



# UNITED STATES NUCLEAR REGULATORY COMMISSION

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## **U.S. Nuclear Regulatory Commission 35th Annual Regulatory Information Conference March 14, 2023 Commissioner David A. Wright (as prepared and not presented)**

Whew! I missed being late by “that much!” And I got to use the old, fake being in the office when your speech is about to start routine and have people follow you on your way over to the RIC trick, too!

I hope you enjoyed my little video opening. My thanks to the NRC’s audio-visual crew for their help and for taking my original idea and having fun with it. Leon, Kevin, Kyle, Joe, and Tyrus will agree that it was a fun little video to make. We had a great time making it for you too. On top of that, although it was a wild ride from the NRC phone booth to the elevator outside, they did figure out a way to get me to the RIC.

With that, good morning everyone and welcome to the NRC’s 2023 Regulatory Information Conference being held in-person this year after the world’s three-year battle with COVID. My name is David Wright, and I am one of the five Commissioners here at the Nuclear Regulatory Commission. For those of you who are tuning in virtually, you are missed, and I hope you to see you in person again soon. Being the last plenary speaker of the morning puts me in a tough position, because I’m between everyone in this room and lunch, but I’ll do my best to keep things as entertaining, informative, and engaging as I can.

Chair Hanson and Commissioner Baran, I enjoyed listening to your remarks. They were spot on and true to who you are. I know how difficult it is to prepare for these presentations. It’s a long process. Many thoughts. Many revisions. But you both did a great job. Being authentic is something I strive for, myself, and I saw that from both of you in your remarks. You set a high bar this morning.

While I’m at it, I also want to thank both of you, as well as Commissioner Caputo and Commissioner Crowell for the working relationship we have as Commissioners. On behalf of Team Wright, I want to thank each of you and your staff for your availability and willingness to work with our team towards solutions on the issues that come before us. We each bring different backgrounds and perspectives to the Commission, which means we may approach issues differently, but that’s a good thing. And now, we have a full, five-member Commission again. That’s a great thing! Me and my team look forward to the future working with each of you and your teams to accomplish good things on behalf of the American people. And our international counterparts, to provide adequate protection to the public and the environment in the nuclear reactor and nuclear materials sector.

Speaking of team members, I want to take a moment and thank my team, Team Wright, for all that they do in support of me, and for the NRC, on behalf of the American people. My staff is a very special group of people. We are a family. We support each other, and I am blessed by each of you every day, which makes it fun to go to work. My gratitude also extends to everyone else who has been a part of Team Wright. Each of you have had an impact and each of you have made a difference and you will always be a part of Team Wright. But I must single out two people, my original Chief of Staff, Cathy Kanatas, who implemented the initial vision for our office, identified and hired people who aligned with that vision and would be an asset to our team. And laid the foundation that our office operates by today. So Cathy, thank you. I also want to thank Carol Lazar, my original legal counsel who gave me great advice and insights into all things legal, including her replacement. And most important, who kept me out of trouble. Thank you, Carol.

If you know me, you know that I am a sports guy. I love sports. So, it should not surprise you when I use sports analogies or sport-related quotes in meetings, conversations or, in plenary remarks. Marv Levy is a Hall of Fame former head coach of the Buffalo Bills, a team in the National Football League. To our international friends, that's American football. Buffalo is about 400 miles north of here (about 650 kilometers) and let me tell you, it can be a very cold place to play football in December, January, and February. Many years ago, the Bills were about to play in a playoff game at the beginning of a stretch where they appeared in four consecutive Championship games or Super Bowls. On that early playoff game day, Coach Levy took to the stadium microphone and asked the cold, yet very boisterous Buffalo crowd, "Where else would you rather be than right here, right now?" To this day, that question is part of their pre-game hype to get the crowd pumped up, in a similar way, Commissioner Caputo, to the way the song, "Jump," is used before Badger football games at the University of Wisconsin. So that's how I feel today. There's no place I'd rather be than right here, right now.

Public service is not for everyone and working for the government at any level is a sacrifice. The wages you make as a government employee certainly fall short of what your counterparts make in the private sector. And working in government can be frustrating because issues and policy direction can change from one election to the next. And the wheels of decision-making can move painfully slow at times, too. But many of you knew that, and you still decided to work in government. That's because and as I believe, public service can also be a calling and another way to serve your country. I know that's true for a lot of you out there in public service, whether that's in the federal government, state, or local government and even the military.

Like those Buffalo fans on a freezing winter day, there are certainly other places you could be, other jobs you could be doing and many of them might be more comfortable and come with a better paycheck, too, but you chose government service. And I am grateful for that. Personally, I know all too well, myself that as you work and serve in government, your family serves with you, as well. You're not in it for the money or for personal gain, but instead, you chose it for a noble reason, a calling, or a cause. Maybe it was the desire to make something possible or to make good things happen for your country or to try to make things better for those around you?

Regardless of the reason, be proud of what you're doing at work and for your country because you are making a difference. What you do every day in your job matters. It matters to the government; it matters to our country, and it matters to many around the world. Where else would

you rather be than right here, right now, am I right? So, thank you for your service and for your work, too. That goes for my family, as well.

When I began preparing for today, my mind was full of more things than I could possibly cover in 30 minutes. That's because a lot has happened in the past 12 months, not just at the NRC, but in our daily lives, as well. The people of Ukraine continue to be in our thoughts and prayers as we look and hope for an end to the unprovoked Russian aggression against the peaceful people of that sovereign country. We continue to experience the effects of COVID as we try to understand it, adapt to it, and make it part of our daily life. And then there's everything else. Cancers, heart issues, diabetes, mental health issues, addictions, family concerns, relationships, and stress. You name it. Some of the things we face may be life-threatening. Some things are life changing and all of it, all of it happens in our life, daily.

Sometimes we get overwhelmed with life events or work or both. It happens to all of us. Some of the things we face are bigger than we are, too and we need help. How we deal with it matters. To my NRC family, I would like to take the opportunity again this year to direct you to the NRC's Employee Assistance Program, the NRC's staying connected team, SBCR, the advisory committees, the affinity and resource groups, and THEEDO. These people and groups are there for you and are willing to help you. They can help you find ways to address and deal with the challenges you face, provide tips for improving your work-life balance, and other issues you may have, so I encourage you to reach out to them. Like I tell my close friends and those I serve as a mentor or accountability partner to, "you can't possibly take care of the needs of others that you love and care about or those you work with every day, if you are not taking care of yourself first." It's important. I want nothing but the best for you in every way so please take care of yourself.

Take time to relax, laugh at something or laugh at yourself. I laugh at myself all the time. I'm like a comic book. Take a deep breath, exhale, walk away from your computer, your phone and the work crisis of the moment and just enjoy the world around you. I promise the work will still be there when you return. It always is. But your attitude and focus will be much improved.

Each year that I have presented at the RIC, I have shared a little more about me, my family, and events in my life. If you listened to or watched the past RIC plenaries you know that my dad was a lifelong Television and Radio personality, a card-carrying Professional Golf Association TV and radio announcer, and a stand-up comedian for more than 50 years. You know my mom, a nurse by profession and who was present and held the Bible when I was sworn in as Commissioner in 2018, had a terrible battle with squirrels in her home in 2020. You know that I am the proud Pawpaw (or Granddad) of a set of grand twins, a boy and a girl brought into this world by my younger daughter, Courtney, and her husband just over four years ago. You know that my oldest son, Austin, and his wife, honored our family with a grandson, Hank Williams Wright, not quite two years ago. I found out last week that Hank will become a big brother sometime this coming November, too. You know that my youngest son Andrew who came home for spring break during the last semester of his senior year of college, on the same weekend that I did in March of 2020, never went back to campus because the world shut down from COVID 19. He graduated while he was at home and even became engaged and got married during the shutdown.

You've learned that I am a Stage Three colon cancer survivor as is my oldest daughter, Kimberly. You also know that we pay it forward today by actively sharing our cancer experience

with and encouraging others who have been recently diagnosed with or who are actively going through their own cancer battle. You know that I'm a baseball umpire calling games for 49 years before COVID broke that streak in 2020. And you know that win or lose, I love all things Clemson University. You know I graduated from there and that I walked-on and earned my first varsity letter as a long-distance runner for the Tigers a half century ago this year. Wow, 50 years ago ... it still feels like it was yesterday. And, while I'm at it, "Go Tigers!"

March has always been an eventful month in my life and that theme continued in 2022. Quick story. One year ago, today at almost this very minute, too at about 11:15 in the morning, during our staff meeting on the 18th floor of NRC headquarters across the street, I got a call on my cell telling me that my home in South Carolina was flooded from the inside. Water meter work outside at the street caused the pressure to change in the pipes inside my home and a coupling ruptured under my kitchen sink. Water ran uninterrupted for five days before it was discovered. Needless to say, I lost a lot. My entire kitchen, mudroom, breakfast room, floors, cabinets, walls, everything, very wet and ruined. It was depressing. For the last year during the water mitigation and drying out of my home, the demolition and debris removal and the design and build-back I had to deal with insurance adjusters, demolition crews, floor crews, cabinet and countertop people and contractors from 500 miles away and in person. When at my home in South Carolina, I lived on a microwave and a grill and lots of paper products.

But every cloud has a silver lining, if not a rainbow. That personal home disaster also gave me a great reason to go on the road. I visited existing nuclear plants around the country. I visited the NRC regional offices. I visited some decommissioned sites. I toured a couple of DOE labs and some research and test reactors, and I visited Southern Company's Vogtle Unit 3 site, twice which, as you know, went critical for the first time last Monday. This was a significant milestone because it marked completion of the first new nuclear power plant in 30 years, the first time an AP1000 has been built in the United States and the first nuclear plant to be licensed under the NRC's Part 52 framework.

This photo here is from a recent visit to Vogtle where I hosted the French regulators. That was a good visit, too. They wanted to try some southern food while they were down south, so I took them to a restaurant where they shared an appetizer of fried green tomatoes filled with pimento cheese and a couple of them ventured out and experienced shrimp and grits. That's what I had, too. The meal was great, and the company was even better.

I also visited Romania where in May I took part in the Small Modular and Advanced Reactor Workshop in Bucharest, spent some valuable time with CNCAN President Cantemir Ciurea, was part of a U.S. delegation that met with Romania's Prime Minister and other Romanian elected officials, and visited the Cernavoda Nuclear Plant near Bucharest. That's also when and where the announcement of their partnership with NuScale was announced and made public. I must say the food along the way sure beat what had been coming out of my microwave, too.

The reconstruction work in my home is still not finished, but right before Christmas I was able to begin moving things back into my kitchen. My daughters helped me get things looking good enough in the house to entertain them, my grandchildren and my mom on Christmas Day, which was awesome. That flood disaster is not the first time that life has thrown me a curve ball and one

thing I'm sure of, it won't be the last curve ball life throws at me, either. The key though, is not to panic when disasters or other bad things happen.

For those of you who aren't familiar with the sport of baseball, a curve ball is a pitch thrown to a batter by a pitcher that spins in such a way that it curves either toward or away from the batter or drops from top to bottom. When pitched, the intent of a curveball is to fool the batter into swinging early before the ball actually gets to home plate. One thing I know from working as an umpire is that a well-thrown curve ball can make a batter look very silly and feel very foolish.

Then there's the hitter and a good hitter is not easily fooled. Good hitters can usually pick up the spin of a curve ball as the pitcher releases it and can adjust the timing of their swing. They will either get just enough bat on the ball to foul it off and stay alive at the plate or in that particular moment have the patience and discipline to stay back and wait for the ball to curve and then hit it for a base hit. By design a curve ball is not supposed to be an easy pitch to hit that is, unless the pitcher makes a mistake when throwing it. As a home plate umpire, I have the best seat in the house so when a pitcher makes that mistake of hanging a curve ball out over home plate, good hitters will punish the pitcher by hitting the baseball a very, very long way, many times out of the park, maybe even out of the baseball stadium. In that moment, a good hitter can make a pitcher look very silly and feel totally helpless.

Last year, the unprovoked invasion of Ukraine by Russia threw the world a curve ball. Russia's intent was to make the rest of the world make mistakes, swing early, and look bad. Fortunately, that did not happen, and we and the Ukrainians are still alive at the plate and very much in the game today. But the unprovoked invasion did cause us and our global partners to pause and take a hard look at ourselves as a country and reassess our connections, our partnerships, our supply chains, our internal needs, our resource needs, and our available resources. And what we learned was concerning, if not downright alarming. Here's just a few examples of issues in the energy realm that developed almost overnight following the unprovoked invasion of Ukraine by Russia:

- Uranium supply and uranium source issues
- fuel source supply for the development of advanced reactor designs, new fuels, and new fuel facility designs
- rare earth mineral sourcing concerns
- safety concerns, as a result of the attacks on and the illegal occupation of nuclear power plants in Ukraine, specifically, the Zaporizhzhya Nuclear Power Plant
- and the desire of many European countries to cut their energy ties with Russia and examine and determine what they would need in order to improve their own energy resilience.

As you know, we are fortunate to have Mr. Rafael Grossi, Director-General of the International Atomic Energy Agency, with us in the audience today. He gave remarks to the RIC earlier. Director-General Grossi, you have been on the forefront of the efforts to keep the Zaporizhzhya plants stable and safe and we thank you for everything that you, the IAEA, and the

leaders of Ukraine are doing. On behalf of myself and a thankful audience today, welcome to the RIC, sir. I've also been told that the Chairman of the State Nuclear Regulatory Inspectorate of Ukraine, Mr. Oleh Korikov, is here with us today. Mr. Korikov, I can't even imagine what it's like trying to do your job in an active war zone. What I do know, though, is that our two countries have had a bilateral cooperation agreement since 1993, and I think that it's safe to say that in the thirty years we've been working together our relationship has never been more important. I look forward to continuing and strengthening our partnership with you. And again, welcome to the RIC to you, too.

As a result of the war in Ukraine because of the massive curveball thrown at the world by Russia decisions were made, timelines changed and today there are many more countries around the world looking to the United States to help them meet their energy needs and goals through new and existing nuclear technologies than there were just a year ago. Those countries, as well as stakeholders within our own borders: vendors, agencies, and the Congress, are looking to the NRC to develop, review, and approve a regulatory pathway for these new and advanced technologies, sooner rather than later so they can get to market and for good reason, too. The NRC must do our part and get it right without compromising safety and without delay.

The time to meet the moment is upon us. It's important on many levels, energy security, grid security, energy resilience, national security, and even global security. If we don't meet the moment our success and the success of other countries will be at stake and if we fail to meet the moment our adversaries will certainly try to take advantage. We can't afford for that to happen.

As I mentioned earlier, NuScale has a deal with Romania. The Romanian regulator must be prepared, ready, and able to review and inspect that design. Their success involves and requires the NRC's timely assistance, and that moment is upon us. Poland has selected the Westinghouse AP1000 design, and they are considering other advanced technologies, as well.

The Polish regulator must also be prepared ready and able to review and inspect whatever technologies are ultimately chosen in their country. Their success involves and requires the NRC's timely assistance, and that moment is upon us.

Here at the NRC, we are working with our Canadian counterparts through a Memorandum of Cooperation which involves performing a technical review of portions of the advanced design by Terrestrial, as well as other advanced technology designs by X-energy and GE Hitachi in the hopes that a collaborative effort will result in a more streamlined and effective licensing process versus just going at it alone. I believe it will do just that, and I support this effort. The success of our collaboration with Canada, hopefully, will lead the way to other multi-lateral arrangements for this and other designs around the world. Success with the CNSC requires the NRC's timely and active engagement, and that moment is upon us.

The United States government is actively working with countries of like mind around the world to source and build new nuclear projects both big and small. And our government's success involves—requires—the NRC's timely assistance, and that moment is upon us.

Here at home in the United States there is a great deal of activity in the nuclear sector as well as in the entire energy sector. Carbon reduction goals have been set in many countries around the world but also by states and even local governments in this country. We must recognize, and I

believe this to be true, that successfully achieving these goals will not be possible without existing nuclear, new nuclear, and advanced nuclear being a big part of the generation mix today and going forward.

As a safety regulator, what does all of this mean to the NRC? It means absolutely everything. And there's no better place to be than at the NRC right here, right now. I believe the NRC is made for this moment. Our international counterparts are preparing to meet the moment, too. Russia has hung a curve ball out over the plate and the world needs to hit it to the moon.

Overall success, though be it in the United States or around the world, involves and requires the NRC to meet the moment and that moment is upon us. Meeting the moment will involve and require the NRC to continue its Transformation. Doing things, a certain way because that's the way we've always done it is a proven recipe for failure. A person, much less an agency, cannot grow if they stay where they always have stayed and continue doing things the way they have always done them. Applicants, licensees and ultimately members of the public pay us for our reviews and our oversight, too, so we have a fiduciary responsibility to be timely in our reviews and responsible in the use of our resources.

That's also good business and is why our Efficiency Principle of Good Regulation says "the American taxpayer, the rate-paying consumer, and licensees are all entitled to the best possible management and administration of regulatory activities." As I see it, the NRC and us as regulators are not supposed to disable the use of nuclear, but instead we are to enable the safe use of nuclear. The NRC's Office of Nuclear Reactor Regulation (NRR) has a motto that says, "make the safe use of nuclear power possible." They're doing that every day as they oversee the safe operation of the nation's 93 operating reactors and as they engage the 15 vendors that are involved in preapplication activities for new and advanced reactors. They are not alone either because NRC's Embark Studio, a creative incubator for transformation, innovation, and change within our own walls has the motto of "Enabling the safe use of nuclear power." One of the ways they're doing that is by developing internal and external mission analytics portals, or MAPS, that will allow NRC technical reviewers to receive data and information they need to conduct their reviews in a faster, more streamlined manner. These tools should bring significant time and cost savings for both the NRC and applicants by helping us to share information more readily. Those two mission statements speak to the fact that we need to be externally aware of what is happening in the world around us and be responsive to the moment. Meeting the moment involves and requires the NRC to innovate. Safety is our mission. "Reasonable assurance of adequate protection" is the standard. That's the floor and the ceiling and our strike zone over home plate. It's non-negotiable. How we do things, though at every level should always be up for debate and we should think about ways to be innovative, novel, and transformative to improve effectiveness and the efficient use of resources in tackling the issues before us.

Congress challenged the NRC to create a flexible, simpler, all-inclusive regulatory pathway for the various new and advanced reactor technologies being contemplated or who are before us now and wanting to get to market. This is an opportunity for the NRC to meet the moment that is upon us and accomplish what I know we can accomplish if we work together. That would be a new, novel, transformative, risk-informed regulatory framework for advanced reactors 10 CFR Part 53.

And it's time to meet that moment because the rulemaking package is now in front of the Commission. To actually meet the moment though and Congress's challenge is going to require the NRC staff, and the Commission, to think outside of the box, to be risk-informed and not just risk averse. In the end, Part 53 has to be a regulatory pathway that is useable and useful to the applicants and the technologies it is being created for. And I know we can do it.

Meeting the moment involves and requires the NRC to collaborate. The Department of Energy, our sister agency in a way, is the promoter and salesman of all things in the energy sector, and they have picked some winners in the advanced reactor space and funded them, too. X-energy and Terra Power are two of them. So it should come as no surprise that the NRC must get ready for them and be ready for them. And we're going to have to do that quickly. Just about two weeks ago, on March 1st, X-energy and Dow Chemical signed a joint development agreement to build a four-unit Xe-100 reactor facility on the gulf coast by 2028. We have NGOs and trade associations actively involved before us on behalf of advanced technologies of every size and shape, as well as fusion, and they are telling us of the importance and the urgency for the NRC to meet the moment. Speaking of fusion by the way, I'm happy to say that I am one of the Commissioners who recently voted on a framework that would establish a risk-informed, efficient, and predictable path toward regulating the safe use of fusion energy in the United States.

While it's true that the NRC is a safety regulator, we are not insulated in doing our job or meeting our mission, either. We are an independent agency, yes, but as stated in our principles of good regulation we are not supposed to do our job in isolation. We must openly seek all available facts and opinions from all our stakeholders. We have to be externally aware of what is happening around us, too such as:

- the national and international goals of the Administration and the Congress,
- the goals and work of DOE and other federal agencies and departments, and
- the plans and timelines of utilities in this country who are considering or looking to build advanced technologies.

We must maintain an awareness of and engage early with potential applicants so that we better understand what the NRC may need in order to review and license their proposed technology. This means NRC collaboration, NRC involvement and possibly even NRC learning from others, will be required. Bottom line? It's an exciting time to be a safety regulator.

As I begin to close, let me ask you a question: "Are you ready to do something special?" You, we, can do it right here, right now. We can create and put in place a simpler, all-inclusive, risk-informed, performance-based licensing framework for advanced reactors, SMRs, and other technologies to enable the safe use of nuclear power through these new and advanced technologies to make a difference here in the United States and around the world. You, we, have that special opportunity in time right here, right now. The Russian curve ball certainly brought more attention to and more focus on the need for and the purpose of these new technologies.



Now the time has come to meet the moment and hit that hanging curve ball out of the park. So: “Where would you rather be than right here, right now?” Personally, I can think of no better place to be than working alongside all of you, as we meet this moment.

To my NRC colleagues, my fellow Commissioners, I appreciate your dedication and commitment to serve our country, and I look forward to our work together. To our international counterparts, I am confident that the NRC will continue to do our part to help you meet the energy goals you have set as we look to meet the moment, this moment, in time with you.

To my NRC family, the staff of this great agency, you, we have an incredible opportunity in time to do something special. Something that will have positive impacts here at home and provide energy opportunities, energy security, and energy resilience in the countries of our allies around the world. In addition, on top of all of the focus and work in the new and advanced reactor space and Part 53, the NRC has other opportunities to “meet the moment,” too. There’s work on accident tolerant fuels, a renewed focus on uranium and rare earth metals here in the United States, new safety and training updates as a result of advances in nuclear medicines, treatments, and therapies, and the potential to license companies with technologies that can clean up legacy mining sites and return these sites to a green field state, just to mention a few.

Here in the United States and with our allies around the globe, together, we, can meet this moment, this unique and special opportunity in time and through our work do our part to help provide energy security, energy resilience grid security and national security. Not just here in the United States, but in allied countries around the world.

It's an exciting time to be a safety regulator and why there is no place I would rather be than right here, right now working alongside all of you as we meet this special moment in time. Thank you very much for your kind attention and I hope you enjoy the rest of the RIC.