

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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35TH REGULATORY INFORMATION CONFERENCE (RIC)

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OPENING SESSION

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TUESDAY,

MARCH 14, 2023

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The Plenary Session convened at the Bethesda North Marriott Hotel and Conference Center, located at 5701 Marinelli Road, North Bethesda, Maryland and via Video Teleconference, at 8:00 a.m. EDT, The Honorable Christopher T. Hanson, Chairman, NRC, presiding.

PRESENT:

CHRISTOPHER T. HANSON, Chairman, NRC

ANDREA VEIL, Director, Office of Nuclear Reactor Regulation, NRC

RAY FURSTENAU, Director, Office Nuclear Regulatory Research, NRC

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P-R-O-C-E-E-D-I-N-G-S

(8:03 a.m.)

MS. VEIL: Good morning, or afternoon, or evening to our Board, to our attendees, and welcome to the 35th Regulatory Information Conference. I'm Andrea Veil, Director of the Office of Nuclear Reactor Regulation, or NRR. It's really a great honor to be here today and to have this opportunity to welcome everyone on behalf of the U.S. Nuclear Regulatory Commission.

This year's RIC is the first hybrid conference, and our theme is Navigating the Nuclear Future. The RIC is one of the premiere regulatory conferences in the world, and the largest sponsored by the NRC. NRR cosponsors the RIC with our counterparts in the Office of Nuclear Regulatory Research, led by Ray Furstenau. We partner with the entire agency. And it really does take a village to develop what we hope is an engaging conference, which will address how we are navigating the nuclear future.

MR. FURSTENAU: Yes, thanks Andrea. You know, as we're standing up here, I think you might notice, I'm a bit taller than Andrea. But when we were looking at this yesterday, how to do this, Andrea won out. So the podium is lower than it -- but that's

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all right. You know, just like Andrea said, it's great to be here.

First time in person since 2019, and being able to see a lot of you that we haven't seen for a while, or seen virtually. And it's just a wonderful, wonderful turnout, both virtually and in person. And I'm really looking forward to the plenary sessions today, and the technical sessions we have in the agenda. So it's going to be a great week.

To get things started, we've got, I'd please ask you to rise for the presentation of the colors, by the military District of Washington Joint Service Honor Guard. And please remain standing for the singing of our National Anthem by Kimberly Waters.

And at the same time, it will be translated in American Sign Language by Alicia Mullins.

(Presentation of the Colors.)

(Singing of the National Anthem.)

MR. FURSTENAU: Well, thank you, Kimberly and Alicia. That was a wonderful way to start the day, so thanks. And thanks to the military District of Washington Joint Service's Honor Guard as well.

Next, I'd like to introduce the past Chairs and Commissioners who are here. And I recognize Dick Meserve. I think we talked just a

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couple of weeks ago. So you're always looking young.

So it's good to see you again. And Bill Ostendorff, and Jeff Merrifield, Bill Magwood, I know we've had Steve Burns also registered. I don't see him today, yet. And also, George Apostolakis, maybe they're on virtually. So welcome and we really appreciate that you're still involved in nuclear safety activities. And thanks for your service to the NRC.

MS. VEIL: And thank you, Ray. And thank you for deferring to those who may be short, but mighty. So I do thank you.

This year's program is comprised of two and a half days, which feature morning keynote plenary sessions, followed by sets of concurrent technical sessions, addressing a broad range of topics, both domestically and internationally.

We open this year's RIC with an opportunity to hear from our NRC Chair, the Honorable Christopher Hanson. This morning's sessions will also feature a special plenary from Mr. Rafael Mariano Grossi, Director-General of the International Atomic Energy Agency, and plenary sessions from our Commissioners, the Honorable Jeff Baran and the Honorable David Wright.

Plenary sessions tomorrow, will include

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remarks from our Commissioners, the Honorable Annie Caputo, and the Honorable Bradley Crowell, and our Executive Director for Operations, Mr. Dan Dorman. Tomorrow will also feature a fireside chat with our NRC Chair, and Mr. William D. Magwood, IV, Director-General of the Nuclear Energy Agency. We have 24 technical sessions between the afternoons of today and tomorrow. So choose wisely, and manage your time. And also, on Thursday morning.

We're pleased to offer a hybrid RIC this year, and to be able to see so many of you face to face, or virtually. This is my first one in person, so this is a special honor for me. In addition, all of this year's sessions are being recorded and will be available for viewing on our website, after the conference.

I want to highlight just a few of those technical sessions, and some that will be chaired by our Commissioners and the EDO. So today at 1:30 p.m. Eastern time, Commissioner Crowell will chair the session on, Transformation and Modernization of NRC Environmental Review Processes, Meeting the Challenge.

And at 3:30, Chair Hanson will chair the session on, Re-envisioning the Next Generation of University Led Nuclear Innovation, which is a topic

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that's important to all of us.

Tomorrow at 1:30, Commissioner Caputo will chair the session on, Perspectives on Risk-Informed Licensing of Advanced Reactors. And at 3:30, Commissioner Baran will chair the session on, Empowering Advanced Nuclear Deployment with Non-power Reactors.

Thursday at 8:30, Commissioner Wright will chair the session on, The Future is Now, Case Studies on Nuclear's Role in Meeting Energy and Electricity Demands. And at 10:30, our EDO, Dan Dorman will chair the session on, International Collaboration on New Reactor Licensing.

It's so great to see so many of you here today -- oh, we have a double page. Ray, did you put a double page in here, just to make sure I'm paying attention --

MR. FURSTENAU: Just to throw you off a little bit.

MS. VEIL: And not just reading off of the page? You have two pages for us. That is unacceptable.

(Laughter.)

MS. VEIL: All right. I'm back, I'm back. This year's conference platform consists of 17

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digital exhibits. We also have tours of the NRC Emergency Response Center at 1:30, and today and tomorrow, and 8:30 a.m. and 10:30 a.m. on Thursday. I encourage everyone to check out the wide range of exhibit topics at your leisure, before and after our technical sessions.

On site attendees, can submit questions electronically, using the QR code from your mobile device. The questions will go to session chairs, for consideration and during the sessions open discussion.

Virtual attendees can also submit questions using a Q&A tab, similar to last year, via the conference platform. In addition, attendees can contribute to the discussion by participating in live polling in some sessions.

Our digital exhibits will have contact information, should you have questions or feedback from our staff. And I haven't been on the platform, but I really hope that music from last year has changed to some soft jazz or something, like a lot more inviting, than that really pumped-up music from last year.

So let me go over some housekeeping items and safety information. Upon entering the session room, please silence your devices, if you haven't

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already? For security reasons, we ask that you visibly display your badge at all times. We expect some sessions to reach to reach capacity, if so, participants will be directed to another session, when these rooms fill to capacity.

If you see something, say something. Report any suspicious items or activities to security, or RIC volunteer. Lastly, I really want to recognize the outstanding efforts of the various RIC committees over the past year, who organized this hybrid conference. I said it earlier, but it takes a village, and when one RIC ends, the next RIC starts in the planning. So, each year, planning and execution of this magnitude, is such hard work on top of everything else we're doing. So, I really want to thank the NRC staff, the contractor partners, and a wide array of panelists and speakers.

And now, I'd like to open this year's RIC with an opportunity to hear from our NRC Chair, the Honorable Christopher T. Hanson. Christopher Hanson was designated Chair, of the U.S. Nuclear Regulatory Commission by President Joe Biden, effective January 20th, 2021. He was sworn in as a Commissioner on June 8th, 2020.

Chair Hanson has more than two decades of

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government and private sector experience in the fields of nuclear energy. Prior to joining the NRC, he served in several roles, including staff member on the Senate Appropriations Committee, Senior Advisor in the Department of Energy's Office of Nuclear Energy, in the Office of Chief Financial Officer, and Consultant at Booz Allen Hamilton.

Chair Hanson earned Master's Degrees from Yale Divinity School and Yale School of Forestry in Environmental Studies, where he focused on ethics and natural resource economics. He earned a Bachelor of Arts Degree in Religious Studies from Valparaiso University in Valparaiso, Indiana. Please join me in welcoming Chair Hanson. We're all looking forward to your remarks.

CHAIRMAN HANSON: All right, let's see if I can -- there we go. How about that, it works and everything. Thank you all for being here. It is great to be with you in person this morning. And thanks again to Kimberly Waters for that beautiful rendition of our national anthem. She just did a wonderful job. And thank you also again, to Alicia Mullins for the sign language interpretation. And thank you again, welcome for all.

So it's official, now we know that Andrea

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and Ray are as funny live and on stage, as they are on the screen in TEAMS. And that's actually a good way to I think, cut all the nervousness this morning a little bit.

So this year's RIC also opens on a couple of other remarkable days. Today is Albert Einstein's birthday. And what better way to celebrate than by kicking off a conversation centering around technology and the future. It's also Pi Day, 3.14. So I also plan to celebrate later with a slice of pie. I come from a small town with an annual blueberry festival, so it's blueberry or nothing for me.

Thank you for attending this year's conference, it's great to see so many of you in person. Whether you're joining us virtually from your homes and offices across the United States and around the world or whether you're joining us here in person.

This year's event marks the first time we've gathered for the RIC in person at the same time the entire program is available live online. We're making history today, or at least RIC history. Thank you to Andrea and Ray, their teams, our production crew, and all the many others who made this first-of-a-kind RIC possible.

I'd also like to thank my colleagues on

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the Commission. We welcomed two Commissioners since our last RIC, bringing us to our full complement of five. We might not always agree, but we each bring something different to the table. And we're stronger as a collegial body for that. Thank you.

Like Ray, I'd also like to recognize the important NRC alumni in the audience. As he mentioned, Chairman Dick Meserve and Steve Burns, Commissioners Jeff Merrifield, George Apostolakis, Bill Magwood, and Bill Ostendorff. I and the other current Commissioners have benefitted greatly from your legacy and appreciate very much your ongoing engagement.

Finally, I would like to extend a special thank you to my staff---both my permanent staff and those who joined me on rotation. So thank you to Kathleen Blake, and Patty Jimenez, Molly Marsh, Cinthya Román, Tony Nakanishi, Olivia Mikula, Mandy Mauer, Lisa Dimmick, and Jessie Quintero. Together we've accomplished a lot in the last year.

Before I turn to the main topic of my speech, I want to express my continued, deepest concern for the people of Ukraine. It is unbelievable and heartbreaking to me, that I said pretty much the same thing exactly a year ago.

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On March 4th last year, shortly after its further invasion of Ukraine, Russia forcibly seized the Zaporizhzhia Nuclear Power Plant, the largest in Europe. We watched the footage of combat around the site's operating reactors during the initial assault, an unprecedented event in the history of warfare. And fighting continued near the plant for months afterward, and increased again just recently.

Credible reports implicate Russian personnel in systematically mistreating the Ukrainian staff, including unlawful detention and even physical abuse. Moscow also created a company explicitly to usurp Ukraine's control over the Zaporizhzhia plant and then coerced Ukrainian employees to sign employment contracts, thus forcing an impossible choice between defying their Russian minders or staying put and maintaining the safety of the reactors.

Despite the heroic professionalism of the Zaporizhzhia plant's Ukrainian employees, they cannot operate under such duress indefinitely. And Ukrainian regulators have consistently been denied access to the site for critical safety inspections. Russia's actions have violated all the International Atomic Energy Agency's Seven Indispensable Pillars of Nuclear

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Safety.

Russia's flagrant disregard for nuclear safety further demolishes its claim to be a responsible nuclear power and supplier of civil nuclear technologies to the global energy sector. I am resolute in the NRC's long-standing support of Ukraine's nuclear workers and our regulatory counterpart as they work to protect and sustain the safe operation of their nuclear facilities.

I'm thankful that Congress provided funds for the NRC to support our fellow regulators with equipment and other forms of assistance, which we have done and will continue to do. I am especially pleased to have in attendance my colleague and friend from the State Nuclear Regulatory Inspectorate of Ukraine, Chairman Oleg Korikov, and his colleagues.

Each of them has been touched by the horrors of this war, and I applaud their bravery in sustaining the civil institutions that will be critical to rebuilding Ukraine when it is victorious.

(Applause.)

The theme for this year's RIC is Navigating the Nuclear Future. I'd like to focus today on what I've observed during my time as Chair, and what I envision for the future of the agency.

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I've been fortunate over these past few years to get to know our staff in the Regions, at Headquarters, and out in the field. And these meetings have not only emphasized the hard work and dedication of our agency staff, they've also highlighted for me several concrete examples of the ways in which we are changing how we work to navigate the nuclear future.

In my remarks today I'll share examples large and small. The ways we're embracing changes to our agency culture, the major projects that are already benefitting from those changes, and how we're innovating the way we approach our work at the office, team, and individual staff level. Throughout, I'll touch on just some of the many accomplishments over the past year that I think are worth celebrating.

I know I've talked about transformation and innovation a lot in the past, and some of you may feel that the terms have been overused. But hear me out, we continue to work in a very dynamic environment. First, let's recognize the significant achievement of Vogtle 3 reaching criticality last week, while Southern Nuclear continues startup testing. Not only is this important for Southern, it's also important for us.

I want to recognize the tremendous work

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and dedication of the NRC staff to get to this point, especially the resident and regional inspectors in Region II's Division of Construction Oversight, the experts in headquarters' Vogtle Project Office, and all the partners of the Vogtle Readiness Group, who have helped put safety first.

Second, let's just consider some of the other policy, economic, and technological developments out there. Passage of the Inflation Reduction Act that is spurring new investments in nuclear power, the bipartisan infrastructure law which incentivizes continued operation of existing plants, advances in fusion science, invention of new medical technologies, changes at the state level in climate policy, just to scratch the surface.

It is therefore imperative that we truly rethink what needs to be done, why, and which parts of our agency are best suited to the task. And from what I've seen, based on my interactions with agency staff, we've made transformation more than just a buzzword. As I've said before, the deep thinking we're doing about what changes we're making and why, will allow us to meet the demands coming our way.

There are many great Albert Einstein quotes, and I'll sprinkle a few throughout my speech,

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but perhaps one that particularly resonates here is this. Life is like riding a bicycle. To keep your balance, you must keep moving. What I hope you take away from this speech are two things, yes, we're preparing for the future. But more than planning, we're doing. We are balancing and moving forward.

We are developing the tools necessary to adapt to the range of possible futures that might unfold. And amidst that preparation, we are continuing to accomplish our core mission, protecting people and the environment, as we've always done.

The NRC already has a culture rooted in teamwork and collegiality, which will continue to serve us well as we evolve. But we're seeing cultural change happening in real time. We're embracing risk-informed thinking. Across our mission and support offices, we're implementing new processes to accomplish our work effectively and efficiently.

We've recently seen this play out in several ways, but today I'll specifically highlight four, Accident Tolerant Fuel, Advanced Reactors, Materials Security, and Human Capital. In a Commission meeting this January, we heard from the NRC staff and an external panel representing a range of perspectives on accident tolerant fuel technologies,

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which hold the promise of increased safety and improved economics for existing reactors.

A common thread ran through the discussion, the importance of early, frequent communication. Not only are NRC staff working across offices, they're also working with our federal and international counterparts and sharing information with applicants, licensees, and members of the public. This collaboration has already been instrumental in getting an accident tolerant fuel testing plan in place at Idaho and Oak Ridge National Laboratories.

While we want to make sure we do not get out in front of the research, we are taking a flexible, risk-informed approach, to prepare and enhance staff knowledge to ensure safety across the entire fuel cycle. For example, we recently issued three license amendments to enrichment and fuel fabrication facilities for possession and use of greater than five percent Uranium-235.

We issued four certificates of compliance and one letter of authorization allowing the transportation of accident tolerant fuel and fuels with increased enrichment up to eight percent. And we approved two topical reports that may be used by licensees in support of license amendment requests, to

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incorporate certain accident tolerant fuel technologies.

I applaud the staff for their accomplishments and risk-informed efforts to ensure continued readiness for future accident tolerant fuel developments. They're doing the job in front of them.

At the same time, they're preparing for the next applications.

In advanced-reactor space, the NRC is likewise getting today's work done while preparing for tomorrow's applications. Indeed, we are interacting with 15 different companies right now. And currently have -- we've already dispositioned 51 topical reports and white papers, and currently have 33 under review. Vendors, utilities, and project sponsors, all tell us to expect more than 20 applications in the 2025 to 2027 timeframe.

For the applications currently pending before us, the staff has set ambitious, yet achievable review schedules. We're focusing on the more risk and safety-significant aspects of advanced reactor designs, without compromising our safety, security, and environmental mission.

With high-quality submittals from applicants, the staff's pre-application review and

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approval of several topical reports, and early engagement with the Advisory Committee on Reactor Safeguards, the staff has already met several significant milestones.

For example, the NuScale design certification rule went into effect just last month. The staff also reports that it's ahead of its 21-month review schedule for the Kairos Hermes test reactor. And the staff is already making progress on its 18-month schedule for Abilene Christian University's research reactor.

And we're not losing sight of the fuel-cycle applications that are directly tied to advanced-reactor deployment. Last November the staff accepted TRISO-X's application to manufacture high-assay low-enriched uranium fuel, and the staff's review is well underway. The staff also achieved several advanced-reactor rulemaking milestones.

Since the last RIC, the staff submitted a proposed-rule package to align the licensing requirements in our existing Parts 50 and 52 for any new or advanced reactor technology, based on lessons learned from recent reviews. With respect to our new framework for advanced reactors under Part 53, the staff provided the draft proposed rule to the

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Commission two weeks ago.

The Part 53 rulemaking effort reflected a true dialogue with our stakeholders. Since September 2020, the staff held some two-dozen public meetings to develop a risk-informed, performance-based licensing framework. Incorporating the varying, diverse, and sometimes conflicting views shared during the iterative process, the staff developed two frameworks with general provisions governing both, to cover a range of possible advanced reactor technologies.

Let me be clear. We are in the middle of the rulemaking process. Not at the end. The Commission will review the proposed language and weigh in on key policy issues. No doubt there will be things that we agree with the staff on, and others we don't. And we'll provide direction back to the staff as expeditiously as possible. That's our job.

The staff will revise the proposed rule and get it out to the public for a formal comment process. So there's more to come. We're not nearly done. But I applaud the staff for adopting a uniquely iterative approach to its public outreach and for achieving this significant project milestone.

The staff has also prepared for Commission consideration, rulemaking packages addressing

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emergency planning and physical security for advanced reactors. I commend the staff for continuing to provide the Commission with a range of options to address the big issues and novel questions facing the agency with our future licensing and oversight of advanced reactor technologies. Again, the staff is doing and preparing at the same time.

The NRC is accomplishing all these domestic obligations at the same time it is collaborating with its international counterparts on new design reviews. Our efforts overseas are geared toward more effective and efficient technical reviews as several American SMR and advanced reactor companies endeavor to deploy their reactors in more than one country simultaneously.

We're also taking an in-depth look at our security framework for special nuclear and radioactive materials. For special nuclear materials, we're evaluating potential changes to our regulations to ensure regulatory stability, clarity, and reliability. Fuel-cycle facilities and materials have changed in the years since we last amended our physical-protection rules.

With that in mind, the staff has proposed a risk-informed approach that would, if approved by

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the Commission, combine performance-based and prescriptive requirements by tying physical-security requirements to a material's attractiveness, thereby promoting a consistent level of protection regardless of location.

For radioactive source security and accountability, we have two efforts underway. The first is focused on ensuring the validity of licenses for category 3 quantities of material through commonsense verification measures. The second revises the financial assurance requirements for higher activity category 1 and 2 sources, to ensure proper end-of-life handling and disposal.

If approved by the Commission, both efforts would constitute relatively small changes that could significantly improve the nation's security framework.

None of what I've just described would be possible without our dedicated employees. It's imperative that we ensure we're building and sustaining our workforce. To that end, we've ramped up our hiring efforts. We're looking at hiring, or having to hire, about 200 people a year just to kind of maintain current staffing levels.

And in 2022, we did just that, we welcomed

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205 new employees to the agency, with an additional 66 hired and awaiting start dates. And we've met approximately 20 percent of our hiring goal for fiscal year 2023.

Our overarching goal is to have the staff on hand, with a range of skill sets, to make sure the agency is ready for the future. And to achieve that goal, the staff has commendably been thinking critically about how, who, and where we are recruiting, to ensure we have an adaptable, diverse workforce.

Here's a good example. Staff's efforts to build a health-physics pipeline, by working in collaboration across our Regional offices and at headquarters to address a critical staffing need, shared by the NRC and Agreement States.

We also established the Health Physics Specialties, Graduate Fellowship Program, that provides current staff members the option to pursue a degree in Medical Health Physics or other specialties to make certain we have sufficient staff to carry out mission roles in specialty functions when needed.

And last July, we welcomed our second NРАН Cohort. NРАН stands for Nuclear Regulator Apprenticeship Network. It's a developmental program

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for entry-level employees that offers mentoring opportunities and a series of four to six-month apprenticeships with NRC offices and the Regions, to grow the next generation of regulators and inculcate a shared appreciation of the NRC's organizational culture.

Like the first NRAN Class in 2020, they are an energized and ambitious group. I'm incredibly optimistic for the future of the agency. Finally, I'm pleased to share, kind of by way of a plug or a public service announcement, that there's an upcoming direct hire event, right here at the Marriott on Thursday, May 11th. So be sure to check out the hashtag HIRENRC! posters. And stop by our recruitment booth to learn more about that event and the various career opportunities at the NRC.

So far today, I've spoken about some of the major projects currently before us and how they demonstrate that we are continually evolving the way we do our work. Along with the large-scale, multi-office projects I've just shared, there are changes taking place daily at the NRC, on an office, team, and individual staff level, that are no less significant because they enable us to do our jobs better.

To quote Einstein again, the measure of

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intelligence is the ability to change. I think that's true for organizational intelligence too. In the past, I've talked about the Be riskSMART program. A framework the agency developed to introduce the concept of risk in decision-making. The agency-wide completion rate for the Be riskSMART training is now 92 percent. And we're seeing more and more staff taking this framework to heart, incorporating risk-informed thinking in their day-to-day work.

For example, staff are using Be riskSMART to update inspection guidance for fuel cycle facilities, materials, and uranium recovery decommissioning projects. Anecdotally, I've heard Be riskSMART mentioned more frequently in staff conversations, showing that we've become more confident in taking well-managed risks while remaining steadfast in our safety, security, and environmental mission.

Our risk-informed thinking is further enhanced by our love of data at the NRC. We're making more use of data dashboards to enhance the way we collect, analyze, and share data to facilitate information sharing with our government partners and streamlined communication with licensees, applicants, and members of the public.

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For example, staff in the Regions are using dashboards to track licensing and inspection activities for materials users. And technology has enhanced our work lives in other ways. Staff in the Office of Nuclear Material Safety and Safeguards, successfully transferred data from its decommissioning and low-level waste licensing activities, to a web-based licensing system.

The system is also being used for deploying inspection enhancements and for tracking and reporting licensing activities and performance metrics for fuel cycle facilities.

On an agency-level, we're continuing to improve the way we work using the Innovate NRC 2.0 IdeaScale platform. IdeaScale provides an open space for employees to share and promote ideas, along with a success gallery to highlight achievements. The platform provides a real sense of community, where sharing an idea can inspire other employees or offices to try it out and improve upon it.

The point here is to create and sustain a culture of ongoing innovation and improvement. To that end, in June the Executive Director for Operations is hosting an NRC Futures Jam 2.0, where it will spend a couple of days focused on crowdsourcing

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new ideas from our agency staff.

There's great opportunity to see our innovation efforts in action tomorrow afternoon. TAYtalks LIVE! Innovation Education, with our very own Taylor Lamb. Kudos to the Office of the Chief Information Officer for continuing to make the right tools available to allow us to maintain our working relationships and get the job done.

We're also fostering relationships to ensure we sustain our culture of openness. It's vital that we cultivate appreciation for individual views and create space for employee connections. One program I'm especially proud of at the NRC is our Diversity DIALOGUE project, championed by our Office of Small Business and Civil Rights.

DIALOGUE stands for Diversity Inclusion Awareness, Leading Organizational Growth, Understanding, and Engagement. As part of this project, employees from across the agency gather to learn and share their diverse experiences and perspectives. I applaud the staff for their continued efforts to create space for individual perspectives.

It is my strong belief that an agency workforce that listens, communicates, and respects differences will have the adaptability and flexibility

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to meet the challenges of the future.

Now, believe it or not, I'm not wearing rose-colored glasses up here. I know we have challenges in front of us, and we're tackling those. And while I admire Einstein, I admire Marie Sklodowska Curie even more. And she said I was taught that the way of progress was neither swift nor easy. But also, I agree with the late Secretary of State, Colin Powell, who believed that optimism is a force multiplier.

By highlighting where we're making progress, and celebrating where we are improving, we create additional opportunities to make better, more risk-informed, more durable decisions that protect people and the environment. And that's what I hope you take away.

That we're accomplishing our mission today and developing the toolkit and culture that will allow us the flexibility to adapt to our future work, to navigate the nuclear future. We're not standing still. We're working effectively across offices. We're working closely with our government and international partners.

One last quote from Einstein. You never fail until you stop trying. I thank our dedicated

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staff for their many accomplishments over this past year, as we remain committed to building our flexibility and adaptability, all while remaining focused on serving the public. I'm impressed and proud everyday of what we're accomplishing together.

Thank you all again, for attending this year's RIC and listening. Stay right where you are to join me in our next session, where I'll be speaking with International Atomic Energy Agency Director, Rafael Mariano Grossi.

Later this morning, we'll hear from Commissioners Baran and Wright. Tomorrow, we're going to hear from Commissioners Caputo and Crowell, and our EDO Dan Dorman. And I'll also be having a fireside chat with Nuclear Energy Agency Director-General, Bill Magwood. I'm looking forward to talking to both Director-Generals, to hear their perspectives on Navigating the Nuclear Future. Thank you all very much.

MS. VEIL: Okay, hopefully my lapel mic is on. Thank you, alright, first question, and I'm going to go to about 8:55 to give you enough transition time to your next session. So your first question is how is the NRC collaborating with other countries on SMRs and advanced reactors?

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CHAIRMAN HANSON: Ah, that's a great question. Well, I see my good friend Rumina Velshi over here in the audience, from the Canadian Nuclear Safety Commission. We've had a memorandum, cooperation with our Canadian counterparts since 2019.

We're undertaking joint technical reviews on a whole range of topics. And in fact, we've issued six of those reports so far. And we have a particular and specific effort ongoing now, on the GE Hitachi BWRX-300, which I know is of great interest to our friends north of the border.

And so we're focusing those efforts on these kind of joint technical reviews. I think there's, that we're looking at an opportunity to include our friends from the UK in that. But we're also having technical discussions with other countries as well, recognizing that pockets of expertise reside around the world, that, you know, we may not have.

I'm a firm believer that the diversity of, and the innovation around nuclear these days, is such that no one country, it can kind of tackle all of the different technical aspects and designs by themselves.

So I think international collaboration on a lot of these things is really an imperative.

MS. VEIL: Okay, next question. You've

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embraced the agency's efforts to use more inclusive language by changing your title. What impact do you think leaders supporting these efforts have on agency culture?

CHAIRMAN HANSON: I've been a big proponent of the idea that openness and diversity of thought and risk-informing, go hand in hand. Because bringing those perspectives into a discussion on technical issues, is vitally critical, because all of the different staff members that we have, have very different experiences of operating out there in the world.

Because of where they come from, because of the color of their skin, because of their background, all kinds of, you know, because of their experiences. All kinds of reasons. And it shapes how they view risk. And particularly, when we think about risk-informed thinking, there are always -- I think about confidence in intervals, right. It's always partly about what you know, and also about what you don't know.

And so being careful and judicious and thoughtful about both of those things, about what we know and about what we don't know, and bringing those perspectives together I think is absolutely critical.

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Also, you know, just from the standpoint of going from Chairman to Chair, you know, I was, I kind of inherited Chairman. But I have an order from the President of the United States, that designated me specifically, Chair. So there's that. But there's also nothing specific about being the head of the agency that is -- particularly requires one to be a male.

MS. VEIL: Good thing.

CHAIRMAN HANSON: Or any particular gender, so. You know, it felt safe to kind of take that out of the equation.

MS. VEIL: Next question. Nuclear power is internationally recognized as green. Is the nuclear renaissance coming back?

CHAIRMAN HANSON: That's a great question.

Let me put it like this. An awful lot of that -- so there are a lot of different dimensions to this, right. There's their business, there's policy, and there's all kinds of things. And I think there are a number of chicken and egg problems associated with new nuclear deployment.

The NRC and the regulatory pathway here in the United States is only one of those. And for myself, I think that it's imperative on us as an

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agency, to solve the chicken and egg problem within our purview. That then, potentially allows other chicken and egg problems to be addressed, right. Financing and policy mechanisms, maybe greenhouse gas, you know, climate change policies, supply chain, these other kind of things. Things that aren't necessarily insurmountable but I am really primarily focused on those things within our purview.

So that, if the business community, if the policy community et cetera, decide, if our utility licensees et cetera, decide to greatly expand nuclear then, that can happen in a clear transparent reliable way.

MS. VEIL: And you're an advocate for all staff -- this is a question. There's no more coming in, so there's QR codes, and there's also codes coming in the portal, but I have a question for you.

CHAIRMAN HANSON: Okay.

MS. VEIL: So you've been an advocate of the staff. And in particular the NRAN cohort. And we had a chance to spend a lot of time with the NRAN cohort.

CHAIRMAN HANSON: Yes.

MS. VEIL: In the recent UAE conference. What have you in particular learned from them?

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CHAIRMAN HANSON: Oh wow. You know, one of the things I've really appreciated in interacting with the NRAN cohort, is they're very, they really want to be engaged. How can we help? What can we do to make a difference here? They really want, they want to engage not just to do their jobs well, which of course you would expect, but actually to make a difference, to have an impact. And I try to tell them, look it's wide open, right.

This is the other thing I think about some of our transformation and risk-informed efforts, is it flattens the organization, right. It's about the value of the idea, not where you sit on the org chart.

And I think the NRANers -- that's what we call them around here, the NRANers, bring a lot of enthusiasm to that.

I mean, when we were in Abu Dhabi at the IAEA Regulatory Effectiveness Conference, right, our folks from the NRC, we had three folks from the NRAN class, and two presented on ways to improve the NRAN program. They've got ideas on how to -- they're in it now, and they've already got ideas about how to make it better.

And the other was a poster session on artificial intelligence. It was put together by three

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members of the NRAN cohort. And so it's that, it's that leaning in. It's that forward looking that I just, I get a lot of -- I get a real jolt of energy from that. I appreciate it a lot.

MS. VEIL: Okay. Another question. From the standpoint of a regulator, what advice would you give to a new developer, or a new applicant for nuclear power? I know there are a lot of aspects to it. There's economic aspects to it. What advice would you give as a regulator, to a new applicant or developer?

CHAIRMAN HANSON: Come see us early and often. You know. Avail yourself of all the opportunities that exist out there. Interactions with the Department of Energy, with the National Labs, you know, start with those pre-application, maybe even informal conversations. Move up to a white paper about the key aspects of your design.

There are some things that can be gotten that can be addressed early in the process, right. What your quality assurance program looks like? How you think you might classify system, structures, and components and how they're safety related or not? It's not, I think those pre-application engagements are just absolutely critical.

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Familiarize yourself with the kinds of information that the NRC's going to require to make a safety determination about your application. Tell us what's different about, you know. If you have ideas, if an applicant has ideas about maybe what parts of our regulatory framework apply, and which ones don't.

Great, come and talk to us about that. So, the door's open.

MS. VEIL: Thank you and I truly appreciate that answer, sitting where I sit. So thank you. Thank you very much. And I don't see any more questions coming in. So it's 8:52, I think this is a good -- 8:53, a good opportunity for me to close the session so you have a little bit of a break before you transition to your next session.

So thank you for your remarks, and everybody for your attention and your questions. And I will now close the session.

CHAIRMAN HANSON: Thank you.

(Whereupon, the above-entitled matter went off the record at 8:53 a.m.)

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