. That body of knowledge gives us confidence in our technical abilities at all levels so that we can leverage our vast intellectual capital to make better, smarter, more efficient, and more durable regulatory decisions.

We like to refer to risk-informed thinking as a new and innovative concept.

Certainly, risk-informed thinking leads to innovation. Risk-informed categorization of structures, systems, and components; technical specifications; and completion times are all great examples of regulatory advances that were developed through risk-informed thinking.

But it is not really new. Risk-informed thinking has been around from the very beginning of this agency. The premier example being WASH-1400, the original Reactor Safety Study from 1975. WASH-1400 was initially treated with skepticism by the nuclear community.

The accident at Three Mile Island ultimately confirmed small loss-of-coolant accidents and operator error as potential contributors to a meltdown risk, as predicted by WASH-1400. It was only then that Probabilistic Risk Assessment (PRA) started to gain traction.

Decades of experience with PRA have led us to where we are now – considering a licensing framework for advanced reactors, known as Part 53, that stands on this incredible legacy. The approach presented in Part 53 didn't just come out of nowhere. It is the logical and direct outcome of decades of work on the use of risk information and insights, allowing a flexible alternative for applicants to consider alongside our existing deterministic frameworks.

With a changing nuclear landscape, the agency is facing more and more questions that do not have a past reference. These novel issues require a workforce that can problem solve, evolve, change, and challenge norms. A workforce that not only has the tool kit but has the imagination and the confidence to use it.

Risk-informed regulation is really about characterizing uncertainty. There is necessarily a lot of professional and personal judgment implied in that. Data is critical, but we all know data can be interpreted in a wide variety of ways. Having staff of diverse backgrounds and viewpoints helps ensure that uncertainties are fully understood and characterized.

Let me be even more clear. Risk-informed regulatory approaches not only benefit from diverse viewpoints and backgrounds, they require them. As Tim Berners-Lee, the inventor of the

World Wide Web simply put it, “[w]e need diversity of thought in the world to face the new challenges.”

During my time here at the NRC, and like my colleagues, I have made it a priority to visit as many universities as possible during my travels. In one of my trips, I visited Alabama Agricultural & Mechanical (A&M) University, an institution with an incredible science, technology, engineering, and mathematics programs, and a history of strong values—born out of the example of its resilient founder and former enslaved person, Dr. William Hooper Councill.

While visiting the campus, I spoke directly with bright and ambitious students and made the recruitment pitch for our agency. Basically, I argued that the energy challenges our country faces requires an “all-hands-on-deck” approach, that investment in, and partnership with, the widest possible range of colleges and universities is required to solve the big issues in front of us.

Most students at Alabama A&M assumed that nuclear engineering was a prerequisite for work at the NRC, and it was in talking to a student reporter covering my visit that I realized the need to articulate the full scope of what we do and the people we hire. Health physics and engineering degrees are obvious necessities, but we employ people with experience in environmental studies, communications, human resources, and finance. Doctors and lawyers. Geologists and seismologists.

Diversity—diversity of experience, diversity of thought, diversity of perspective—it is not a nice-to-have; it is not ideology. Diversity is essential to meeting our safety mission and to maintaining a robust nuclear safety culture.

We define safety culture as the core values and behaviors resulting from a collective commitment by leaders and individuals to emphasize safety over competing goals to ensure protection of people and the environment. Starting in 1989, the Commission recognized the importance of safety culture, first in the context of control room operator behavior and later throughout the entire nuclear industry.

We want our own staff to feel comfortable sharing their perspectives and raising concerns. We want to promote an environment that is open and transparent so that we can make durable, lasting decisions. I think diversity plays a key role in creating this environment. When we value diverse perspectives and welcome differing views we demonstrate our commitment to safety. We give our staff the same message we expect licensees to give to their own employees.

My point is a simple one. We need diversity because we need a technically competent workforce that can adapt, that can think differently, and that isn’t afraid to raise a safety concern.

PROTECTION OF THE PUBLIC

That brings us to our last topic, protection of the public. The heart of our agency’s mission.

Our mission, at its core, is based in protection. While the ADVANCE Act recently directed the agency to update its mission statement as I previously stated, this did not change our safety and security focus as an independent agency. Our main avenue for upholding this promise

to the Nation is through our regulatory structure, applying it in a clear and reliable manner and adapting it appropriately as times change.

We are seeing an influx of interest in advanced reactors, accident tolerant fuels, and fusion machines. Although we have a legacy of knowledge to build on for these new areas, we still need to lean forward in our thinking, while maintaining that all-important balance that keeps us grounded.

I am particularly proud of the staff's recent successes associated with the review of non-light water reactor applications, including the streamlined review of the construction permit for Kairos Hermes 2. And the construction permit issued to Abilene Christian University to build the nation's first molten salt university research reactor. Our staff demonstrated the technical competence to review these applications efficiently and effectively while adhering closely to our mission of public health and safety.

In recent years, over 90 percent of the NRC workforce indicated that it is important to them that their work contribute to the common good. Over 80 percent indicated that they identified with the NRC's safety and security mission. The public servants at this agency are drawn to the work of the NRC because they are completely dedicated. We are here because we believe in something larger than ourselves.

Contrary to the baseless and negative narrative about public servants circulating out there, our unflappable staff made major headway in the past year:

- We issued two advanced reactor construction permits.
- We significantly streamlined our mandatory hearing process.
- We signed civil nuclear cooperation agreements with Thailand and Singapore.
- We issued several license amendments for increased enrichment and High Assay Low Enriched Uranium.
- We approved License Termination Plans for multiple facilities.
- We accepted the first advanced reactor power construction permit. application to date and issued the associated safety evaluation report ahead of schedule.
- We issued three operating reactor license renewals.
- We've been hard at work meeting ADVANCE Act milestones – completing deliverables on schedule.
- We issued the proposed Part 53 rule for public comment, continuing our engagement with stakeholders.
- We are working to further streamline our environmental reviews for new reactor applications.
- And we issued a proposed rule that would increase flexibility for advanced reactors by allowing for alternative physical security requirements.

That is just the tip of the proverbial iceberg. Condoleezza Rice said, “[t]here’s no greater challenge and there’s no greater honor than to be in public service.” We owe it to our employees to make them feel valued and to encourage them to keep up the work they do every day.

To the dedicated NRC public servants that show up every day to protect the public: thank you for your service. Your country needs you.

CONCLUSION

Bruce Springsteen said, “[t]he great challenge of adulthood is holding on to your idealism after you lose your innocence.” Or in this case, the challenge of maintaining a lasting institution is assuring that even as things change over time, the foundations stay the same. So, let us try this again.

I do solemnly swear that I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose of evasion; and that I will well and faithfully discharge the duties of the office on which I am about to enter. So help me God.

There is so much power in these words. They unite us on a deep level.

Last year in my speech I made a pitch for optimism. I said that “optimism is a choice to move forward with the confidence that we can overcome the challenges of our day—the belief that we can leverage our history and apply the lessons we have learned to keep striving to build a better future.”

Today I spoke about living up to our ideals, about staying true to the foundations of our institution. I defend independence, technical competence, and protection of the public because I am optimistic for our future. Because I believe that these principles are worth preserving. Because my years of experience working alongside the public servants of this agency—with their high standards, strong sense of purpose, and unwavering dedication—give me confidence that the incredible legacy of the NRC will continue for another 50 years.

I leave you with a quote from Harry Truman: “America was not built on fear. America was built on courage, on imagination and an unbeatable determination to do the job at hand.”

I am honored to work with an agency full of people that exemplify this every day.

Thank you.