UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

+ + + + +

34TH REGULATORY INFORMATION CONFERENCE (RIC)

+ + + + +

REMARKS BY THE HONORABLE JENNIFER M. GRANHOLM,

SECRETARY OF ENERGY, U.S. DEPARTMENT OF ENERGY

+ + + + +

WEDNESDAY,

MARCH 9, 2022

+ + + + +

The Plenary Session met via Video-Teleconference, at 10:00 a.m. EST, Andrea Veil, Director, Office of Nuclear Reactor Regulation, presiding.

PRESENT:

ANDREA VEIL, Director, Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission

P R O C E E D I N G S

10:00 a.m.

MS. VEIL: Hello, and welcome to the special plenary session for the NRC's 34th regulatory information conference. Once again, I'm Andrea Veil, Director of the Office of Nuclear Reactor Regulation.

Today I have the distinct privilege of opening this session and introducing our special guest speaker for this year's RIC, the honorable Jennifer Granholm, Secretary of Energy.

Jennifer M. Granholm was sworn in as the 16th Secretary of Energy on February 25, 2021, becoming just the second woman to lead the U.S. Department of Energy.

Secretary Granholm would lead the Department in helping America achieve President Biden's goal of net zero carbon emissions by 2050 by advancing cutting edge clean energy technologies and building an equitable clean energy future.

Secretary Granholm will also oversee DOE's core missions of promoting American leadership and scientific discovery, maintaining the nuclear deterrent and reducing nuclear danger, and remediating the environmental harms caused by legacy

defense programs.

Unfortunately, due to her schedule, Secretary Granholm won't be able to join us live however she provided her remarks in a pre-recorded video that we would like share with you now.

SECRETARY GRANHOLM: Hello, everyone, I'm delighted to join all of you there and to take part in the 34th annual regulatory information conference. Let me thank the Nuclear Regulatory Commission for the opportunity to speak to you.

The Department of Energy and the NRC are really sister agencies of sorts. Actually, we both share a parent in the Atomic Energy Commission and your work is essential to our work.

You obviously ensure the safety and the security and the efficiency of a nuclear fleet that supplies roughly 20 percent of our country's total electricity production and more than half, of course, of our emissions-free electricity generation.

You have earned and kept the public's trust in this vital energy source. You've given us at the Department of Energy the license to think big when it comes to the future of nuclear power.

So, today, I'd like to tell you about our

vision for nuclear power in the 21st century. It's a vision that is really underscored in its urgency and necessity by the present moment. The images that we've all seen out of Ukraine over the past few weeks have brought a few things to mind.

First and foremost, of course, the extraordinary courage and the unbreakable will of the Ukrainian people.

And at the same time as Vladimir Putin's unacceptable, unjustifiable, unprovoked invasion, that has made the need to diversify the world's energy sources as clear as day.

For the sake of our energy security and affordability and reliability, we can't remain over reliant on volatile fossil fuel markets that an autocrat can wield as a geopolitical weapon.

And we know it, that we condemn in the strongest terms the Russian military's reckless engagement around the Zaporizhzhia Nuclear Power Plant, a firefight near a peaceful nuclear facility should be unthinkable.

And it's outrageous that that's exactly what unfolded last week. Russian forces must not interfere with a safe plant operations or regular

shift rotations.

So, that being said, it really is a credit to the strong global regulatory standards in nuclear energy construction and operations that these reactors, knock on wood, have not suffered serious damage and are still supplying power to the Ukrainian grid.

Among all of this chaos and tragedy unfolding because of Putin's aggression, the IPCC just reminded us once again that the threat of climate change roams larger with each day.

The math on the carbon budget is really simple, we've got to get emissions under control by the end of this decade and that imperative doesn't pause in the face of global conflict. The clock just keeps on ticking.

But there is still hope, there's hope in clean energy, there's hope in nuclear power. Since President Biden's inauguration, this administration has made clean energy innovation and deployment a top priority.

We're pursuing the most ambitious agenda for climate action in history, we're setting goals to cut emissions in half by 2030 and to reach 100 percent

clean electricity by 2035, and of course, to achieve net zero by 2050.

And we're not alone, over 70 countries, accounting for nearly 70 percent, actually, of the world's population, have all announced net-zero plants. So, to make it happen, the world needs to deploy as much clean energy capacity as we can and as quickly as we can.

I call it the silver buckshot strategy. We need to use a broad range of technologies to hit these targets, not just one silver bullet but a whole range. And nuclear has got to be a big piece within that silver buck shot.

Because no small part, it's currently our best source of clean baseload dispatchable power. Already, the Biden administration has secured $6 billion within the bipartisan infrastructure to keep our existing fleet online.

We've requested more funding for the light-water reactor sustainability program, which we're going to use to increase cost-effectiveness of operations and maintenance.

Our Office of Nuclear Energy is supporting research development and deployment of new

and improve accident-tolerant fuels to further enhance performance and to reduce cost.

And we're working with four facilities, the Palo Verde nuclear generating station, Davis Besse, Nine Mile Point, and Prairie Island, all of them to demonstrate how we can use nuclear energy to produce clean hydrogen.

There's funding for that in the bipartisan infrastructure law too. That's just what we're doing with the fleet we have today. We're also looking ahead to the fleet we want to build tomorrow.

Once upon a time I served as Governor of Michigan, which is the heart, of course, of America's auto industry. And I actually have seen some similarity between the trajectory of our autos and nuclear energy.

They were both born out of American ingenuity, with a little more of that ingenuity they can both be a key part of our solution to climate change.

Today's cars have come a long way since the Model T, much like our reactors have evolved since the atomic age of the mid-20th century.

And in that era the United States built

a vast fleet of reactors at home and around the world which have ably served us for decades and continue to serve us well today.

And just as the auto industry is entering into this new electric era, we can usher in a new era for the nuclear industry as well with new next-generation reactors to power the 21st century.

These reactors can help strengthen America's economic influence on the world stage, they can help us build alliances with other nations, much in the same way that the last generation of reactors did.

So, partnering with developers and universities and are invaluable national laboratories, our aim is to deploy advanced nuclear technologies within this decade. We have $2.5 billion to support advanced nuclear demonstration projects, thanks, once again, to President Biden's bipartisan infrastructure law.

And these concepts are real, they're ready to support a variety of energy demands and applications, and we believe that a lot of them offer new pathways to economic revitalization for coal and power-plant communities.

We'll see the first deployments of these small modular reactors in the coming years, and we believe, for example, the NuScale regulatory process conserves a model for how DOE and industry and the regulatory community can work together to commercialize new technologies.

We'll also have two deployments of generation for technology operational by 2028, Terra Power's atrium sodium-cooled fast reactor and X-Energy's small modular high-temperature pebble-led gas reactor.

So, one of the most exciting discussions in nuclear energy is its potential for aiding the transition to clean energy because of the possibility of placing small reactors at these retired or retiring coal thermal power-plants.

In fact, Terra Power's demonstration is going to be sited, as you probably know, at a retiring coal plant. That project is going to take advantage, of course, of the coal plant's existing infrastructure and the skilled workforce.

And that means jobs, jobs, jobs for coal plant employees, it means that a community shift from fossil to nuclear can lift fossil energy workers up.

And since nuclear energy doesn't produce carbon pollution, it obviously needs cleaner air for that community as well.

As more coal plants retire, we're very eager to pursue those kinds of projects. So, we can ensure that we're bringing every community along in this clean energy transition.

I can tell you Congress is particularly interested in this, as many of you doubtlessly know, so are governments all around the world. And of course, we at DOE are ready to partner on it.

We are just ready to partner on nuclear energy, we're ready to help countries develop or expand nuclear programs with the use of American advanced nuclear technologies.

In the last year, for example, we took new steps with Poland and Romania, the former Poland, to replace its coal power-plant fleet, the latter of which selected NuScale power's SMR design for deployment at a retired coal site by the end of the current decade.

So, there's more to come, we're going to continue to engage the international community and to showcase the future of America's nuclear industry

when we host the 2022 International Atomic Energy Agency nuclear power ministerial this October in Washington D.C.

And as we look to export next-generation technologies all over the world, we want to shore up the supply chains that we need to build it here at home, particularly in light of the Russian invasion of Ukraine.

We know we can't depend on our adversaries for our reactors' fuel supply. We know that we need to double-down on onshoring the front end of the fuel cycle, mining, milling, conversion, enrichment.

We need to do that to meet our needs for nuclear power and defense as well as research and medical uses. So, just two weeks ago, DOE released a deep dive into our nuclear energy supply chain.

It lays out the challenges we face in the U.S. from fuel requirements to security risks around imported components and, of course, the policies that could solve those deficits.

So, we're going to be working with the rest of the administration and with Congress to put these policies in place. And of course, we also know

that we can grow and improve our own industry with lessons from abroad.

And that's particularly true of our effort to restart consent-based siting for an interim spent nuclear storage facility. Sweden, Finland, others, they've got impressive records of success on this front.

We're going to be looking to their approaches, their lessons as we frame our own consent-based process.

Our vision for nuclear power covers a lot of ground from that consent-based siting to maintaining and upgrading the current nuclear fleet to rebuilding our own nuclear supply chain and onto expanding nuclear capacity around the world.

We have got big plans, bold goals, and of course, that's all possible because of our regulators. And I don't just mean the NRC, the entire regulator community is critical to the success of this industry.

This is why modern nuclear power has a pristine record of safety. You've built confidence in this technology and that means that you have laid the foundation for a future powered with far more

nuclear energy.

But I do have more to ask of you. First, as we push to innovate and to modernize the nuclear industry, we're really depending on experts like yourselves to innovate and modernize nuclear regulations.

I know the NRC is on the ball here, they've shown they've got their eye towards the future with the actions they've taken on design certification that's impressed us at DOE.

We hope that their international counterparts follow their lead, this is critical to ensuring that we're going to able to build new advanced reactors and get them operating efficiently, and ensuring they're as secure as possible anywhere in the world.

So, second, we need everyone here to speak up about the benefits of nuclear, both in your countries and on the international stage. Nuclear energy is sustainable, it is safe, it's a proven solution to climate change, whether in the E.U. or U.S. or anywhere else.

Lawmakers have to hear that and this group can offer a unified voice.

And then one more, finally, we need your help to invest in and to mold this next generation of nuclear energy leaders so they can develop innovative solutions to today's challenges.

I know we've got some students that were attending this meeting, I have no doubt that it's a brilliant bunch and we all need to do our part in supporting them, because they may well hold the keys to this industry's challenges.

We need to support diversity in this field too. A few weeks ago I had the privilege of hearing South Carolina State University's nuclear engineering facility with Whip Clyburn.

It is the only one of historically black colleges and universities to have an undergraduate nuclear engineering program. We could change that by forging new partnerships between industry and regulators and DOE and HBCUs.

And if that interests you, let's talk. In the meantime, let's work together to ensure that when these students are ready to start their careers, this industry is well on its way to reaching its full potential.

There is just a massive opportunity here,

there's an opportunity to add more clean, safe, secure nuclear power, there's an opportunity to finally get our arms around the climate crisis, and there's an opportunity to deliver a safer and healthier future for our children and our grandchildren.

So, let's get out there and take it. Thank you all, once again, for having me and I hope you enjoy the rest of the conference.

MS. VEIL: On behalf of the U.S. Nuclear Regulatory Commission, we would like to thank Secretary Granholm for taking the time out of her very busy schedule to share her thoughts with us.

There were several great messages but I just want to touch on some of the messages that particularly resonated with me.

First was our status as sister agencies and the great cooperation that we have with DOE on several projects also driving next-generation technology forward and leveraging international partnerships to power more of the world with safe, secure nuclear energy.

We look forward to doing our part at the NRC to support the Department of Energy's plans in

our regulatory role. Thanks once again to Secretary Granholm and to everyone at the Department of Energy for their service.

Also, I'd like to thank each of you for your time and attention. We look forward to meeting all of you in our next special plenary after the break at 10:45 a.m.

It's titled women belong in all places where nuclear safety decisions are being made. That's chaired by Chairman Hanson with president Rumina Velshi and Brooke Clark.

Enjoy the longer break and this concludes this plenary session, thank you.

(Whereupon, the above-entitled matter went off the record at 10:17 a.m.)