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Committee on Environment
and Public Works

Washington, D.C.

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OVERSIGHT OF THE NUCLEAR REGULATORY COMMISSION

Wednesday, December 1, 2021

United States Senate

Committee on Environment and Public Works

Washington, D.C.

The committee, met, pursuant to notice, at 10:09 a.m. in room 406, Dirksen Senate Office Building, the Honorable Thomas R. Carper [chairman of the committee] presiding.

Present: Senators Carper, Capito, Cardin, Whitehouse, Markey, Stabenow, Padilla, Lummis, Sullivan.

STATEMENT OF THE HONORABLE THOMAS R. CARPER, A UNITED STATES SENATOR FROM DELAWARE

Senator Carper. I would like to invite the Chairman and the Commissioners to please come to the witness table.

Colleagues and witnesses, guests, I think we have everybody in their respective seats. Nice to see you all, thanks for joining us.

Today we are going to hear from three members currently serving on the Nuclear Regulatory Commission. I want to start by welcoming each of them back to this committee. Chairman Hanson, Commissioner Baran, and Commissioner Wright, we want to thank you all first of all for being here. I want to thank you for your service. It is great to see each of you.

This hearing is an opportunity for our committee to examine the work of the NRC, important work of the NRC, understand what is working and to learn what we can do together to address any challenges that this important agency is facing. We appreciate the commissioners joining us today, because it is important for us to hear directly from you.

We want to ensure that the NRC has the resources it needs to maintain the safety of existing nuclear facilities and also to prepare of the future. This includes the work required to develop and deploy the next generation of reactors as well as new, advanced nuclear technology and materials.

As many of you know, I believe that safe nuclear power plays an important role in our efforts to address the greatest challenge that we face on earth at this time, and that is the climate crisis. America's nuclear reactors provide, if I am not mistaken, one-fifth of our Nation's electricity and just about half of all emission-free energy in this Country of ours. Think about that. Just about half.

Nuclear energy is key to reaching net zero emissions economy-wide. The NRC is critical to ensuring that our nuclear energy is safe and that it is reliable.

In August, I had the opportunity to visit Salem Hope Creek Nuclear Power Plant, just across the Delaware River in our neighboring State of New Jersey, along with Chairman Hanson. Thank you for being there with us. I describe that as my favorite part of Delaware, but it is really in New Jersey. Actually part of the high-water mark on the Delaware River on the New Jersey side actually does belong to Delaware. We never got control of the nuclear plants.

Anyway, I was quite impressed with what we saw during our visit. I suspect the Chairman was as well. Those two plants employ more than 1,600 people, a bunch of them from New Jersey, but a surprising number from Delaware, too, and some from Pennsylvania. They keep electricity rates affordable and help make the electric grid more reliable. More importantly, they do

all these things safely. Let me say that again. More importantly, they do all these things safely.

The NRC remains the gold model for nuclear safety agencies. And the Commission's work to maintain safe and secure nuclear power is an essential tool in our efforts to reduce greenhouse gas emissions.

Unfortunately, our existing aging and inefficient nuclear fleet is struggling to keep up with our growing needs for safe, climate-friendly power. Several nuclear plants have closed prematurely in recent years. Several more are expected to close this decade.

From this adversity comes opportunity. Now, American innovators can rise to the challenges and work to develop the next generation of reactors and technologies. Doing so will place our Nation at the forefront of the revolution to clean energy, all while creating jobs and economic opportunity for the American people. That is something we all should be proud of and we should all support.

As we work to meet this moment, we open the door to another critical opportunity, that is the chance to right the wrongs of the past and address the historic impact of pollution on disadvantaged and underserved communities across our Country. As a founder and co-chair along with the Senator from Illinois, I and also Senator Cory Booker, I think it is essential for the

NRC to bring that focus on equity to their work as we pave the way for a new era of non-polluting and safe nuclear power.

So I am pleased that the NRC is currently undergoing a review of its environmental justice policies and programs. I hope and expect that these efforts will empower those communities historically left behind by our energy policies and will give them a seat at the table in the NRC's decision-making processes, and hopefully within the nuclear industry more broadly.

These are good efforts underway at the Commission. So in closing, I would just add that I look forward to hearing from each of you about how this committee can better support your efforts. Together, I think we can. Actually, I think we must ensure that a revitalized nuclear industry is a significant part of our national strategy to combat climate change by providing safe, secure, clean and affordable energy to all Americans.

Before we hear from our witnesses, I would like for us to hear from Senator Capito for any comments that she wants to make. Senator Capito, welcome, and thank you.

[The prepared statement of Senator Carper follows:]

STATEMENT OF THE HONORABLE SHELLY MOORE CAPITO, A UNITED STATES SENATOR FROM THE STATE OF WEST VIRGINIA

Senator Capito. Thank you, Chairman Carper, and thank the witnesses for coming before us today and for your service.

This comes at a very critical time. Energy prices continue to rise, as the weather is turning colder and families need to heat their homes. My constituents are paying more at the pump to take their kids to school or to go to their jobs. Higher energy prices are driving inflation and make no mistake, this is a hidden tax on our working families.

Despite this, the game plan is to continue to push policies I think that will make the situation worse. Unaccountable White House staff, led by climate czar Gina McCarthy, are developing and implementing an extreme environmental agenda. President Biden's Administration is taking drastic steps that will hurt energy affordability and electric reliability. The EPA is pushing regulations to limit production of American energy. EPA Administrator Michael Regan has stated that he is going to push the envelope in exercising the agency's regulatory authority. It seems this reckless tax and spending spree would increase energy costs on all American families and businesses and will harm our competitiveness, will reduce the reliability of our energy systems, it is just a bad deal. It would raise energy prices through a natural gas tax. These policies will raise

energy costs and undermine baseload electric generation, threatening families and businesses with more frequent and wholly preventable blackouts.

Instead of pursuing policies that will accelerate inflation and undermine our grid, we should advance the solutions we are going to hear about today that reduce costs and increase reliability, all the while improving the environment. This means pursuing all clean energy sources, including carbon capture, natural gas, and nuclear. The NRC enables the safe use of nuclear energy in the United States. It is instrumental to ensure our public confidence. The public confidence is strengthened when the Commission operates as it was intended.

The Congress established the Commission as a five-member body. It functions most effectively with a full slate of members. The Commission is currently operating with just three members, who we have here with us today.

In March, President Carper and I wrote to President Biden asking that he promptly put forth a bipartisan pairing of qualified nominees, one Democrat and one Republican. But the President has yet to do so. A full slate of Commissioners should be in place to make critical decisions for how new nuclear technologies are licensed, regulated, and operated.

In 2018, Congress passed the Nuclear Energy Innovation and Modernization Act, which I cosponsored, with overwhelming

bipartisan support. That law, which was a product of this committee, requires that the NRC develop safety rules for the next generation of advanced nuclear technologies. This past May I wrote to the NRC Chairman Hanson to applaud the Commission and its staff for their diligent work so far on those rules. Our innovators need safety rules that are both predictable and flexible. Nuclear engineers and entrepreneurs who are investing time and money to develop new reactor designs need to use the rules and they need to know the rules of the road.

I look forward to receiving an update on the rulemaking as well as other related advanced nuclear initiatives.

The Commission is looking to update existing policies for new and emerging technologies to guide review of applications submitted before the rulemaking is complete. In addition to setting the stage for new nuclear technologies, the Commission should modernize its policies to allow for today's reactors to focus on the most important safety issues.

In 2019, the NRC staff proposed recommendations to the Commission for common sense changes to what is known as the reactor oversight process, the regulations that guide the oversight and inspection rules for operating nuclear power plants. I joined seven of my colleagues in asking the Commission to support these proposals, which were based on thorough analysis and review of historical data. I am

disappointed that the Commission did not act. The staff is now, to my understanding, reworking its proposals.

While the Commission reviews its policies to ensure the safe operation of nuclear power plants, Congress can build on previous bipartisan efforts like the Nuclear Energy Innovation and Modernization Act to secure the future of our Country's nuclear energy sector. In July, I introduced the American Nuclear Infrastructure Act to preserve and expand our use of nuclear energy. Joining me on the bipartisan legislation are six cosponsors, including Senator Whitehouse and Senator Graham on this committee. Last year the EPW Committee, this committee, passed that bill by 16 to 5. Chairman Carper and Senator Cardin voted in favor of that bill.

I look forward to working with Chairman Carper to advance this legislation again this Congress to ensure Americans have access to clean, reliable, affordable energy.

With that, I yield back.

[The prepared statement of Senator Capito follows:]

Senator Cardin. [Presiding.] Let me thank the Ranking Member.

We will now hear from the Commissioners of the Nuclear Regulatory Commission, starting with its Chair, the Honorable Christopher Hanson.

STATEMENT OF THE HONORABLE CHRISTOPHER T. HANSON, CHAIRMAN, NUCLEAR REGULATORY COMMISSION

Mr. Hanson. Thank you, Senator Cardin.

Chairman Carper, Ranking Member Capito, and distinguished members of the committee, my colleagues and I appreciate the opportunity to update you on the U.S. Nuclear Regulatory Commission's licensing and oversight activities this morning.

The NRC is an independent federal agency established to protect the public health and safety through the regulation of commercial nuclear plants, research tests and training reactors, nuclear fuel cycle facilities, and civilian use of nuclear materials. Additionally, the agency regulates transportation, storage, disposal, export and import of nuclear materials and waste, the export and import of nuclear reactors and production facilities, and the export of nuclear facility components.

The Commission last appeared before this committee in March, 2020. Since that time, the NRC has had to respond to the challenges of the COVID-19 pandemic while protecting the safety of our workforce and continuing to perform our important safety and security mission. To ensure that the agency could maintain its regulatory oversight role during the pandemic, the NRC implemented a number of interim procedures. These procedures enabled the NRC to continue inspections and other key oversight activities during the pandemic. It also allowed the agency to

stay engaged with the public despite limitations on in-person meetings.

The NRC's incredible workforce has remained committed to the agency's mission despite all the challenges and uncertainty associated with the pandemic. The NRC began its transition to a hybrid work environment on November 7th, just last month. We have taken care to ensure our buildings are safe for employees, contractors, and visitors.

In this regard, we have been fully implementing the Administration's executive orders requiring COVID-19 vaccination for federal employees as well as federal contractors and subcontractors.

The NRC has made significant progress in implementing the provisions of the Nuclear Energy Innovation and Modernization Act since its enactment in January 2019. The NRC submitted 12 reports to Congress and has made progress implementing other provisions, including the requirement to complete a rulemaking for a technology inclusive regulatory framework for advanced nuclear reactors, also known as Part 53. The NRC remains on a schedule that would allow for publication of the final rule significantly ahead of the NEIMA deadline of December 2027.

The NRC continues to provide licensing and oversight for 93 operating commercial nuclear power plants and 31 research and test reactors around the Country. Currently, 92 of 93 reactors

are in NRC's highest performance category and have fully met our safety and security performance objectives. Only one reactor is in the second performance category, needing to resolve items of low safety significance.

Since December 2019, the NRC has approved subsequent license renewals for six reactors, extending each reactor's period of operation from 60 to 80 years. The NRC is currently reviewing several other applications for subsequent license renewal.

The NRC is also actively preparing for the completion of construction and anticipated transition to operation of the Vogtle Reactor units in Georgia. NRC inspections are proceeding in accordance with the licensee's continued work at the site.

Regarding small modular reactors, or SMRs, the NRC has completed its technical review of NuScale's application for certification of its SMR design. The NRC is also engaged in pre-application discussions with vendors for three other SMR designs as well as a possible combined license application that might reference one of these designs.

In the nuclear materials and safety program, the NRC completed its safety and environmental reviews for a consolidated interim storage facility in Andrews, Texas. The agency issued a license to Interim Storage Partners in September 2021.

In addition, the NRC approved a license amendment in June that authorizes a 16-centrifuge cascade for uranium enrichment at the American Centrifuge Plant in Piketon, Ohio, to demonstrate the production of high assay low-enriched uranium for the Department of Energy.

Twenty-six NRC licensed reactors are currently in decommissioning. Three additional power reactors publicly indicated or submitted formal notifications to the NRC that they will be permanently shut down before the end of 2025. The Commission recently approved a proposed rule to address decommissioning reactors. Decommissioning reactors are currently subject to the same requirements as operating reactors, despite significant differences. This rulemaking removes inapplicable requirements but does not reduce safety. It will provide for a safe and more efficient decommissioning process ending with unrestricted release of the reactor sites. It should reduce the need for license amendment requests and requests for regulatory exemptions.

In closing, the NRC and its dedicated employees are hard at work and remain deeply committed to the agency's safety mission. Chairman Carper, Senator Cardin, Ranking Member Capito and distinguished members of the committee, this concludes my formal testimony. On behalf of the Commission, I thank you for the opportunity to appear before you this morning and for your

support for the vital mission of the NRC. We would be pleased to respond to any questions.

[The prepared statement of Mr. Hanson follows:]

Senator Cardin. Chairman Hanson, as you first pointed out, Senator Carper is in another committee where his time is up for questioning. He will be back shortly. Senator Capito had a similar commitment. Don't take it personally.

[Laughter.]

Mr. Hanson. Not at all.

Senator Cardin. You are left with Senator Whitehouse and myself.

We will now hear from Commissioner Jeff Baran.

STATEMENT OF THE HONORABLE JEFF BARAN, COMMISSIONER, NUCLEAR REGULATORY COMMISSION

Mr. Baran. Thank you for the opportunity to testify today. It is great to be back with my colleagues to discuss NRC's important work.

I want to briefly focus on three pressing challenges affecting NRC: the fight against climate change, the response to the COVID-19 pandemic, and the pursuit of environmental justice. I see NRC's nexus to climate change in two main areas: the operating fleet and new reactors.

For the long-term operation of existing nuclear power plants, NRC's role is to provide strong safety and security standards and rigorous independent oversight. The Reactor Oversight Process has generally been an effective safety framework. If we are going to make a particular change, there should be a solid safety case for it. Of course, NRC needs to be open to and ready for new technologies that could improve safety, such as digital instrumentation and accident tolerant fuels

The other main climate-related role for NRC is the licensing and oversight of new reactors. New reactor designs have the potential to be safer than existing designs. The challenge is striking a reasonable balance between the value of new safety attributes and maintaining a prudent degree of

defense-in-depth.

Responding to the COVID-19 pandemic has been another major priority for the agency. Resident inspectors are now back onsite and the regions have returned to in-person safety and security inspections. In fact, the staff has set a goal of getting back to normal levels of oversight this year.

During the pandemic, some inspections were performed remotely out of necessity. I see that as a temporary measure that made sense during an extremely unusual and challenging public health emergency.

Going forward, there is broad agreement on the value of and need for in-person safety and security inspections. There is just no substitute for having independent NRC inspectors onsite.

NRC must also pursue environmental justice. The staff is performing a systematic review of the agency's programs, policies, and activities. They are consulting with a broad range of stakeholders and developing options for improving how the agency pursues environmental justice.

In my view, we must meet the moment and not settle for doing things the way they have always been done.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Baran follows:]

Senator Cardin. Thank you very much, Commissioner.

We will now hear from Commissioner David Wright.

STATEMENT OF THE HONORABLE DAVID A. WRIGHT, COMMISSIONER, NUCLEAR REGULATORY COMMISSION

Mr. Wright. Thank you, Senator Cardin. Good morning to Chairman Carper, Ranking Member Capito, and the other members of the committee as well. I appreciate the opportunity to appear.

First, I would like to thank my colleagues for their insights into the matters that are before the Commission and to the Chairman for his leadership during these challenging times. I hope that the next time we appear before you, we will be a full complement, because we work best with five Commissioners.

Thanks to the efforts of our COVID task force, we did begin reentry on November 7th. This gives us the opportunity to collaborate in person again, as well as meet employees who onboarded while we were on fulltime telework. That in-person interaction helps us meet our mission in the most effective way possible.

There are many exciting things happening at the NRC, including advanced reactor applications under review, the Part 53 rulemaking efforts, subsequent license renewal applications, digital I&C, accident tolerant fuel application reviews, and the decommissioning rulemaking. In these and in all matters, my focus and the staff's focus is safety.

There have been recent media statements and social media posts regarding NRC decisions and rulemakings suggesting that

the staff's recommendations are not safe or simply reflect the industry viewpoint, including on the proposed decommissioning rule. For the record, I do not agree with those statements. Our staff members are committed professionals dedicated to meeting the NRC's safety mission.

As you know, our safety mission is apolitical, as are the NRC's Principles of Good Regulation. The staff's findings in the matters before the NRC are based on data, expertise, and experience, and are informed by input from external stakeholders.

At times, the staff is not unanimous in its recommendations, but processes are in place to ensure that all staff perspectives, including differing views, are considered before making recommendations to the Commission. While there may be different policy views on those recommendations, each recommendation staff provides the Commission meets the NRC's safety mission. I make sure I understand each of these points of view, as well as my colleagues' perspectives, before reaching a decision. I would like to thank the staff for its unwavering focus and dedication to the shared goal of the Commission, the staff, and our licensees: the safe and secure civilian use of radioactive materials.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Wright follows:]

Senator Cardin. Again, I thank all three of you for your service and for your testimony here today.

You obviously have tremendous challenges. I think we all hope that we can get a full complement of Commissioners nominated and approved as quickly as possible.

I want to start this round of questioning dealing with the workforce issues. You have tremendous responsibility. We are very proud of the workforce, I am very proud of your location in Rockville, Maryland, where your headquarters are located. I have been there many times and talked to many of your workforce about the challenges that you face. You clearly have to deal with the safety of our current reactor inventory as well as dealing with decommissioning and dealing with the new reactors that are being put online, and new technologies legislation passed by Congress that you have to implement. We recognize all that.

In addition, you have Project AIM 2020, which dealt with downsizing the Nuclear Regulatory Commission. Put on top of that COVID-19, which changed your methods of dealing with challenges to a remote work environment. As I look at the demographics of your workforce, I see an aging workforce. I see a concern as to whether we are attracting the type of talent that is needed at NRC moving forward.

So I would like you to share with us your strategies for

making sure that we have the workforce we need to carry out this incredibly important responsibility. Chairman Carper and Ranking Member Capito pointed out the importance of nuclear energy. I strongly agree with that. Half of our carbon-free energy production is through nuclear. So it is a critical part of our current energy portfolio, and an important source moving forward with dealing with both energy and climate.

What are we doing to make sure that we have the talented workforce that we need, most of which are technical individuals, as we move forward under this environment?

Mr. Hanson. Senator Cardin, thank you for that. This issue of what we call strategic workforce planning is a very high priority for me. I know my colleagues have spoken on it in public and in other venues as well, in making sure that we have the workforce of the future.

Let me highlight a couple of things. We have aggressively implemented a number of computer-based tools and other tools to identify the skill sets that we are going to need going into the future. So that may be materials engineers for advanced reactors, or health physicists or other kinds of skill sets. We are actively recruiting for those people. We need experienced and mid-career people to step into senior technical roles and leadership positions within the agency, certainly.

One of the other big areas that we really need to focus on

is attracting younger talent as well. In my visits to nuclear plants this summer, I was always asking, what is the percentage of the workforce at a plant under the age of 30. On average, plants were coming in in the 10 percent to 15 percent range. At the NRC, it is actually 3 percent. So this is a big area.

We reinstituted our apprenticeship program, what we are calling the Nuclear Regulator Apprenticeship Network, to take people that are right out of school and bring them in and cycle them through the various offices within the agency over a two-year period, so that when they come out, they have seen a lot of the agency and they are ready to hit the ground running, having experience in a number of areas.

We had our first class of that two years ago, with 22 folks. We are about to recruit another class. With additional resources in our human capital organization, we are hoping to be able to make that an annual program as well., to get more talent in the agency, so that we can have that culture and knowledge transfer from the folks that are going to be retiring out over time.

Senator Cardin. I would add that your budget is primarily financed through the industry itself. We recognize that nationwide, we have a real challenge in regard to workforce issues. This is not unique to one agency. We have a national shortage, particularly of trained individuals. If you need some

additional help from us, please let us know. Because I will tell you, we are deeply concerned by that percentage of those under 30 being 3 percent. We want you to have the brightest minds coming out of our universities that are going to help us deal with the new technologies in nuclear power, as well as dealing with the challenges of how we deal with waste and material, in addition to your current responsibility of safety.

So you have a pretty heavy portfolio. We would welcome any thought you might have as to how we can help you in order to retain the best possible workforce.

Let me ask one additional question as our leadership is settling into their seats. That is the economic issue of nuclear power. Nuclear power has not enjoyed the same type of tax incentives as other energy sources, particularly those that are friendly toward our environment on carbon emissions. I have introduced legislation dealing with the production tax credit. It is bipartisan, it is included in the Build Back Better budget on the House side. We have had many members of this committee that have been interested in this on both sides of the aisle, same thing on the Senate Finance Committee, where Senator Carper and I both serve as well.

Could you talk for a moment as to the need, moving forward with maintaining our nu clear reactors safely, as well as going to the next generation of nuclear reactors, to have a level

playing field in regard to the tax code to make it economically feasible for the investments to be made to make sure we have nuclear power moving forward?

Mr. Hanson. Senator, thank you for that. As you know, our focus is really going to be on the safety and maintaining the safety of each of these plants. As many people in the industry have acknowledged to me, there is no future for nuclear power without the safe operation of the current fleet. So that is just the opening stakes, as you will, into the larger energy conversation.

There is a nexus, of course, with the economics. Because of the economic pressures on some of these plants, there tends to be a focus to streamline and highly optimize the operations in a way that is not currently impacting safety. We don't want to impact safety into the future. So we are cognizant of the economics. But our focus is really on making sure that all of our licensees, whether long-existing or new or prospective, understand our standards.

Senator Cardin. I appreciate that answer. The reality is, if it is not economically feasible because of the competitive disadvantage that it does put additional challenges on operating safely. So it does affect your mission. And I think the economics of energy is an important part of our overall policies here. I would welcome your thoughts as to making sure that we

stay competitive so that safety is not compromised. I think your point is very well taken; we cannot compromise safety. But we also need to make sure that it is a level playing field for nuclear power.

With that, I will turn the gavel back over to Senator Carper, and ask if I got any additional staff as a result of taking over.

Senator Carper. [Presiding.] I am just glad you didn't annex part of Delaware on the DelMarVa Peninsula and take it into Maryland while I was away.

Senator Capito, please.

Senator Capito. Thank you, Chairman.

Thank you, I am sorry we had to slip out. As you can tell, there is a lot going on right now with simultaneous committee meetings.

As you all know, Congress created the DOE's Advanced Reactor Demonstration program to establish public-private partnerships. Then the BIF put in $2.5 billion in funding to support these programs. That is a major investment and much welcomed in a bipartisan effort.

To successfully build and operate these reactors, the NRC must efficiently review and approve these designs. Chairman Hanson, my understanding is that there are already two applications that were accepted last year and that will be going

into this program. How is the Commission preparing to review those in light of the new funding opportunities?

Mr. Hanson. Senator Capito, thank you for that.

One of the key ways that we are preparing is by reviewing what we call topical reports from both X-Energy and TerraPower, the two ARDP awardees. What those really are, they are technical reports that they submit to us for early review.

What that does is it allows us to resolve any technical questions that we might have about their design. It also gets them into the regulatory process early before there is a formal application. So we can have a very interactive process with them. We can learn about their design. They have an opportunity to go back and refine their design as needed. We can do that.

So that when, for instance, TerraPower is supposed to come in with their application in 2023, we are fully prepared to review that efficiently and effectively.

Senator Capito. So I guess the basic question there is, the protocols are already firmly established, the rules of the road are already established in this particular case for these two projects. In other words, they know what they are going to be, they know how to formulate their applications. The rules of the road are explicit for them right now to be able to, as you are moving toward the process.

Mr. Hanson. Yes, that is right. Because our advanced reactor rulemaking is still ongoing, they are going to, I think, choose alternative pathways for licensing for their reactors in the near term.

Senator Capito. Okay, thank you. Commissioner Wright, in 2018 the NRC stood up what is called the Vogtle Readiness Group, which was tasked specifically to oversee activities associated with the completion of the only two new nuclear reactors currently under development, and that is Southern Company's Vogtle site in Georgia. This organizational approach may be useful to replicate for the Commission's review of the ARDP reactors.

Is there a structure that NRC would consider for these first reactors that mirrors these principles that are embodied in the Vogtle Readiness Group?

Mr. Wright. Thank you for the question.

Yes, ma'am, I think that the NRC is going to take lessons learned from everything that we are doing right now. The Vogtle Readiness Group is one of those things that has performed very well.

Because the different technologies that are coming before us, be it the TerraPower thing, be it NuScale, be it Oklo, or be it Kairos, or whatever, they have different needs, requirements. So we look at tiger teams, we will loosely call it that, to try

to, once we get a team working on something, they stay with that, so they are not bouncing back and forth to different people. I think that will add some consistency to it. What we learn from one we can apply to others as well.

Senator Capito. So would you anticipate creating some sort of group that is exclusively focused on reviewing these two demonstration projects? Is that what you are saying?

Mr. Wright. I would think that we are going to do something very similar. It may not be exactly.

Senator Capito. Mr. Chairman, did you want to weigh in on that?

Mr. Hanson. That is right, Senator. We are looking at kind of what we are calling a core team approach where we have a dedicated group of people that will follow that application all the way through, and then can kind of bring in extra expertise as we go along. We think that has been kind of a proven method for improving the efficiency of these reviews and decreasing the need to kind of educate multiple groups of staff within the agency.

Senator Capito. I alluded in my opening comments to the fact that the Commission did not act on the reactor oversight process that was formulated. What are the next steps for the staff and for the Commission to improve and modernize that?

Mr. Hanson. Senator, as you noted, they withdrew the

paper, I think.

Senator Capito. Right.

Mr. Hanson. Because they had updated information. They are looking at that, those papers again, and incorporating that updated information. I expect that we will see that paper again. That was certainly the basis of my approval of the withdrawal, was that we would see these issues again in some revised form. I am looking forward to that.

I don't have an update on the specifics. I would be happy to follow up.

Senator Capito. Let me just ask a real generalized question. From the view of the American public, who I believe believes in an all-of-the-above energy plan for the Country, and you heard from my opening statement the frustrations that I have felt with the direction that we are going. Nuclear is the least talked about, but in some ways could be the most powerful dual tool in terms of generating the power, but also in an environmental way that doesn't add the emission challenges that things like coal and natural gas that my State produces very well for the Country, I will say.

How do you tell the American public, and if I could take the time to ask all three of you, how do you, very quickly, tell the Country that nuclear needs to have a future, and has a future, and any concerns from the past, how they are being

allayed? If you can do that in a minute or so, I think it would be important for the American public to hear that. We will start with Mr. Baran.

Mr. Baran. We always walk a careful line here because it is important for all of us, I think the Chairman will say this, too, we don't promote nuclear power. It is important for us to be neutral on it. We all have our individual opinions. But we as an agency don't promote it. Our focus is on safety and security.

What I want the American people to know is that is what we are focused on every day, to make sure we have the right standards in place, and rigorous, strong oversight, and we have good processes for new reactor applications. As I talk to licensees, when the conversation turns to climate and how are we going to get to net zero, the focus turns to nuclear in a lot of cases.

So that could mean we get a lot of additional applications in the future. We need to be ready for that. We need to have a framework in place. We need to be using these strategies that my colleagues talked about to make sure we have a good process for reviewing new reactor applications.

Senator Capito. Chairman Hanson?

Mr. Hanson. I would like the American people to know that nuclear power has a long history of safe operation in this

Country, overseen by a rigorous, independent regulator here at the NRC and the NRC staff. As Commission Baran said, we are well poised with our technical staff to license new nuclear technologies into the future. And we are modernizing our approaches. We are building on what we have learned over that long history of safe operation to make our oversight of the current fleet more efficient and more effective.

Senator, as you have noted, a lot of utilities, the cornerstone of their carbon-free electricity plans are the continued operation of existing reactors today. NRC will continue to be an efficient and effective regulator of those sites.

Senator Capito. Mr. Wright?

Mr. Wright. Thank you. External awareness is really part of our mission as well, to be externally aware of what is going on around us. When I go visit plants specifically, where a plant is located, that is probably the biggest support area around that plant. The farther away you get from a plant, it becomes less and less talked about, so to speak.

So the support for the plants are closest to where they are. You hear that talked about. But one thing, I agree with my colleagues, we just need to be sure that when we are engaged with the public that they know we are going to make sure they are operated safely.

Senator Capito. Thank you. Thank you for the time.

Senator Carper. Senator Lummis, I am going to yield to you, so you can go next. Once you have asked your questions, Senator Whitehouse, you will be next.

Senator Lummis. Thank you, Mr. Chairman.

Chairman Hanson, in July of 2020, the NRC and EPA signed a memorandum of understanding regarding the understanding of uranium in situ recovery facilities. The MOU provided clarification of the respective roles and responsibilities of the two agencies. It was needed.

Will you commit that the NRC will uphold this MOU, particularly as the agency proceeds with its consideration of a draft proposed rule regarding uranium in situ recovery facilities?

Mr. Hanson. Senator, thank you for that. The approval of the MOU with EPA was a full Commission decision. It would take a decision by the Commission to change that MOU, and that is not a matter before us at this time. I don't foresee any changes in the immediate future.

Senator Lummis. So if there were to be a change, the entire Commission would have to abrogate the MOU in order to make the rulemaking conform to their new ideas?

Mr. Hanson. I believe that the proposed rule on the in situ recovery that is before us conforms to the MOU.

Senator Lummis. Okay, perfect. Thank you.

The NRC and the States that have implemented NRC regulation requirements, the agreement States, of which my State of Wyoming is one, have a really good track record on in situ recovery. We make sure that uranium recovery is safe, that it is carried out through regulation, guidance, site-specific licensing considerations, and the expertise of regulatory staff. The regime is comprehensive and it is working very well to protect the environment.

I understand that the NRC is seeking to formalize aspects of the licensing process in the draft proposed rule. In doing so, would you agree that the NRC should reinforce existing management practices that are working well, and not duplicate or supplant them?

Mr. Hanson. As a general matter, I think if agreement States are executing the programs that they have in front of them, that there is not a need for the NRC to, as you say, duplicate that effort. We don't do that in other areas, for example.

We do inspect State programs on a triennial basis, I believe, for their effectiveness. We would do the same thing with Wyoming, I think, coming up. There are new agreement States so I think their review is some ways off.

But those reviews tend to be generally constructive. We

want to help States implement their programs effectively.

Senator Lummis. I think that is a worthwhile give and take that occurs during those discussions. It is important that you understand what they are doing, and they understand what you expect of them. That is reassuring.

My next question is for all of you. As you know, TerraPower's Natrium Power Plant is going to be built near Kemmerer, Wyoming. We are very, very pleased wit that choice. It is a timeline that will allow works from the coal plant that is slated to be closed to transition to the Natrium plant. Both DOE and the developers have said they can meet the seven-year deadline imposed by Congress.

This will require the NRC to review and approve applications in a streamlined and efficient manner. Because it is a pretty tight timeline. Congress also passed the Nuclear Energy Innovation and Modernization Act to push the NRC to move faster on licensing advanced reactors. NRC has been working hard to meet the bill's timelines. It is clear that meeting these timelines and moving faster is a key priority for Congress.

So for all the Commissioners, does the NRC have what it needs to ensure that these reactors, funded through a public-private partnership, will achieve the 2028 goal? If not, what more do you need from Congress?

Mr. Hanson. Senator, thank you for that. At this point, I would say we do have what we need. We have gotten money outside of our regular fee structure for the development of the advanced reactor rulemaking. The Department of Energy, of course, has granted money to the ARDP awardees like TerraPower, and they are using some of that money to consult with us for early licensing engagement. So I think we are on a good track now.

To the extent that we need additional resources, if I could, I will put in a plug for some of our corporate support functions in the IT area, to make sure we have the information technology tools, and in our human capital area, so we have the people on board that we need, to hire the people that we are going to need to review these applications.

So it is kind of one step removed. I think we are doing well in the technical areas. Again, the conversation we had with Senator Cardin about the need to backfill a lot of the technical expertise that is going to retire over time, we are actively engaged in that. But at the moment, I think we are in a good situation.

Senator Lummis. Mr. Baran?

Mr. Baran. I agree with the Chairman. I think we are well positioned to do this work.

Senator Lummis. Great. Mr. Wright?

Mr. Wright. He did a very good job. There is not much to

add to it, except to say we are going to do everything we can not to be a barrier to anything there.

Mr. Hanson. Well said.

Senator Lummis. I thank the witnesses, and I yield back. Thank you, Mr. Chairman.

Senator Carper. Thanks so much for joining us today.

Senator Whitehouse?

Senator Whitehouse. Thank you, Chairman. I am going to ask questions very aligned with Senator Lummis's. I was an original author and sponsor of the Innovation and Modernization Act. So I am keenly interested in seeing you implement it effectively. Senators Barrasso, Crapo, Booker and I wrote to you all recently to give you a well done on moving up the schedule.

But recently, you extended by nine months the date in the Part 53 rulemaking for receipt of the proposed rule package. I am wondering what the portends by way of timeline.

Mr. Hanson. Senator, thank you. The Commission did just approve an extension of the timeline and we didn't do it lightly. Because we do feel the urgency in getting this rulemaking out.

Senator Whitehouse. But as I understand it, you have moved ahead of the anticipated schedule to begin with. So this is slowing down an accelerated schedule.

Mr. Hanson. That is right. The original schedule was December of 2027. The Commission had given direction to the staff to move that up to I think some time in 2024. We have now pushed that back a little bit so that we could really focus on how best to use our risk information in some of the designs that we are going to get and how to credit design maturity appropriately in the application process.

Senator Whitehouse. So does the nine-month extension likely flow through and tack onto the anticipated end date?

Mr. Hanson. I am hoping it is not a day for day slip, to tell you the truth. I am hoping that the extra time that we are taking up at this stage in the process that we can recover at least some of that in the final rule stage, because we will have a more fully developed product.

Senator Whitehouse. Okay. We wish you well. This is a strong bipartisan area in a Congress in which strong bipartisan areas can be scarce.

One of the reasons that I have been supportive of this innovation is the constant news that we are hearing out of the innovative community that these technologies will put them in a position to take the spent nuclear fuel, nuclear waste, for which America currently has no plan, and which is sitting onsite near nuclear facilities, because we don't even like to have it travel, and piling up. It seems to me that the ability to take

that resource and use it to power carbon-free generation is a pretty positive thing. We have no better plan for the nuclear waste right now.

I am concerned that the economics are going to be a problem. If we were United States of America, Incorporated we would have a balance sheet, we would have accountants, there would be a report each year on the financial picture of the company. And in that financial picture would be the liability of cleaning up the nuclear waste mess. Whatever that number was, that number less $1 would be the incentive to get that problem solved, because it would be identified as an economic burden on the enterprise.

The United States of America as a country doesn't operate that way. My worry is that a small savings from using new fuel as opposed to trying to address the spent fuel problem will push the spent fuel technologies to the side, simply because the importance of dealing with the spent fuel won't be recognized in the equation in any way.

First, are you aware of that problem, and is there any way in which the NRC is focused on trying to make sure that spent fuel innovation, spent fuel-based innovations don't become orphaned by your process?

Mr. Hanson. Thank you for that, Senator. I think we are focused to make sure that there aren't any parts of the fuel

cycle that are orphaned. In our advanced reactor preparations, I have personally tried to emphasize with the staff the need to look at all parts of the fuel cycle and ensure that we have what I would call a regulatory line of sight for all of these parts of the fuel cycle. If all we are doing is focusing on regulating reactors, for instance, Senator, but we are forgetting fuel enrichment on the front end or fuel fabrication, or spent fuel management handling, reprocessing, I think as you are suggesting on the back end, then we are potentially hampering the entire enterprise.

So that has been a focus for me, and certainly the spent fuel management piece of that, whether it is storage or transportation or disposal or as you say, reprocessing.

Senator Whitehouse. So you think you are going to be to provide a level playing field for reprocessing innovation, as well as new fuels innovation?

Mr. Hanson. I believe we can.

Senator Whitehouse. Okay. Thanks, Chairman.

Senator Carper. Thank you for your continued interest and leadership on these issues, Sheldon. Thank you very much.

Senator Markey has joined us. Welcome.

Senator Markey. Thank you, Mr. Chairman, very much.

The Nuclear Regulatory Commission is responsible for ensuring a safe, effective, and efficient decommissioning

process for nuclear power plants whose life expectancy has now been completed. That includes the Pilgrim Nuclear Power Station in Plymouth, Massachusetts.

However, with its recent approval of the proposed decommissioning rule, I fear the NRC now stands for not recognizing concerns. The NRC has decided that the best way to shield itself from criticism around the decommissioning process is to take itself out of the process. In the latest version of the proposed decommissioning rule, the Nuclear Regulatory Commission would have no ability to approve, no ability to change, no ability to deny plants decommissioning proposals. Known as post-shutdown decommissioning activity reports, its only job would be to acknowledge receipt of the report.

Our independent nuclear safety regulator would serve as a glorified filing cabinet, ceding the job of regulator to the nuclear industry itself. It is not a win for safety, for communities, or for the energy sector.

Chairman Hanson, if the Nuclear Regulatory Commission doesn't need to formally approve nuclear plants' decommissioning plans, will anyone, the NRC or stakeholders, be able to meaningfully assess or address any issues in the accuracy, timeline, cost estimates, environmental impacts, or overall legitimacy of the plant decommissioning proposals?

Mr. Hanson. Senator, thank you. Our decommissioning

processes are oriented around one primary goal, and that is the ultimate greenfield release of the site. The post-shutdown decommissioning activities report that you mentioned is supposed to outline the activities that our licensees are going to undertake to reach that goal over time.

We establish in regulation what is required in that report. If that report comes to us and is lacking in any way, we can direct our licensees to address those deficiencies and prohibit undertaking any decommissioning activities until those deficiencies are addressed.

We also publish that report for review by the communities. We hold two public meetings and solicit public comments, so that not only can we rely on our own review with regard to whether or not that report meets our regulations, but we can solicit input from the community about whether or not they think it meets our regulations.

Senator Markey. So you are saying that you can, and are authorized to require NRC approval of decommissioning plans? You are saying that is in your jurisdiction, you will have to approve the decommissioning plan? Is that what you are saying you are going to do?

Mr. Hanson. It is not a formal approval, as you note. It is a review for consistency with our regulations.

Senator Markey. Well, then, from my perspective, check the

box exercises aren't enough. This needs to be a process that takes into account the accuracy of those plans, not just the completion of those plans. And the Nuclear Regulatory Commission has to sign off on it as part of the process. Otherwise, we wind up closing the barn door after the horse is out, gone, and died of old age. We don't have the NRC playing a meaningful role in this process.

Do you believe that anything in this proposed rule does anything to strengthen stakeholder involvement in the decommissioning process?

Mr. Hanson. Senator, one of the areas that we added to this rule was, we are making licensees conduct an analysis to ensure that their activities are going to be bounded by previous environmental assessments. If they are proposing any activities that are not bounded, they have to, the NRC is going to provide a meaningful opportunity for public participation to review those activities and their relationship to these prior environmental analyses.

Senator Markey. Is there a requirement to consider and respond to public comments? Is there a requirement to have public hearings on this decommissioning process?

Mr. Hanson. We do have public meetings on the post-shutdown decommissioning activities report. We solicit public comments on that report.

Senator Markey. This would be after the utility, the industry, had completed this process, so that there would be public input as to the adequacy of the work which was completed?

Mr. Hanson. Well, the activities report happens at the beginning of the process. They are required to submit that to us two years prior to shutdown. The license termination plan would be, there is an environmental assessment conducted at that, and that is within two years of completion of all the activities. Then the NRC oversees the activities in the interim.

Senator Markey. The problem is the comments that don't have to be responded to are considered not meaningful if they are not going to be actually considered. It is like shouting into the wind, if you are a community that is concerned about what is taking place with this nuclear power plant and its decommissioning process.

So I am very concerned about this process, as it is unfolding. I would just absolutely urge you to ensure that there is full NRC and public participation. Because the industry historically, I am not telling you anything you don't know, has been known to cut corners and ultimately we cannot allow the public safety to be put in jeopardy at all. Thank you.

Senator Capito. [Presiding.] Senator Stabenow.

Senator Stabenow. Thank you very much. Good morning, thank you to all of you for your testimony and your work.

Chairman Hanson, as a Michigan native yourself, I know you understand the importance of the Great Lakes to all of us. It is not only about our economy, it is really our way of life in Michigan. Protecting the Great Lakes is really in our DNA, as you know. So it is vital that we do everything that we can to protect 95 percent of the Country's fresh water, which surrounds us in Michigan.

That is why for years I have led bipartisan efforts to oppose Canadian proposals to very low level nuclear waste just off the shore of Lake Huron. Thankfully, they decided not to do that, and I appreciate the fact that they have not done that.

But they are still considering a proposal to store highly radioactive waste at a site within the Great Lakes Basin that is only 30 miles from Lake Huron. So Michiganders are extremely, extremely concerned. I am extremely concerned about this. Stopping the storage proposal is the right thing to do for the people of Michigan, it is the right thing to do for the people of Canada, because the risk is just too great. They have a lot of other possibilities of where they could create this storage facility.

Chairman Hanson, will you commit to work alongside our other federal partners, including the State Department, to

engage with our Canadian allies with the shared goal of protecting the Great Lakes from the risk of a nuclear accident?

Mr. Hanson. Senator, thank you. As you said, as a native Michigander, I am keenly interested and concerned with the long-term health and viability of the Great Lakes. The NRC would be happy to support the State Department and other inter-agency partners in that.

We also have a very strong relationship with our Canadian nuclear regulators. We believe they have a very mature and technically competent staff. We haven't interacted with them much on this issue, but if they wanted our consultation, we would be happy to provide it.

Senator Stabenow. I think it is really important that you do have that dialogue. I have very much appreciated having multiple conversations with our Canadian friends. There is no question that there is competency and sophistication and a lot of land in Canada. It does not have to be right next to the Great Lakes. I think that is the point for all of us.

Also, we have about 10,000 tons of spent nuclear fuel from 15 current or former U.S. power plants stored along the shores of the Great Lakes. As the Biden Administration has made clear, it is going to be hard to meet our near-term carbon reduction goals without nuclear power. But we have to make sure that these smaller nuclear storage facilities are sound.

So it is critical that we work together on the most effective means of dealing with the waste, again, alongside our precious Great Lakes. I would appreciate your comments and can we count on you to work with us on this?

Mr. Hanson. Yes, Senator. I think you can count on the NRC to make sure that the existing operating reactors continue to operate safely and that the spent fuel stored on the Great Lakes is also stored safely. I was at D.C. Cook this last summer and had an opportunity to see the storage pad as they were preparing to move some of their spent fuel out of the pool and onto the pad this fall. I think Attorney General Nessel may have been there for that spent fuel loading campaign and was very interested to kind of learn about the stability and how they manage those facilities and came away very reassured.

Senator Stabenow. I appreciate it very much. Again, we have a really, what we view as a sacred trust in Michigan in protecting the Great Lakes, not only for us but for the entire Country. It is very important that we look at these issues through the eyes of protecting those waters. Thank you.

Mr. Hanson. Thank you. I appreciated your comment about sacred trust. I think my colleagues and I feel that cutely every day in the mission that we set out to achieve.

Senator Stabenow. Thank you.

Mr. Hanson. Thank you.

Senator Capito. Thank you.

While we are waiting for the Chairman to return, he had to go over to Finance, I am going to exercise my discretion and ask another question. I have been in these hearings now with NRC probably for my entire six years as a Senator. The management issues seem to always be the same. In response to Senator Lummis' question about what do you need, it was more resources for IT. Yet at the same time, if you look at some of the financial management practices, for instance, the NRC pays the GSA rent for space that is currently occupied by FDA. Apparently a decade ago, I understand this is before any of you all were there, the NRC signed a long-term lease for space that has never been fully utilized by the agency. I missed your opening part when you talked about the blended workforce. And flexible times.

Chairman Hanson, how much does the agency pay GSA in rent for office space that the agency does not use? If you are looking for more resources, in my view this would be a place that if you took that out of your overhead calculations you might be able to pick up some of the additional IT requirements that you think you are going to need in the future.

Nobody wants to take that.

Mr. Hanson. Oh, I do, except I think Commission Wright has actually spoken, within the agency, has spoken very eloquently

on this issue. I wanted to give him an opportunity to respond.

Senator Capito. All right, good. Mr. Wright?

Mr. Wright. Senator, thank you so much. I couldn't agree with you more. The fact that that counts against us, we get no benefit from it at all. In the end, our licensees end up paying part of this stuff, too. So that is something we don't get any benefit for.

I do think that if we can adjust that, and I think it totals $6 million and change that we are talking about, which is about 1 percent, when you are looking at that.

Senator Capito. Right. So how do we solve this problem? Can you get out from under the lease? Does the lease have to expire? What are your options here? How aggressively have you pursued this?

Mr. Wright. Again, I think, and I would just go back in my confirmation hearing, the last time I did tell Senator Inhofe that if there was anything that we had issues or concerns about where the budget was concerned, we were going to come to you to ask for help. We are searching for answers as well. I think we are reaching out to you and to the others, and our CFO and everybody would be more than willing to discuss the best way.

As I sit here right now, I can't tell you exactly. Do you know?

Mr. Hanson. Senator, that subsidy to FDA as you call it I

think was put in place by the House Transportation and Infrastructure Committee. So we are looking at it, and we want to engage your staff on specific ways that we might be able to address that going forward. It could be just as simple as a recategorization or maybe some other method.

Senator Capito. It would seem to me, I am on the Appropriations Committee as well. The truth in budgeting, it is not there. Certain agencies, and I wouldn't necessarily categorically put you in this category, but certain agencies and commissions ask for money in certain areas knowing full well that they want to come back in and reprogram this money into other areas that may be less politically viable, or for other reasons. I don't know that this is necessarily in this case, but I would say -- now that I see Senator Padilla is here, I will yield to him and get off my soapbox.

But I will say as we look at these blended workforces, as we look at more of our federal workforce that is not coming in full-time, there is no reason that you all and others throughout the entire Federal Government should not be able to skinny down your physical space, your requirements for physical space. If it is just as easy as a recategorization, it should be done.

So we will be supportive of that. I think the taxpayers would be supportive of that, and it is smart.

Senator Padilla, I will open it up to you for questions.

Senator Padilla. Thank you, Madam Chair.

Good morning to all of you. I have a couple of questions specifically for Chairman Hanson. But let me set the stage. As I know you are familiar, California has one nuclear facility still in operation, but three that are in various stages of decommissioning. Those would be San Onofre, Rancho Seco and Humboldt Bay, with the most recent action being the NRC's announcement that it has terminated a license for Humboldt Bay's Unit 3, and released the unit site for unrestricted use on November 18th.

A transparent decommissioning process I think we can all agree, and a clear understanding of its timeline, is critical to not just operators and stakeholders, but to community members at large, and local governments around these sites. Concerns about environmental health impacts, future use of these sites, et cetera.

So with that as a lead-in, the first question is this, Mr. Chairman. Given that the NRC's historic role has been in regulating the operations of nuclear power plants, rather than overseeing their decommissioning, how do you see the NRC meeting this expanded role of oversight regarding decommissioning activities, and what is being done internally to assure that the NRC is ready to conduct a transparent and timely process?

Mr. Hanson. Thank you, Senator, for that. We really have

had the opportunity, because as you have said, we have had an increasing number of decommissioning's or plants entering decommissioning over the last several years. Because all 26 didn't hit all at once, we have been able to shift staff gradually to focus on decommissioning.

I call it kind of the three challenges that the agency currently has. Historically, we focus mostly on the safe operation of the current fleet. With regard to reactors, we had kind of that single mission.

Well, now we are doing three things. We are getting ready for new technology, of course we are focused on the existing fleet, like Diablo Canyon, while it is still operating. And we are shifting our focus as well, we are pivoting, if you will, to decommissioning. I think overall, the agency has been quite successful in that regard, in being able to review those shifts by our licensees to that new status.

Senator Padilla. Thank you. Just two comments before my next question. One, looking at not just shifting personnel to getting ready for new technology, as you said, current operations and decommissioning, sort of a new growing priority, but if there is capacity concerns, need for additional staffing and other resources to accommodate this shift, please let this committee know how we can be supportive of that.

Second, just in thinking ahead on the decommissioning, my

start was in local government, before moving to State government, before coming to the U.S. Senate. So I know my colleagues in local government are anxious in many ways, even if it is thinking 10, 20, 30 years ahead, what future use of these sites can and should be. Residential, maybe not quite the case. But for example, clean energy technologies, renewable energy sources, et cetera, to take advantage of existing tie-ins to transmission and distribution infrastructure, which is key for wind, when appropriate, to solar, if appropriate, depending on the natural resource that is site-specific. So I want to plan that seed.

The second question is this. Specifically on the issue of community interest and engagement, the NRC states that it "considers public involvement and information about the NRC's activities to be a cornerstone of strong, fair regulation of the nuclear industry." So the question is, how do you see the NRC's role in facilitating local community stakeholders with the decommissioning process, specifically from the beginning, but not just the beginning, through until the end?

Mr. Hanson. Thank you, Senator. As part of the implementation of the Nuclear Energy Innovation and Modernization Act, we completed a study, if you will, or a report, on best practices for community advisory boards. We would be happy to provide your office with that.

As part of the proposed decommissioning rule, my understanding is that we will be putting those best practices for community engagement into guidance for our licensees.

We also participate regularly in community advisory board meetings, so that people have an understanding of what it is the agency is doing, how we are overseeing our licensees. I know the performance of spent fuel storage system at San Onofre is of significant concern to the community. We have participated a great deal in the community advisory board there to talk about how our oversight, how we are overseeing the licensee and the licensee's monitoring program, how we are ground-truthing the data that we are getting from the licensee about the performance of those systems.

That is one example. I don't know if, Commissioner Baran, you want to jump in.

Mr. Baran. Sure. The only thing I would add there is, one of the things we have been interested in doing is making sure we provide flexibility for how all that is structured. So at some sites in the Country, the company has set up an advisory panel and involved the local community. In other places, it is the State, the State legislature passed legislation establishing, I think that is what they did in Massachusetts and Vermont.

So one of the things we have been careful to do is allow that flexibility, different communities, different States are

going to want to do it different ways. We don't want to push them to do it any one particular way.

Senator Padilla. Just in closing, I would imagine it is done collaboratively with, in California, the legislature or the Public Utilities Commission and its counterparts in other States, their regulatory and oversight bodies, not just to arrive at the stakeholder process, but formalize any commitments that are made as a result.

Thank you, Mr. Chair. Welcome back.

Senator Carper. [Presiding.] Thanks, Senator Padilla. Thanks for joining us.

Senator Sullivan, good morning.

Senator Sullivan. Thank you, Mr. Chairman. Good morning, and thank you to the commissioners.

I have a question I want to begin with about the U.S. Air Force's announcement in October that it picked Eielson Air Force Base in interior Alaska to host a first of its kind small nuclear reactor. The design known as a microreactor would reliably generate enough electricity to support round-the-clock operations at this remote but very strategic military base. It is going to be hosting over two and a half squadrons of F-35s in a couple of months.

I would like to get, Mr. Chairman, your views on this first. A, on safety, everybody wants to know about safety. But

B, in remote communities, in my State and other States that rely currently on fuel delivery, diesel generation, a lot of us see that this kind of microreactor has potential to provide clean, reliable energy for decades to come.

So what is the thinking on these microreactors? Not just the Eielson one, which I am sure you are involved with, but the potential, and again, safety, but also energy costs. We are all experiencing very high energy costs right now in our Country. A lot of it is self-inflicted wounds by the Administration. Some of their senior advisors are telling the American people, hey, we are driving up energy costs on your back to "accelerate the transition to renewables." This is Gina McCarthy, not very smart, in my view, really hurting American working families.

But can you talk about the Eielson microreactor, and the potential for remote communities to benefit? One idea that we have thought about in Alaska is you would have the microreactor at Eielson, is there a possibility to actually have that not just power the base but the surrounding communities? Fairbanks, for example, is nearby. And I would love to hear from all the commissioners.

The safety issue is a big one, obviously. People have concerns about that.

Mr. Hanson. Yes. Thank you, Senator. I will speak to the Air Force part if I could first, then I will talk more

generally, we can all talk more generally about microreactors.

I wanted to point out, we have a longstanding relationship with the Office of Naval Reactors to review some of their designs and their fuel formulations and so forth.

Senator Sullivan. By the way, that is an incredible office and legacy that we have in America. Not a lot of people know about it, starting with Admiral Rickover. Just really remarkable.

Mr. Hanson. And now led by Admiral Caldwell. So the NRC has been very pleased to provide peer review and technical support and so forth.

We haven't heard from the Air Force, to my knowledge. But we would be happy to do the same for them.

Senator Sullivan. Do you think they should be giving you a call about the Eielson?

Mr. Hanson. We will leave that up to them.

Senator Sullivan. We can help with that.

Mr. Hanson. We will answer the call if the phone rings, certainly.

Senator Sullivan. Okay.

Mr. Hanson. Microreactors themselves are very intriguing, because of their small size and in many cases, their passive safety features. We have one application in from Oklo for a microreactor and we are actively engaged with them in reviewing

that. Understanding the safety features that they have with those, in many cases kind of passive safety features, it doesn't have as many moving parts so there aren't as many things to break or pay attention to.

I think the other thing that is interesting across the advanced reactor spectrum is this focus on fuels. Part of what makes microreactors so interesting and viable for remote communities, not that remote, obviously, Fairbanks, is the long-term core. So every day, the reactors in Senator Carper's, across the bay there in New Jersey, they will refuel every 18 months to two years, say. Some of these microreactors don't have to be refueled for 10 or even 20 years, depending on the fuel formulation.

So that has the potential, as you point out, to bring down the delivered cost of energy, which of course I know is of great concern to Alaskans.

Senator Sullivan. And safety. Just safety in general on these microreactors. What is your assessment?

Mr. Hanson. We still have a number of these concepts under review. So I don't know that we are ready to make a formal declaration. But I think the passive safety features are intriguing and I think hold a lot of promise.

Senator Sullivan. Any other commissioners want to comment?

Mr. Baran. Yes, the only thing I would add there, and

maybe Commissioner Wright has a point, too, this is a big area as we establish the framework for advanced reactors. This is one of the tricky pieces that we need to get right. The existing fleet, these are really large reactors. They are 1,000 megawatt reactors. Now we are talking about designs that are maybe a megawatt. You are not going to have the same requirements for a one megawatt reactor that is advanced as you would for a 1,000 megawatt light-water reactor.

Having a rule that and cover the big ones but also something as small as a microreactor is what the staff is really focused on. It is tricky, because we want to make sure it is open to all the different technologies and the different sizes. It is different than we have in the existing fleet.

Senator Sullivan. Great. Commissioner Wright, do you have any thoughts on this?

Mr. Wright. Personally, I am a real fan of this, the idea. Intuitively you would think they are safer. The jury is still out; we are still, as the chairman said. There are national security implications with this for sure, and benefits for us as well as if we own it, and we send it out from us, then we control that.

So there is grid security potential advantages to it, there is reliability, stability, and resilience that you can work to or independence, just like they are trying to do in some of

these areas. I am looking forward to getting one of these things through the process and letting it get to market. I really can't wait for it.

Senator Sullivan. Good. Thank you. Thank you, Mr. Chairman.

Senator Carper. You are quite welcome, thank you. Thanks for joining us.

Senator Duckworth I think will be joining us on WebEx. Senator Duckworth, are you there?

Senator Duckworth. I am, Mr. Chairman. Thank you. I am sorry I couldn't come back to the hearing. I am back and forth between hearings.

Senator Carper. I know that feeling. Welcome.

Senator Duckworth. Thank you. And thank you to the commissioner for being here today. There may be few other States that better understand the NRC's critical importance to nuclear safety than Illinois. After all, Illinois possesses more nuclear generating capacity than any other State. Last year, nuclear power plants accounted for 58 percent of my State's in-State electricity generation.

On the positive side, nuclear power has played an important role in expanding production of zero emission, clean energy sources. However, the inability to implement a permanent storage solution for our Nation's nuclear waste hinders our

ability to effectively decommission nuclear power reactors and worse, harms local communities located near such stranded sites that no longer generate power or revenue but still store nuclear waste.

Shortly after joining the Senate in 2017, I traveled to the city of Zion, Illinois, and witnessed the adverse financial and social impacts resulting from Zion's proximity to a stranded site. Congress should better serve communities that suffer a devastating one-two punch at first, losing a significant economic driving force, and then being forced to service a de facto interim storage site.

That is why I wrote the Sensible Timing Relief for America's Nuclear Districts Economic Development Act of 2021, which is also known as the STRANDED Act. My bipartisan bill would provide the city of Zion and other similarly situated communities across the Country with financial assistance to offset the harmful impacts of a stranded nuclear waste site.

Chairman Hanson, given the NRC's extensive expertise and experience with the decommissioning process, can you share your view on why the public would benefit from the programs and funding contained in the bipartisan STRANDED Act?

Mr. Hanson. Senator, thank you. I also appreciate the hybrid nature of our interactions here. We are striving for this at the NRC, too, with the re-entry of the staff. So it is

nice to see you virtually.

As you recognize, Senator, the NRC's focus is really on protecting people and the environment. It is really focused on public health and safety and security. So we are not going to have necessarily a direct role in some of the issues you raise.

But I think one of the most important things that the NRC can do is actually oversee and ensure the safe and timely and secure cleanup of these decommissioning sites, so that ultimately I think as I mentioned to Senator Markey, that they become available for unrestricted use into the future, so they can be used for any number of purposes.

Senator Duckworth. Thank you. Helping these communities, these stranded communities, there is an urgent environmental justice priority. It is why, beyond just passing my bill, I also focus on what immediate relief the NRC could provide, or what specific authorities Congress could empower the NRC with to deliver such help.

My understanding is that despite the NRC maintaining legal oversight, that you have mentioned, over a stranded nuclear waste site, the Commission is significantly limited in its statutory authority to assist my constituents in Zion and others throughout the Country that are struggling with the preparations leading up to and the aftermath of a decommissioned facility.

Chairman Hanson, what would be the most effective

additional authorities to empower the NRC to achieve environmental justice goals and better support communities that are essentially forced to serve as dumpsters for nuclear waste?

Mr. Hanson. Senator, thank you for that.

I want to give you an answer, then I want to give Commissioner Baran an opportunity, because he has spoken a lot about environmental justice.

We have a review ongoing within the agency with regard to environmental justice, a comprehensive review of our policies and programs, with a view toward environmental justice. That would certainly include decommissioning.

We are expecting the conclusions of that review to come to the Commission in January or February of 2022. We would be happy to follow up with you about that.

It may be a little premature for me to say what I think our additional legislative authorities are, but we would be happy to follow up with you and your staff going forward.

Senator Duckworth. Thank you.

Mr. Baran. I think the Chairman gave a very good overview of it. I think all of us are approaching it with an open mind. We have asked the staff to take several months to talk to a large number of stakeholders and gather ideas. What are other federal agencies doing? We know a lot of federal agencies right now are focused on environmental justice. Some of those ideas

may make sense for NRC, some of them may not.

But the staff is pulling together, they have gotten hundreds and hundreds and hundreds of comments, and talked to a lot of stakeholders, tribes, they have held panels to gather information. Talked to some of the folks that maybe haven't interacted as much with NRC in the past and see what they think about what NRC should be doing on environmental justice.

I appreciate your flagging this issue. I am not sure how much focus there has been on that in this environmental justice conversation. I think it is an important aspect.

We are looking for, I think all of us, to see what has the staff come up with, what are the options, are there any that require new legal authorities or changes in the way the agency has operated. That is coming, and I think we are all very open-minded and focused on doing something there. I think we want to improve what the agency has done on environmental justice. I for one think we need to ask those tough questions and be bold.

Thank you for flagging another area for us to look at there.

Senator Duckworth. Thank you. I look forward to following up with you both.

I yield back, Mr. Chairman.

Senator Carper. Senator Duckworth, thanks very much for your involvement on this issue. It is an important issue, and

your leadership.

I have a couple of questions for our Chairman and our commissioners. One of those deals with NRC funding. I think we have had some conversations about that already. I have been in and out, so I missed some of the questions.

The NRC's work to help maintain the safety and the security of our Nation's nuclear power facilities and materials ensures that nuclear power can continue to provide safe, zero-emission power for our Nation. For the NRC to do its job, the agency must be able to hire the best and brightest, be equipped to keep up with the industry's innovation and new technologies, which we are witnessing.

At the same time, the NRC must be nimble and adapt to COVID and other workforce challenges. And in NEIMA, you will recall, Congress put spending limits on how much the NRC could spend on human capital, on IT and building costs, commonly known as corporate support.

In your testimony, again, this is for Chairman Hanson, in your testimony I believe you mentioned that the NRC is having difficulty meeting these limits. Would you talk a little bit more with us about those difficulties and what it may mean in terms of the NRC meeting its mission? And to follow up with that, how the COVID workforce challenges and the prospect of new advanced nuclear reactors changed your view on the importance of

corporate support?

Mr. Hanson. Senator, thank you. First, I want to say that collectively, as a commission, we take the corporate support caps very seriously. We have strived to meet them. So it is not something that we undertake lightly to say that we are having difficulty in meeting those.

We have reduced corporate support spending over the last six or seven years by over $100 million, and by well over 100 staff. So we have taken reductions, and I think what where are getting to is, we are reaching the limit of those reductions.

A couple of key areas I may have mentioned to Senator Lummis and Senator Capito that I would like to highlight, and that would be in our IT function. IT costs, as you know, Senator Capito, from the Appropriations Committee, are rising across the government. Yet the need to invest in modernization and new technology continues apace.

Most agencies across the government invest probably 7 percent to 8 percent of their IT spending in modernization. That is in new tools and new capabilities. The NRC is around the 2 percent to 3 percent mark. We could do that for the last couple of years, but that is starting to catch up with us, particularly as we have a hybrid workforce, and as we train up to want to take on the challenges of licensing advanced reactors and wanting some of those advanced computing tools and other

tools available to us.

The other area is really in our HR, which also falls under the corporate support. I have learned recently that, we talked about the under 30 cohort. I spoke about this with Senator Cardin earlier in the hearing, about how we are about 3 percent under 30 right now within the agency, and that we really need to work on that to have the workforce of the future.

We have an apprenticeship program in the agency that we started a couple of years ago. We would be able to expand that if we had additional resources in our HR function, for example, and could more aggressively tackle that problem. One of the things we want to accomplish in our workforce is to have some overlap between the new people and the more experienced folks with the institutional knowledge, so that they can transmit that knowledge and culture as they head off into retirement.

So these are some of the challenges. I don't know if Commissioner Wright or Commissioner Baran want to speak about this a little bit as well. It has been a subject of a lot of conversation among the three of us.

Mr. Baran. Yes, I think there is broad agreement between the three of us on it. I agree with everything the Chairman said.

I would just flag a couple of things. With the agency, we talked about this earlier, kind of an aging workforce, we have

probably 6, 7, 8 percent of the agency turn over every year. So just to kind of keep our staff at the current level, that is a couple hundred people we have to hire. Right now, we struggle actually with HR to actually hire that many in terms of having the resources there to do it. That is just to kind of stay flat and be ready for everything that is coming down.

The other area I would flag, just where I think basically the corporate support cap has had an unintended consequence in terms of our inability to make an investment that could save money down the road is actually something we were talking about earlier with Senator Capito, which is space planning. One of the things we want to be able to do, for example, is say let's have the upfront costs to renovate a floor of our building. If we do that, we can take up less space, freeze up other space, we get rent savings.

We found that there are times with the budget we just actually don't have the corporate dollars to do that renovation that would make sense as an efficiency and just improving the quality of the experience of the staff, too. But we can't capture those savings down the road, because we can't make the upfront investment and still meet the corporate cap.

So I really appreciate that you all are focused on this. I know it you all, on a bipartisan basis, want us to focus on corporate support. We have done that. And now we are at the

point where it is starting to create some challenges.

Senator Carper. Senator Capito has another question or comment that she would like to add. I have one or two more questions. I want to follow up on the apprenticeship that you mentioned.

Senator Capito, please proceed.

Senator Capito. Thank you, Mr. Chairman.

I want to thank the three of you for being here today. I learned a lot, and I think we have a lot of things we can work on together. I look forward to that. I am hoping that President Biden heeds our call to have two more commissioners nominated, so we can have a full boat in front of us.

I would like to make a brief note, prior to leaving the meeting. The NRC's career staff provides invaluable scientific and technical advice. They do not make policy decisions. Policy decisions are made by the Commission. NRC staff do propose recommendations for the Commission to approve or disapprove, proposals that are grounded in the NRC statutory authority.

The staff should be able to make recommendations in an unbiased manner without fear that a member of the Commission will take to social media, suggested that staff recommendations are designed to weaken or roll back nuclear safety. Commissioners should not use social media to call into question

the motives behind the staff's recommendations.

I am concerned that a Commissioner's recent and persistent social media comments will have an adverse impact on NRC career staff's unbiased work. I hope that all members of the Commission will consider how their social media activity may influence and threaten the objectivity of professional NRC staff's work.

I appreciate that, and I would like to ask for unanimous consent to enter into the record my March 26th letter with you, Chairman Carper, to President Biden, requesting those nominations of two members, and a November 22nd letter from the American Nuclear Society and Nuclear Industry Council regarding the importance of the full Commission.

Senator Carper. Without objection, so ordered.

[The referenced information follows:]

Senator Capito. Thank you.

Senator Carper. Thanks so much. This is an important hearing and I am glad we could have it.

I want to come back, I think, Mr. Chairman, you mentioned an apprenticeship program. We have mentorships; probably every Senator on this committee has interns in our office back home and here as well. I am a big fan of apprenticeships. Tell us a little bit about your apprenticeship program. How long have you had it and how is it working?

Mr. Hanson. We revived it here just two years ago. We took a cohort of 22 recent engineering graduates and it is a two-year program where each of those graduates cycles around in three- to six-month assignments around the agency. So they are touching a lot of different areas that the agency works in, everything from medical technologies to reactor operations and so forth. When they are done and they find a home in the organization, they have a broader sense and a lot of experience with the overall NRC mission. We are just coming to the end, and we are starting a new cohort now on that.

You mentioned internships, Senator. We also have an intern program, a summer intern program for students.

Senator Carper. I presume it is a paid internship.

Mr. Hanson. Yes, paid internship, absolutely. We also have co-op for engineering students where they can take a

semester off, come work for us and then go back and finish their studies as well. So we are really fully utilizing all those mechanisms to bring people into the agency.

Senator Carper. Could you comment on the -- I am going to stay on apprenticeships. So just hold your horse just for a second.

One of the things we try to be mindful of as we are recruiting interns is diversity. Any thoughts anybody can make on that front, please.

Mr. Wright. If you don't mind, I will pick up.

First off, this is a very diverse group. They are very active as well. They are not shy. In fact, we learned a lot from them when we started the program back a couple of years ago. We had a group of four of them who actually came up to my office and talked about where the NRC was missing out. Because when they were recruiting some of the people, when they were applying for internships or for the NRAN program or whatever, we weren't getting back to them soon enough, and other agencies were coming in and taking the cream of the crop. They were saying, the NRC is missing that opportunity.

So it actually helped us refocus on how we went about this. I think it has been very successful. I am really excited, there is a couple of them right now that I am following their career as they go.

Senator Carper. All right, thank you. Anything else on this point?

Mr. Hanson. With regard to diversity, Senator, we take the diversity, the need to have a diverse apprenticeship class and internship class very seriously. I think this recent group of apprentices was culturally and ethnically diverse. But we could have done better on the gender balance. So I have asked our HR people to take a closer look at that and how we are approaching women graduates of some of the engineering and other programs around the Country to make sure that those folks know that the NRC is a good place to work with an important mission.

Senator Carper. That is great. Good, thank you.

A question if I could for Commissioner Baran and Commissioner Wright. We have learned a lot about the nature of work throughout the course of the Coronavirus pandemic. We know that the NRC needs to be able to adapt and remain flexible in order to maintain the safety as well as the security of its operations, and its ability to carry on the agency's regulatory responsibilities.

While some aspects of the NRC's work can adapt to remote operations, some do not adapt. For example, safety and security inspections at nuclear facilities cannot be conducted over Zoom. With new variants of COVID-19 still emerging we would be sharing the lessons learned from the NRC's responses to the Coronavirus

pandemic, both from an operation and a regulatory perspective. Any challenges you are expecting as we move forward? Would anyone like to lead that off?

Mr. Baran. Sure, I am happy to. One of the things that I think we as an agency learned from the pandemic period is just how valuable the technology was. We were fortunate that our IT folks had really been forward-thinking. We were in a position where everyone, for example, every employee had a laptop ready to go. You could transfer it, have your workstation at home. That is something, if it had all happened a few years earlier, we wouldn't have been ready for.

So I think overall as an agency, we functioned very well, even at the 100 percent remote. We took advantage of new technologies at the plants, so we had many licensees would give our resident inspectors laptops with data that they could use on plant performance that really helped, if you weren't there all the time.

One of the things we learned where we want to get back to where we were is on the inspections, as you mentioned. There is this, I think there was this growing appreciation from the inspectors, the managers, throughout the agency, that there is no substitute for having people on the ground at the plants with an NRC hard hat walking around. Remote inspections, they were good enough for the period where we needed it, but not as good

as when we have people there in person. The ability to walk down the equipment, to just look and say, that doesn't look quite right, and then pursue it. Talk to the folks working there and hear if they have any concerns.

So I think that has been one of the lessons. There is a lot we can do with technology, and then there are some really kind of core principles I think we have learned are super-important in terms of having people there, eyes on equipment and available to talk to folks.

Mr. Wright. Thank you. So, if you want to look at examples of successes where being a risk-informed regulator, you look no further than just what happened during COVID and how the agency responded. Personally, I will remind you of this. My confirmation hearing was Chris and I were here, it was the next day that the world shut down.

Senator Carper. Cause and effect, do you think?

[Laughter.]

Mr. Wright. And we do apologize for that.

[Laughter.]

Mr. Wright. There are many things that we have done that hopefully we can learn how to carry some of that forward. I agree with Commission Baran that nothing beats boots on the ground. The real live person being there helps.

But because of COVID, our inspectors were given real-time

access via computer to the plant. So there are some things, if there was an event or something that they did not need to respond to right away, they had access to it via computer and they could come in hours later, next morning or something like that. We were able to do hybrid inspections, virtual inspections, or real-time inspections in person.

So we have learned how to do things, and we have learned how to be adept and nimble, as you mentioned earlier, sir. There are some things we can learn, and I know that we have empowered a group to go do that and try to figure it out. Hopefully, we will have some updates for you.

Senator Carper. All right, good. Thanks for that.

Last question is just, I want to know if you have any additional thoughts, maybe a question you were not asked that you wish you had been. Let us know what that question is and how would you answer it. We will start with you, Mr. Chairman, and Commissioner Baran, and finally wrap up with Commissioner Wright.

Mr. Hanson. Thank you, Senator, Mr. Chairman.

People who hear me talk around the agency kind of know that I like to start and finish all my speeches with thank you. So I think I will do that today.

I want to thank you for having us and the opportunity to appear before you. I think this was a really productive

discussion this morning, so thank you.

I want to thank my colleagues for their friendship and their professionalism, and their insights. As several people have noted this morning, we function, we are designed for five, and we benefit always from the additional perspectives. Although I think I have to say, among the three of us, we are accomplishing the mission and we are getting things done.

Finally, I want to thank the NRC staff. As Commission Wright noted, we shut down right in March of 2020 and the staff pivoted to work remotely almost immediately. Not least of all because of some very fortunate and forward-thinking IT investments that we made that allowed everybody to take their laptops home and work from home and accomplish the mission and figure out new ways of doing things. They have been equally professional and flexible in moving to this new hybrid work environment that we have undertaken in the last month or so as well.

So I couldn't be prouder, really, to come to work every day and serve alongside my fellow Commissioners and to lead this agency. I appreciate the opportunity.

Senator Carper. Thanks for those words. Commission Baran?

Mr. Baran. I agree with everything the Chairman said. In terms of the complement of the Commission, it is always great to be at five. I have been on the Commission long enough; I have

been around for three, I have been around for four, I have been around for five. As long as you have quorum, it is good, and there is no issue there.

But I would just echo what the Chairman said, that the three of us all have terrific working relationships. I think we are doing a lot of good work.

Senator Carper. Some of us remember a time when it wasn't quite that way. This is refreshing.

Mr. Baran. And those days are well behind us. It is just a really great, collegial environment. I think everyone is focused on the mission and we have a terrific staff at the agency, as the Chairman said. We are working very well together and getting a lot of work done.

So we appreciate your support, and we appreciate your interest.

Senator Carper. You bet. Thank you, sir.

Commissioner Wright?

Mr. Wright. Thank you, Senator. Everything that my colleagues have spoken is true. But again, I want to reiterate two things. One, for them, to their staffs, I appreciate my staff. They are awesome. They make me look good, they keep me educated and up to speed. They have not missed a beat during this whole telework program, as have my fellow Commissioners' staffs. Our staffs work very well together.

As you know, we can only get together one on one but they can throw down three on three right now. Hopefully, it will be five on five at some point.

The staff of the NRC, from the EDO shop all the way down to the person who cleans the floors and runs the security guard gates, they are incredible people. They are dedicated, they are passionate. From where I sit, they are very appreciated. I thank you for the opportunity to recognize them publicly.

Senator Carper. You bet. I am reminded by your comments of a story. I don't know if it was a NASA story in Florida, or maybe in Houston. But we were preparing to, as a country, put a man on the moon. And someone was visiting this NASA operation, had an evening meeting. They got there and they couldn't find the right place for the meeting, and they were kind of looking around, this guy was looking around. He came across someone from the custodial staff. He said to the custodian, what do you do here, sir. And the custodian said, I am helping to put a man on the moon. Isn't that great? Helping put a man on the moon.

So folks, all the folks, including right here, the people who help make sure that this place, the building, the Capitol itself, is presentable and just an attractive place to live and work and visit. We appreciate everybody at the NRC and the folks that you lead.

We try to emulate your collegiality here on this committee.

We reported out last year unanimously bipartisan infrastructure legislation on roads, highways, bridges, climate, on water, drinking water, wastewater, floodwater, unanimously. Most people in this Country wouldn't believe that we do that, but we do. That is seldom in the papers. But we admire the way that you have evolved as a Commission of the last decade, and we seek to emulate what you are doing.

I want to thank each of you for helping us to better understand the NRC's important work, and what we can do to better support this important agency. As you said earlier, a well-functioning nuclear is critical to the future of our economy. It is critical to the future of our planet.

We look forward to continuing our work together in order to ensure that this future, our future, our children's, grandchildren's future, is realized.

Before we adjourn, there is some housekeeping work. I would like to ask unanimous consent to submit for the record a variety of materials that include letters from stakeholders and other materials that relate to today's nomination hearing. And one other unanimous consent request. I hear no objection to that first request.

[The referenced information follows:]

Senator Carper. Since there is no other Senator here, unless I object to my own request, it will be affirmed. But one other unanimous consent request for this meeting. At this morning's business meeting, the committee favorably reported the nomination of Jennifer Clyburn Reed of South Carolina to be Federal Co-Chair of the Southeast Crescent Regional Commission, and Amanda Howe of Virginia to be Assistant Administrator for Mission Support of the Environmental Protection Agency. I would ask unanimous consent that the record actually reflect the number of the Presidential nomination there, they are Presidential nomination 957 for Ms. Reed, and Presidential nomination 633 for Ms. Howe.

Hearing no objection, so ordered.

[The referenced information follows:]

Senator Carper. And getting back to this hearing, before we close, Senators, members will be allowed to submit questions for the record through close of business on Wednesday, December 15th. We will compile those questions; we will send them to our witnesses, to you, and ask you to reply by Wednesday, December 29th.

Anything else that you would like to add, take away? Hearing none, this hearing is adjourned. Thank you all very much.

[Whereupon, at 11:59 a.m., the hearing was adjourned.]