

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

+ + + + +

35TH REGULATORY INFORMATION CONFERENCE (RIC)

+ + + + +

COMMISSIONER CAPUTO PLENARY

+ + + + +

WEDNESDAY,

MARCH 15, 2023

+ + + + +

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 8:30 a.m. EDT, The Honorable Annie Caputo, Commissioner, NRC, presiding.

PRESENT:

ANNIE CAPUTO, Commissioner, NRC

RAY FURSTENAU, Director, Office Nuclear Regulatory Research, NRC

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

(202) 234-4433

www.nealrgross.com

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

8:30 a.m.

MR. FURSTENAU: Welcome back to the second day of our 2023 RIC. I hope everybody had a great day yesterday and a nice evening.

This morning we have plenary sessions with remarks by Commissioner Annie Caputo and Commissioner Bradley Crowell and our Executive Director, Dan Dorman. Then after that, we'll complete the morning with the fireside chat from our NRC Chair, Christopher Hanson, and Director General of the Nuclear Energy Agency, Bill Magwood.

I want to mention for those folks here in person for the Q&As, please use the QR code. It's real easy to use and it gets you right to the question and answer session and those online, when you sign into the session, there'll be a tab for Qs&As.

With that, it's my honor and pleasure to introduce our first plenary speaker, the Honorable Annie Caputo. She was sworn in as a Commissioner of the US NRC in August of 2022 and is currently serving the remainder of her five-year term ending in June of 2026. As many of you know, Commissioner Caputo previously served at the NRC from 2018 to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

2021. Most recently, she worked as a consultant for the Idaho National Laboratory related to international collaboration on advanced nuclear reactors. Prior to her work at INL, she served as a professional staff member on the US Senate Arms Services Committee assisting with issues related to the National Nuclear Security Administration's infrastructure. She also served as the senior policy advisor for Chairman John Barrasso on the Senate Environment and Public Works Committee.

Commissioner Caputo held the same position for then Chairman James Inhofe from 2007 to 2012 and from 2005 to 2006 and 2012 to 2015, Commissioner Caputo worked for the House Committee on energy and commerce, handling nuclear issues. Prior to her positions on Capitol Hill, she worked for Exelon Corporation. She's a graduate from the University of Wisconsin - Madison and she holds a Bachelor's degree in Nuclear Engineering.

With that, let's all welcome Commissioner Caputo and I didn't take your notes. (Laughter.)

COMMISSIONER CAPUTO: Thank you, Ray, for that introduction. Go Badgers. Let's just you know get started. Thank you and good morning to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

everyone here. It's wonderful to be live and in person. Welcome to day two of the RIC.

I want to take a moment to recognize and thank all of the countless NRC staff who have made this event possible and are working very hard to make it a success. Thank you for being here and for all that you do.

I also want to welcome so many people. This event is so well attended with international colleagues, academia, federal and local governments, non-governmental organizations, members of the public and everyone both online and in person. Thank you for joining us.

I also want to make a specific welcome to NEA Director Bill Magwood for joining us and for former Chairman Dick Mes-erve and Stephen Burns, former Commissioners Apostolakis and Ostendorff. You've all been mentors to me for a very long time and I appreciate all of the wisdom you've shared over the years.

Like my fellow commissioners, I want to give one more thank you. I am blessed with a staff of highly talented, high performers, who I would just be lost without them. A special thanks to Nicole, Heather, Eric, Marilyn, Bob and Julie, you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

rock!

The theme of this year's RIC is Navigating the Nuclear Future and who better to talk about the future than Daniel Yergin, the famous author and energy expert. In his recent book, *The New Map: Energy, Climate, and the Clash of Nations*, Yergin lays out the case for how climate change policy is changing our future through the reshaping of geopolitics, global economics and global energy supply. He describes how different kinds of power are in play. "One is the power of nations that is shaped by economics, military capabilities and geography; by grand strategy and calculated ambition, by suspicion and fear; and by the contingent and unexpected." This statement is particularly prescient given that the book was published shortly before Russia's malicious invasion of Ukraine. I want to associate myself with remarks made by Director General Grossi and Chairman Hanson on this situation yesterday. To our Ukrainian colleagues, you have my heartfelt admiration for your continued dedication given the challenge of ensuring nuclear safety in a war zone.

Dan Yergin also refers to other kinds of power, more specifically, "the power that comes from

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

oil and gas and coal, from wind and solar and from splitting atoms, and the power that comes from policies that seek to re-order the world's energy system and move toward net zero carbon in the name of climate." Here in the US, we are seeing the challenges of this net zero transition.

The PJM Interconnection, one of the nation's largest grid operators, is growing concerned about resource adequacy. PJM estimates the retirement of 40,000 megawatts of electricity generation, 21 percent of its total generation by 2030. Over half of the projected retirements are considered policy driven. In contrast, PJM estimates 15 to 30,000 of renewables and battery storage may be added to the grid by 2030. All of this comes at a time when policies are driving the increase electrification of buildings, transportation and industry. Calvin Butler, the new CEO of Exelon, recently indicated that the electrification of buildings in Baltimore would double the electrical load. Consider for a moment the impact of all of these policy dynamics across the country.

Economic growth and growth in electricity demand have historically been

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

correlated. This correlation will become more intense with increased electrification. This means that economic wellbeing and efforts to eliminate energy poverty around the world will be ever more reliant on adequate supplies of clean, affordable and reliable electricity. Hence, there is a growing expectation that any success in mitigating climate change and meeting future energy needs here and around the world must include robust deployment of safe and clean nuclear energy. While the completion of Vogtle Units 3 and 4 will be a very significant accomplishment, those units represent one small step toward a net zero objective.

Here in the US, we at the NRC are gatekeepers to that future. The primacy of our mission to protect public health and safety and security and the environment is indisputable, but if the global vision of success includes a robust nuclear deployment, what does success look like for us as a regulator? The posture with which we approach our mission will have a distinct impact on how nuclear energy will make a growing contribution to our energy needs and that bears repeating. The posture with which we approach our mission will have a distinct impact on whether nuclear energy will

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

make a growing contribution.

Years ago, we at the NRC embarked on a transformation effort. The executive director set our objective to be a modern, risk-informed regulator. Similarly, the Office of Nuclear Reactor Regulation embraced the motto, we make the safe use of nuclear technology possible. What this transformation effort and NRR's motto rightly suggest is that as a regulator, our posture should be finding solutions rather than raising obstacles.

For us to become successful as an agency, I believe we need to become that moderate risk-informed regulator who makes the safe use of nuclear energy possible. I'm going to share with you today what I think our success would look like and there's no better time than the present to make it happen. There's also no better time than the present to innovate.

Once upon a time, space was the sole domain of governments, now NASA astronauts ride to the International Space Station on commercial vehicles. Advances in artificial intelligence now raise the question did I write this speech or did ChatGPT? Innovation in nuclear technology is well underway in both fission and fusion and we at the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

NRC consistently say we will be ready to review applications we receive and we are, using our established regulations, procedures, practices and precedents. But by its very nature, innovation must depart from precedent so the question is can we innovate how we regulate? Congress has directed us to develop a technology neutral, risk-informed, performance based framework for advanced reactors. Can we innovate where and when it counts?

This nuclear regulatory framework for advanced reactors, Part 53, is now before the Commission. Significant work remains to develop the framework Congress envisioned. A framework that is truly risk-informed reflecting the inherent safety found in advanced designs and one that is efficient, enabling timely reviews to allow safe nuclear energy deployment on a scale warranted by our national and global energy needs.

I am rolling up my sleeves to work with my colleagues and shape a simpler, risk-informed, innovative rule that will be the foundation for predictable and timely safety reviews merited by these advanced designs. This will require considerable work on the part of the Commission, our staff, but it is important that we focus our

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

collective efforts to meet Congress' intent with a sense of urgency. The challenge is how efficiently can we enable these advanced technologies while preserving safety.

There is also no better time than the present for data driven, risk-informed decision making. Our clarity principle of regulations states that regulations should be coherent, logical and practical and that agency position should be readily understood and applied. To me, data driven decision making is foundational to these principles. Processes and outcomes should be objective, reliable and reproducible. They should also be transparent. External stakeholders should be able to review our work and understand how we reached our conclusion.

What do we mean by risk-informed? Fundamentally, it means regulatory activities should be consistent with a degree of risk reduction they achieve, once again, as stated in our principles of good regulation. Many of today's operating reactors were licensed in the '60s and '70s, at a time when technology was young and operating experience was limited. Toleration of risk and uncertainty was unavoidable in the early development of nuclear energy. Now, just in the US, we have nearly 4,000

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

years, reactor years of operating experience. A couple of years ago the Nuclear Energy Institute produced a report detailing how the industry had dramatically improved its safety over the past 20 years according to each and every NRC and in-post safety performance indicator. With that experience and safety improvement comes a highly refined understanding of the technology and a wealth of risk information. Have we put this wealth of information and experience to good use to refine our understanding of what is necessary for adequate protection or as a regulator, do we instead seek further precision? The desire for further precision can lend itself to an insatiable appetite for information and an ever shrinking tolerance of risk and uncertainty.

With the combination of state of the art probabilistic risk assessment and the computer modeling and simulation tools available today, we can debate the likelihood of an event happening once in 10 billion years, billion with a B. How do we balance the constant desire to know more with the threshold of knowing enough? Is our ability to model risk that small driving the pursuit of absolute safety rather than adequate safety? Is it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

hindering our ability to accept some level of risk and reach decisions? In the case of digital instrumentation and control, the answer is clearly yes. Thirty years ago, nuclear submarines went to sea and commercial aircraft took off with digital instrumentation and control. Yet, we still wrestle with the issue.

We have processes in place that can guide us to the extent that we follow them. Our backfit rule is decision-making process that begins with risk information before imposing a backfit and requiring revisions, revising our requirements for existing licensees, the agency must first determine through a systematic analysis whether that change will be a substantial increase in public safety and that the change is cost justified. In this way, risk information forms the basis for determining whether the safety or security increase is, in fact, beneficial.

Similarly, the regulatory analysis that underpins our rule making proposals must also use risk information to determine that each element of the proposal is safety beneficial on its own. Regulatory analysis shouldn't be an afterthought, it should be a tool that helps us discern between

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

proposals that merely sound good and those that are, in fact, safety beneficial and cost effective. Our ability to use effective risk information in these processes rests on our commitment to data driven decision making. We need to gather and utilize the right data to make risk-informed decisions, but it's not enough to simply gather the data, we need to use it objectively. As our principles state: "final decisions must be based on objective, unbiased assessments of all information."

If we become successful in making data driven, risk-informed decisions, what would that look like? If our regulatory activities were truly consistent with the risk reduction they achieve, what outcomes would we expect to see? For operating reactors, I expect we would see a focus on inspections and licensing reviews that are focused on safety significance. That we would be using risk-informed decision tools, like the risk-informed process for evaluation and the Very Low Safety Significance Resolution process to resolve things that aren't safety significant. That we would constantly, consistently adhere to the backfit rule. We would produce complete, high quality regulatory analyses. That we would be enabling widespread

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

implementation of digital instrumentation & control and that we would be executing predictable, efficient 50.69 reviews to risk inform the categorization and treatment of structures, systems, and components.

With regard to advanced reactors, we mustn't let the pursuit of absolute safety paralyze our ability to reach decisions. Rather, we should continue to pursue our statutory mandate of adequate protection. It is difficult to justify regulating safety to a level below that of an asteroid destroying global civilization, a risk of 1 in 2.3 million years. We must innovate how we regulate safety and find ways to risk inform our approaches, recognize inherent safety features and exhibit results driven leadership.

There is also no better time than the present to improve our financial stewardship. Our principles of good regulation state that "the American taxpayer, the rate paying consumer, and licensees are all entitled to the best possible management and administration of our regulatory activities." My longstanding view is that the agency needs to improve its financial management and stewardship of its resources.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

The budget is the largest policy instrument for the agency. It sets forth priorities and it allocates resources. It should align with our strategic plan. It should be performance based and it should accurately depict our mission needs. I'm not going to tell you anything that isn't publicly available, but at the end of fiscal year '22, the agency had a carryover of 92 million dollars. This means the agency collected roughly 58 million dollars from licensees and 34 million dollars from taxpayers that it did not need to fulfill its mission last year. This, and a 906 million dollar budget, resulted in an excess of 10 percent due to inaccurate budget projections, yet instead of adjusting the budget request down to account for it, the 2024 budget request was increased up to over a billion dollars.

The difference between what the agency actually needed in '22 and the 2024 budget request is 192 million dollars. This is difficult to square with a drop in our workload. All the inspections and licensing reviews are billed by the hour to our licensees and applicants. This work is down 46 percent from 2016. In 2023, this work will require roughly 419 FTE out of our 2,777 employees. That

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

accounts for roughly 15 percent of our personnel and only 21 percent of our budget. You can nearly double this year's workload and still fit within that 2024 budget request.

The agency will spend 46 percent more on corporate support activities than on inspection and licensing work. Compared to the 419 FTE doing licensing and inspection, 579 will be doing corporate support functions. We need to get back to basics with a focus on actual expenditures to inform budget development with a measure of detail commensurate enough to make truly informed decisions, but in my time on the Commission, we have yet to effect these changes. We need to take a hard look at necessary activities and services that support the core mission of the agency and use data driven decision making to reach effective outcomes. So far, the agency's transformation efforts have seemed to achieve the opposite of what was expected. We are spending more to do less work.

In short, our workload has shrunk. We are collecting significantly more revenue than we need and our budget is growing. This is not what I consider good stewardship. There is no better time than the present to get our fiscal house in order.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

There's one last subject I'd like to address today and that is the challenges facing women in the workplace. There is no better time than the present to empower women. As you're all aware, March is Women's History Month. This year, for me personally, it's different. I'd like to share with you some personal experiences as a woman in the nuclear field to illustrate why that is.

These experiences have caused me to reflect on inclusion in the workplace, particularly because some of my observations may feel strikingly similar to other folks in the nuclear field. Some of what I will say today I have shared with NRC staff in a couple of venues. I particularly want to recognize Region Two since they shared my first step on this journey.

When I graduated and started working in the nuclear field, I often felt like I was treated as a young girl fresh out of college who doesn't know anything. I shrugged it off because they had a point. I was fresh out of school and I had a lot to learn, but I figured it wouldn't always be the case as I gained experience and knowledge. So, I plowed forward with my career goals, choosing to ignore that treatment and not let it stand in my way.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

Besides, the work environment was getting better for women all the time, so this dynamic would wane over time, right? Shortly after I was confirmed for my second term, I found myself getting, for lack of a better term, ``nukesplained''. Someone with significantly less technical and policy experience talked to me as if I was clueless about an issue I had monitored and studied for years. It was frustrating and it was demeaning, but I let it go and redirected the conversation to a different topic.

Later that night, I reflected on the experience. I was frustrated and I thought if this is still happening to me at this stage in my career, how many other women are also struggling. Not long after this experience, I ran into Rumina Velshi, who is an absolute inspiration, particularly on these issues, but on so many others in our field. I couldn't wait to share my story. She listened, commiserated and then asked, so what did you do about it? I was struck, wow, what a wakeup call. What had I done about it? Nothing. The same approach I had taken for my entire career. I ignored it and plowed forward. I tolerated it.

What I now recognize is it's incumbent

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

upon me at this point in my career to wrestle with these issues and do what I can to impart change for the better. Women have faced these issues as long as they have been in the workplace and currently things are a lot better than they were years ago and certainly better than what our mothers faced, but there's a saying, it's not enough to climb up the mountain, you should reach behind and give someone else a hand up.

Director General Grossi and Secretary Granholm have both focused on the need to recruit and retain women in nuclear and that's important. I think the recent reports from the Nuclear Energy Agency, Gender Balance in the Nuclear Sector, is an important effort to gather data on the challenges women face.

I think Director General Magwood has really been a role model in trying to bring attention to this issue and encourage women to pursue careers in nuclear, but I think he goes beyond that. This is where I'm going to insert a strong caveat, I think my struggles have been a fraction of what some women have faced, so what I'm about to say is in no way intended to trivialize the women out there who faced much tougher situations

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

than I have, but these dynamics twice in my career have influenced my decision to actually leave a position. Once as my sole reason and the other as a strong contributing factor. The fact that women struggle in the work environment and they can choose to leave as a result of that should be a reason for all of us to focus on making our workplace more inclusive. Among the strongest drivers of job satisfaction were for people to feel appreciated and I believe the extent to which people feel appreciated is strongly influenced by how inclusive we are.

I'm going to share two stories that illustrate this. A recent one where I played a role and one that happened to me many, many years ago. A few months ago, I was in a meeting with about 15 people, three of them women. We had a PowerPoint presentation over lunch and we were engaged in a discussion. A woman across the table from me started to speak up. She was interrupted. I noticed it. I looked at her, she looked at me expressionless. She waited a few moments for another opportunity to jump into the conversation. She tried to jump in and was cut off again. She gave me a little knowing smile and I gave her a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

little knowing smile back.

I thought to myself okay, fine, I'll barge into this conversation. I'm going to interject and give her an opening. She deserves to be heard and I want to hear what she has to say. So, I tried to speak up and I was cut off. I gave her a surprised look. She gave me a surprised look. So, I waited a minute and I jumped in a little more forcefully and I asked for her input. She had a wonderful, insightful contribution to the discussion. What stuck with me though was the level of effort it took to elicit that contribution.

Women face these situations every day and every situation is fraught with a judgment call. Should I speak up? If a woman asserts herself, she risks being labeled as bossy or aggressive or does she choose to play it safe, withdraw and sit quietly. It's so easy to focus on the substance of the meeting and get lost in our own thoughts and miss a moment like that one. In many cases it isn't intentional and others in the room would be mortified if they realized what that outcome was. These moments can be subtle and fleeting, but when we miss them, there is an equally subtle message that her voice isn't worth hearing. This is a very

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

subtle and crucial aspect of inclusion. How hard is it for anyone, not just women, to contribute and be heard?

Now I'm going to dive way back in my past to a time when I was a volunteer firefighter and emergency medical technician. Obviously, this is a work environment where physical strength matters and as a young woman, I was fairly self-conscious about my physical strength and I wasn't alone. One of the other women on the department and I committed that we were going to lift weights together at the station and build our strength.

One evening when we were working out, one of the fellow firefighters came over to us with an air of contempt. It was palpable instantly. He stated in no uncertain terms he would never go into a burning building with either one of us because if something went wrong, neither of us would be able to carry him out. In his opinion, we shouldn't even be on the department. It was like a shot to solar plexus. I couldn't breathe. I felt devastated.

Not 10 seconds later, our lieutenant in charge of fire training, Scott, came around the corner having heard everything. He looked us each in the eye and told us to forget everything we had

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

just heard. He told us that he would go into a burning building with either one of us because he trusted our judgment and our dedication. He knew that most importantly, we would maintain situational awareness and keep our partners and ourselves out of dangerous situation and if the worst should happen and our partner went down, he knew that no matter what we would stop at nothing to get them out. It wouldn't be a glamorous fireman's carry like in the movies, but dragging a person out accomplishes the same objective of getting them to safety and that is what matters.

He was glad to see us in the weight room and encouraged us to stick with it. He stressed that everyone in the department has important contributions to make. The strongest men aren't necessarily the best in the back of an ambulance with an injured child and a terrified parent. What made us an important part of the team is that we were all intent on finding ways to serve and help those who needed us. That mindset together with our judgment and dedication was why he wouldn't hesitate to go inside a fire with either one of us.

I felt so valued. I felt empowered. I was inspired and most of all, I was motivated.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

There was no challenge too big for me to tackle. I was ready to face my fear and follow him into a burning building because I knew that we were a team and together we were unstoppable.

Stephen Covey has written about a concept he calls the shadow of the leader. It means that as a leader whether you realize it or not, you're casting a shadow so be mindful of the influence you exert, even when you are unaware. This conversation took only a few minutes of Scott's time and it took place over 30 years ago. He has probably long since forgotten that conversation, but you can tell the impact it had on me and how it inspires me to this day.

Think of all the contrasts between these two examples. One where women hesitate to speak up in meetings and one where a woman would run into a burning building. The difference is leadership. Imagine for a moment if everyone felt as motivated as I felt under Scott's leadership. Think of the untapped potential that could be unleashed in a work environment where women felt comfortable speaking up and contributing.

True leadership inspires us to grow beyond who we are and become something greater.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

Scott inspired me to grow beyond who I was and be braver than I thought I could be. While I shared my perspective as a woman, I have no intention to ignore or dismiss the experiences of minorities or gender diverse individuals, particularly because I think some of these observations are probably strikingly similar for them also.

This is an issue where we can all lean in. Our workplace reflects how we as individuals interact and treat each other. Our careers are the sum of our experiences and interactions of those we work with. Our coworkers help shape our work environment and we shape theirs. So, the question is, how do you want to shape it?

Megan Rapinoe, the professional soccer player said, real change lies within all of us. It is in the choices we make every day. I thought the passage of time and my leaving footprints would make the path easier for those who follow, but it isn't enough, so I will find ways to step up my game, find my voice and give a hand to others to help them up the mountain. I recently had the pleasure of inviting Mary Casto, a brilliant environmental scientist new to the NRC team, to spend a day with me in the office and my intent is for her to be the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

first in what I hope is a long line of proteges. Encouraging women's engagement and helping them find their voice is a choice that we can all make every day and it's crucial to the future of the NRC and to the nuclear industry at large. This is where inclusion goes beyond principle and into practice and there's no better time than the present. Thank you.

MR. FURSTENAU: Thank you, Commissioner Caputo. I've got to start with this. I started, as I was monitoring questions, I've got to admit it, I got a little bit overwhelmed because there were so many great comments about what you were talking about towards the end of your talk. I just wanted to share some of those comments with you and the audience before we get into the Q&A.

First, thank you for your bravery to speak frankly about women's issues in the nuclear field. Another comment, racial minorities have expressed similar frustration with very similar challenges. Thank you for addressing the common struggles that we, as women engineers, face on a daily basis and just, again, another comment, a hearty thank you for sharing your experiences on that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

Okay, now we'll get to the --

COMMISSIONER CAPUTO: Thank you to everyone for the thank yous.

MR. FURSTENAU: A question related to the topic, I think is coming from industry, what actions or incentives do you feel we could implement to entice the under-represented at midcareer or, I think, any level of career to come to the NRC?

COMMISSIONER CAPUTO: Oh, to incentivize them to join the NRC rather than industry?

MR. FURSTENAU: Yes. I threw that in, that's my part of question.

COMMISSIONER CAPUTO: Okay, no that's fine. That's fine. You know I really think that's a better question for our NRAN cohort because they made that decision. They're all quite talented and bright and capable and they joined us instead of the industry. I think a lot of times we are very self-conscious about the fact that we can't necessarily offer competitive salaries with industry, but what we do offer is public service and a mission that everyone can embrace with dedication and commitment. I think that appeals to a lot of people. I think it also appeals to the right kind of people.

For employees that are drawn to that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

mission, it's because they are dedicated and they have a public service mindset and I think that that level of commitment is exactly what we're looking for. So, I think there's a certain amount of natural affinity there.

MR. FURSTENAU: Okay, thank you. Another one related to work force. What role do you think the NRC should play in nuclear work force development?

COMMISSIONER CAPUTO: I think we need to continue doing a lot of what we're doing. One of the challenges that we face as an agency is attrition. Over half of our work force is over 50. Our attrition rates have increased from four to seven percent over the last several years, so if we continue to see attrition at that level, you can think about swapping out one-third of the agency over the next five years. That's an incredible hiring challenge, so recruitment is a tall order.

I think we have a very active HR department that is working on being very strategic in recruitment and places that they target to find the high quality people we need for our mission and to find a diverse set of people that are wanting to engage in the mission. So, that is a part of it,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

but I also think retention is a big issue, not just to recruit these people early in their careers, but to show them an exciting career path where they can grow and develop and continue to contribute to the mission for a number of years and find the position challenging and exciting. But, we also have a contingent of middle management, who because we have been blessed with such a large section of experienced employees, perhaps have not had the upper mobility as much as they might have liked. So I think it's incumbent upon us to pay particular attention to making sure that we are giving these people the challenges and the room for growth that they need to develop because in short order, we're going to need each and every one of them to fill the shoes left behind as our deep experienced bench heads into a well-earned retirement.

MR. FURSTENAU: All right, thanks. I think we have time for one more question here. How do your statements on a decedent in workload square with other statements from our external stakeholders that the NRC will need to address new SMRs, new LWR proposals, increase in international demands, increase in advanced reactors and an increase in regulations that the staff will need to address?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

COMMISSIONER CAPUTO: I think that's probably a natural, I will call it, knee jerk response because there's an expectation that there will be a lot of applications and a lot of advanced reactors coming. The natural response to that is to make sure that we have the staff we need. I think having enough staff with the right qualifications is exactly what we need. We need to be focused on that.

The challenge that I see is the fact that we have significant resources to do that. When you look at the scope of the workload, as these applications come in the 419 that I referenced, this includes all of our resident inspectors in all of our plants full time. Everyone that's reviewing license amendments. Everyone that's reviewing advanced reactor applications, topical reports, pre-application engagement right now. So, when I say we could double our workload and still fit within the '24 budget, that encompasses an enormous amount of work that we could handle if we staff according to our technical staff needs.

I think the concern that I have is the fact that that portion of work is 21 percent of our agency at this point. It's our primary mission, but

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309

it represents a small minority of the work that we do.

I think it's that other work that we should really scrutinize because I think, if anything, I think it's quite possible that our employees' time is getting cluttered with things that are not necessarily crucial for the mission, whether it's working groups, meetings, etc. I think there's room to find ways to have our employees use their time more wisely and smarter and expect less clutter in their schedule to allow them the time to focus on what's truly important. That, I think, is an area that is ripe for us to focus on.

MR. FURSTENAU: Okay, thank you very much, Commissioner Caputo. Appreciate your remarks and the Q&A session. With that, I'll close this session. There's just a couple of minutes until the next plenary, so a very short, a very, very short stretch break. Let's thank Commissioner Caputo again.

(Whereupon, the above-entitled matter went off the record at 9:12 a.m.)

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1716 14th STREET, N.W., SUITE 200
WASHINGTON, D.C. 20009-4309