UNITED STATES

NUCLEAR REGULATORY COMMISSION

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JOINT MEETING OF THE FEDERAL ENERGY REGULATORY COMMISSION AND THE NUCLEAR REGULATORY COMMISSION

(PUBLIC MEETING)

THURSDAY,

OCTOBER 22, 2026

The meeting was convened at One White Flint North, 11555 Rockville Pike, Rockville, Maryland, 20852, at 1:30 p.m. EDT, Ho Nieh, CHAIRMAN, presiding.

PRESENT:

NRC CHAIRMAN AND COMMISSIONERS:

HO K. NIEH, CHAIRMAN

DAVID A. WRIGHT, Commissioner

BRADLEY R. CROWELL, Commissioner

MATTHEW J. MARZANO, Commissioner

DOUGLAS W. WEAVER, Commissioner

FERC CHAIRMAN AND COMMISSIONERS:

LAURA V. SWETT, CHAIRMAN

DAVID ROSNER, Commissioner

LINDSAY S. SEE, Commissioner

JUDY W. CHANG, Commissioner

DAVID A. LACERTE, Commissioner

FERC DIRECTORS AND STAFF

DEEPAK RAMLATCHAN, Deputy Director, Office of Electric Reliability (OER)

JASON FEUERSTEIN, Senior Technical Advisor, OER

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC) STAFF

MARK LAUBY, Chief Engineer and NERC Fellow

NRC STAFF

JACOB ZIMMERMAN, Deputy Office Director for Licensing Programs, Office of Nuclear Reactor Regulation (NRR)

JEN WHITMAN, Director, Division of Risk Assessment and Safety Systems, Office of Nuclear Reactor Regulation

MAHMOUD (MJ) JARDANEH, Director, Division of Licensing Projects I, NRR

JOSH BORROMEO, Director, Division of Advanced Reactor Licensing, Office of Advanced Reactors (OAR)

MARY SPENCER, Deputy General Counsel

PROCEEDINGS

1:30 p.m.

CHAIRMAN NIEH: Okay, good afternoon, everyone, I'll call this meeting to order.

Appreciate the accommodation of the start time of 1:30 instead of 1:00.

So, today we're bringing together the Nuclear Regulatory Commission and the Federal Energy Regulatory Commission.

And on behalf of the NRC, it's my pleasure to welcome Chairman Swett and her fellow FERC Commissioners to NRC headquarters.

Thanks for making the trip up here, really appreciate that.

This meeting marks 20 years since the first meeting between our Commissions.

That meeting grew out of the 2003 Northeast -- North American Blackout event, which during that event, nine U.S. reactors tripped offline, and that event highlighted the importance of grid reliability and nuclear safety.

Since then, the NRC and the FERC staff have been working together under a Memo of Agreement to ensure that our work activities are well coordinated.

This meeting also comes at a really important time for America's energy system.

The North American Electric Reliability Corporation's latest long-term assessment warns that America's surging energy demand is

outpacing new generation and transmission and presenting increased risk to America's grid system.

The FERC's assessment report also recognizes that nuclear is a non-variable source of dependable capacity to America's grid.

And it also flanks the consequence that, if nuclear plants retire early before generation is ready, that could really impact our energy capacity in the United States.

This is the reason why many of NRC stakeholders see nuclear, which now generates about 19 percent of America's electricity, as essential to our energy security.

This is also why the NRC is undergoing the most comprehensive period of reform in over 50 years.

President Trump and Congress have called on the NRC to enable and accelerate the safe and secure deployment of new nuclear and expand existing capacity.

Some new nuclear will be provided directly to dedicated customers, others will be powered to the grid, and that's where FERC comes in.

FERC will help ensure that that power to the grid is delivered reliably, securely, and cost effectively to the American consumer.

So, I'm really looking forward to the presentations from the FERC and NRC staff today.

And with that, I'd like to turn it over to Chairman Laura Swett from FERC for opening remarks.

CHAIRMAN SWETT: Thank you so much for having us, it's a delight not to be in charge of moderating, I appreciate that.

And you're putting me to shame by memorizing your remarks, I will not be delivering memorized remarks, but you'll bear with me.

We really appreciate you all having us, Chairman and Commissioners, and we know how much work goes into a meeting like this.

And to your staff, thank you very much.

And to FERC staff who've done a great deal of work to prepare for this meeting for us and the public, we really appreciate it.

So, as you mentioned, the coordination between our agencies goes back more than 20 years, but it's never been more important than ever.

And I'm very happy to say that you and I have a great relationship in a short time, and I know that will continue because what we're doing is so important for the country together and the intersection of that.

So, we're really happy to be here today.

Nuclear power is actually my first energy love, I cut my teeth as a nuclear associate when I graduated from law school, and I worked on the Indian Point relicensing proceeding, RIP Indian Point.

But from those very formative years, I realized how critical nuclear power is.

It's really a national treasure and it's gone through waxing and waning popularity and the public psyche.

But it's now, there's no doubt that nuclear may be what

saves all of us in our grid and prevents us -- our grid from collapsing, given the impending load demand that we have.

So, what you all are doing is so much -- of such great importance now.

And perhaps, we're finally entering the nuclear renaissance of the >20s and >30s that we've expected from quite a while ago.

So, every day, Americans depend on us to ensure the energy they have is secure and reliable, and that we're steering the ship through the uncharted waters of unprecedented load growth in this country.

And of course, at FERC, we're dealing with how to get these large loads online and where the generation comes from.

And it's very tricky for us because we have no control over the siting and building of generation, but that is squarely something that is within your purview.

And I'm very interested to learn more about what you're doing today.

So, from where I sit at FERC, there are two Hail Mary's to save our electric grid from the impending explosive demand.

One of them is natural gas and the other one is nuclear.

And everyone is holding their breath when they come in and tell us about their plans to get power.

And everyone is hanging their hope that the NRC will approve these new reactors and that they will come online, and we just need a bridge to get there.

So, the entire country is waiting and so are we very eagerly and awaiting your success.

And I know you've done a huge amount of reform already in the short time that you've been here and I'm really, really proud to call you up here and thank you very much for having us today.

CHAIRMAN NIEH: Thank you, Chairman Swett, for those kind remarks and appreciate your indulgence of this cozy setting that we have here.

It's like Thanksgiving at our house when we invite both sides of the family and the extended family.

So, it's a little cozy and we have the auxiliary tables here as well.

So, I appreciate your remarks.

Let me ask to see if my fellow Commissioners at the NRC have anything they'd like to say, and Chairman Swett for your Commission?

(NO AUDIBLE RESPONSE)

CHAIRMAN NIEH: Okay, very good.

So, we will proceed to our first presenter, which will be Mr. Mark Lauby from NERC, you have the floor.

MR. LAUBY: Thank you, Chairs and Commissioners of both the NRC and FERC for inviting me here.

I've been asked to chat a little bit about what NERC's been doing with regards to large loads, which is everybody's favorite topic, and certainly, is no surprise because of some of the performance we've been

seeing.

And yet, it's kind of like I've seen this record before because we're putting more and more inverter-based resources, now inverter-based loads, and they all have kind of a certain way in which they act with the system and interact with each other.

And that's why we're trying to move at quick -- swift speed to get in front of the large load challenge.

And wish we had moved faster, for example, with IVRs, but with NERC's help, we've done that too with 901, so, thank you for that.

Is there a slide going to be pulling up here?

Good, thank you.

Why don't we go to the next slide?

As mentioned on our long-term reliability assessment, we put that out every year, it's a ten-year look ahead.

We've been modernizing it over time because there's a key formula I'd like you to consider, and one is the capacity gives you energy and essential reliability services.

And generally, when we built capacity in the past, it gave us all that good spinach.

We got energy, we got frequency provision, we have frequency response, we have a voltage support, all of that good stuff came with a spinning generator because it was mass based.

And I don't know if you know those people understand mass, okay, well done good.

And our control systems are all based on that, it slows the impact of the event down.

And when we start taking that out and replacing it with, let's say, solar panels, which do not have that kind of oomph, and by the way, provide energy pretty much, unless you start sorting them out and saying, well, you're going to provide this and you're going to provide that.

Who's going to provide frequency?

Who's going to provide frequency response?

How does that connect with batteries, et cetera?

It's a much more challenging engineering feat that we're going through right now.

In any event, I did want to point out that some of the, you know, the kind of diversity of load growth.

We have data centers, which, of course, is on the top of our list, and you'll see kind of where that's being spread out compared to, let's say, crypto, which is mostly in Texas, and industrial loads, the re-industrialization of our production.

You can imagine bringing chips back home would be really important when Taiwan, which is where TMSC is and the Hsinchu Science Park is, we really count on them for a lot of our chips.

We need to start bringing some of that back home.

So, that we're going to see our loads growing there.

Next slide, please?

Of course, we're starting to see some events on the system,

which give us pause, especially nearby here, because we have what is known as data center alley.

And it makes sense because this is really where the internet started to feed the industrial complex, the defense complex, and of course, then built out from there.

And we're starting to see some events on the system, which takes out substantial amounts of load.

Again, we've seen this movie before when we started seeing inverter based resources coming off due to line to ground faults and line to line faults, and there was no ride through capability.

So, at the time when you need them the most is when the time they would cease to provide energy.

And so, seeing that, and then, of course, some additional events down in Texas, you know, we --the canary in the coal mine is clearly there, and something needs to be done and done quickly.

The last one was this, the 3,800 megawatts that happened in July and that was a little bit different than the others that we'd seen with line-to-ground faults.

And really, there's been an ongoing conversation with the large load community and Dominion around how long they hang around when there's faults on the system, and they go through their switching one, two, three, seems that the large loads are coming off at two.

And so, they were going to extend to three, but this last one was a line-to-line fault, a little bit more extreme, more voltage dip, and then,

they kind of -- the adios, and so, then, came back.

But the good news was is that we didn't see a major shift in frequency when we lost.

Most of NERC standards are written to lose generation, right, not losing load.

So, this is, you know, high voltages, high frequency.

What happens to it?

In this case, there was a tenth of a hertz because the, you know, the Eastern interconnection still has got a lot of oomph in it.

Next slide, please?

This just kind of gives you kind of a data plot of one event that happened in 2024.

And here we saw a frequency increase of just a half hertz or so.

But we did write, you know, made sure that we document this event or occurrence.

I mean, no load was lost, but that doesn't mean we want to make sure we do a deep dive and see what we can learn from it, see how it might impact our standards and our study work.

And it kind of gives you an idea of what we're seeing from frequency.

But I think, more importantly in the Eastern interconnection, it's more going to be, at least in the near term, a voltage challenge than a frequency one.

While in Texas, because of the island nature that it is, 70,000 megawatts, you're going to see more of a frequency challenge when they lose large amounts of load than, say, voltage.

And you'll see them working on that frequency piece now.

Next slide, please?

Of course, NERC also been working on this event, you know, it actually germinated at a FERC reliability conference, I don't think anybody was here then, but that's okay.

It was Bob Bradish from AEP who said, hey, we got some problems, we're building a lot of large load, computational load buildings, and, you know, I don't even know how to model them, and it's a real potential challenge.

So, we're talking to him, we organized a task force working group to start working on it.

I think it was like 2022, I want to say, that we started that effort.

And of course, we've then generated a number of reports, one being, well, what's the characteristics of the risks?

What are the gaps in the reliability standards?

And you'll see some of that work kind of going on in parallel now, as we move swiftly to stay in front of, rather than wait for more events to occur on the system, stay in front of it and get those standards in place.

And you know, I think we're submitting a filing to FERC with our first set of those on, you know, communications and coordination of

relaying and those kinds of things.

Next slide, please?

And this is kind of in the report as far as what the risks are, it kind of gives you an idea of high likelihood, high impact, lower likelihood, and low impact.

Then one can argue, you know, is that one, should that be over in that corner or that corner?

Because they're all, you know, the thing is, they're all bad.

Is this relative bad to each other, right?

And some of the high likelihood, of course, is well resource adequacy.

And like I said before, well, NERC doesn't write standards on resource adequacy because 215, you know, you know, it says, and that's a state issue around transmission and generating capacity.

However, you do know that NERC has been working in energy because energy's output of capacity.

So, we can write standards there and we've written with some on operational reliability, and now, we're building one out on, you know, basic longer term, one to five year type energy analysis that needs to be done.

But we do highlight it in our long-term reliability assessment every year, and actually, in some of the summer and the seasonal assessments, too, as to where there might be some deficiencies.

It kind of moves a little bit occasionally, but we're getting a better and better feel for it by doing a different type of analysis.

When I started doing long-term reliability assessments in 2007, again, a simple world.

You stack up the generators and then, you look at what the load is, and you figure out what the reserve margin is, which was a really highly mathematical calculation. Right?

And then, you said, if you're 15 percent or over, you're good. Right?

Because you got all the good stuff, you got the energy, you got frequency.

Well, NERC doesn't have a standard that says you will provide 60 hertz, because every machine does that. Right?

But I mean, we may have to start looking at those kinds of things when we look at our standards, we look at the system of the future.

And so, you know, it -- there's an easy world to live in because some simplifications were made that we could take advantage of.

But now, when you have panels which are energy constrained because they're fuel constrained, I was at a trader conference this morning and I asked if I could buy a Ford contract on the sun, and you can do it for gas, you do it with pork bellies, but you can't do it on wind. Right?

So, how do you get your arms around that fuel uncertainty and managing it?

Gas can also provide uncertainties too, as you are aware.

When things get cold and wellheads start freezing up, it could be a bad day.

So, that just-in-time delivery is something we need to manage.

Of course, nuclear is wonderful, and I love it, and the more we can get, the better, of course.

But -- and I'm not pandering, that's really what I feel.

Again, if I can't build coal plants, then I definitely need something like that.

So, and also, voltage stability is an issue, but then, when you start getting less and less oomph into the system, I call it oomph, inertia, mass, whatever you want to call it, you need to be able to manage that.

And by the way, all this is simply an engineering challenge, this is something we can do, we just have got to understand how to do it, what new tools we need, what new models do we need, what algorithms do we need, some of the traditional ways in which we manage the system.

Single-phase modeling, for example, doesn't work well with inverters, you're going to need to have three-phase modeling.

So, we can do this, we've just got to make sure that we're ahead of it.

And we're learning.

There have been blackouts.

I just have to put a white paper out, for those that have any interest in it, and I looked at what happened in South Australia, I looked at what happened in Chile, I looked at what happened in the Iberian Peninsula.

And there are some similarities between the fragility of the

system and also what we can learn from that because, for example, in South Australia, they have one spinning generator now, four synchronous condensers, and grid forming inverters.

So, it's something you can do.

They learn from their blackout of 2018.

And of course, the Chileans are now learning from that and so are the Spaniards, so, we can learn from that, too.

And NERC's going to pull together a group of folks to talk about that and what the pathway forward is, ride through characteristics against some of the other challenges we have.

Next slide, please?

Of course, we did assess the gaps, and we determined that their current standards simply are not sufficient to deal with a world that has these kind of large loads point of, you know, point of interconnection of, you know, single or twice.

And then, you're losing up to 1,000 megawatts at a shot, or even now, because of common mode failures, we see 3,800 megawatts coming off, all of them coming off at the same time.

Obviously, we got to fix that with ride-through standards and make sure that we have the interconnection studies done right and that they're aware, large competition loads are aware of what they can interconnect with, what can the grid take, and what they're going to have to manage on the other side of the meter.

Next slide?

This kind of gives you an idea of the toolkit that we've been using, you know, we have white papers that have been come -- that have come out, of course, and the gap assessment that I mentioned before.

We're watching these incidences as they occur and, right, and make sure that we sit down with Dominion or organizations of Texas and AEP, and say, what do we learn from this and make sure we document that, because that can help them inform standard development, guideline development, training if we need it.

We had also issued a reliable -- an Alert 3, which is unusual for NERC, we've only done four of those, so, it seems to be a recent thing because all the changes on the grid, we had to put out an Alert 3 for inverter based resources to make sure that they actually would support the voltage.

Remember, that was one of the learnings from the Iberian Peninsula was that they had actually a policy statement at -- in Spain that says, you will not support voltage on the grid with your inverter based resources.

I don't know why they did that, but that's what they did.

So, we went ahead and went to our inverter based resources here in the United States and said, you've got to make sure that you provide some capacity.

So, anyway, this is another Alert 3, which basically talked about what we expected from transmission operators and planning coordinators to manage the interconnection of the large loads.

And of course, we are developing now new models to model

these things, engineers need to model this stuff so we know what's going to happen so we can make sure it doesn't happen or happens the way we want it to happen.

Meanwhile, at the same time, working through our registration criteria, I think we're going to submit that soon, too.

It looks like it'll be at a 50 megawatts interconnected 100 kV, that'll be our first cut.

If we need to change that, we can do that.

We've done that with solar, we were at 75 and went down to 20.

It reminds me of my dad had a 9.9 horse motor and I asked him, why do you have a 9.9 horse motor? I mean, why isn't it just a 10?

He said, well, some lakes don't take a 10, you know, and they can have a 9.9 horse motor.

So, we have to be careful that that doesn't happen here and that we're making sure that we know how much risk is left on the table and what we can take and what needs, you know, things that we need to write standards for.

Next slide, please?

Anyway, so, I was in a meeting recently where they said that, you know, this grid we have of ours is from the Eisenhower Era.

And I thought for a second or two, and I said, you know, I'm from the Eisenhower Era, too.

So, I don't -- I think we've kind of -- it's a little bit more further

along than that, and certainly, it's a grid that needs more infrastructure, more transmission, more gas, and of course, more resources.

And so happy to take any kind of questions you might have.

CHAIRMAN NIEH: Great, thank you.

That was Mark Lauby, the Chief Engineer from NERC.

Appreciate the presentation.

It's funny, I was doing an interview yesterday and the person I was talking to was talking about the silver tsunami in the workforce and nuclear.

And I said, oh yes, I was getting dressed and I saw a lot more silver in the hair.

So, but I'm not from the Eisenhower Era.

But anyway, appreciate your conversation.

Anyway, hey, that was a really informative discussion, and I'm curious with the data center alley events.

So, I went back and looked at the status of North Anna and Surry, you know, the day after those events occurred, and I saw they were both stations were still at 100 percent power.

Can you tell me more about the analysis that you went into and your -- that deep dive into the incident?

Because what I'm interested in is that, off-site power is a very important feature for nuclear power plants, the preferred source of power for, you know, normal land accident conditions, but there are deals there in case off-site power is not available.

But did you look really deep into whether a similar occurrence could impact, if it were to occur again in the future, what -- how it could impact off-site power availability to a nuclear power plant?

MR. LAUBY: No, we -- basically working with Dominion and then, of course, their connections to large loads really kind of explored what happened and then, see if there's any lessons learned there.

We haven't done any kind of like knock on analysis on what happens if, for example, you took off -- off-site power off and what issues would be there.

I did have a chance to visit Vogtle, though, they have some real neat battery systems, right, to support their large, you know, plant Vogtle, to 3 and 4.

But anyway, no, we haven't done these sites.

CHAIRMAN NIEH: Okay.

Well, when you have those assessments, I think that would be great information to share with the NRC staff.

MR. LAUBY: Okay.

CHAIRMAN NIEH: So, let me see if my colleagues on the commission have any questions for you.

COMMISSIONER MARZANO: Yes, along those same lines, so just to be clear, kind of you're still getting into this evaluation of the loss of large load.

It's a new paradigm, as you said. Right?

And so, I think, you know, to echo the Chairman's point, you

know, what frequency would the grid have to reach?

Obviously, I think -- I'm a former senior reactor operator, so and I've forgotten all my generator set points and things like that.

But, you know, how much of a load loss would actually, you know, manifest at the breaker, at the generator relaying, and trip a plant offline?

It is actually very fascinating to hear kind of the other perspective, and so, is that -- that analysis still has to happen, and, you know, where on this load analysis do you see things going?

MR. LAUBY: Yes, I -- now we're talking about doing system studies, right?

COMMISSIONER MARZANO: Yes, yes.

MR. LAUBY: And I know that they've done some of those studies in Texas, and that's why they've determined that they need to worry about around 3,200 megawatts, I think that's the number, you need to check me on that.

That they can't take more than that because of a frequency excursion, which would then cause issues with their generating plants.

You know, so far as I can tell, we've been doing some -- just some back of the envelope work right now, and again, usually localized via voltage issue around the 4,000 to 5,000 megawatt arena, but you need -- in the Eastern interconnection, you're going to need to lose a lot of load to hit a frequency issue.

COMMISSIONER MARZANO: Yes, and I think that's kind

of my question.

So, there's some parts of the country that are more susceptible than others --

MR. LAUBY: Right.

COMMISSIONER MARZANO: -- and, you know, where NRC assets are --

MR. LAUBY: Yes.

COMMISSIONER MARZANO: -- located.

MR. LAUBY: So, it's steady work that's ongoing and NERC has been kind of leading some of that, it's just preliminary right now, yes.

My engineers would get really upset if I start throwing numbers out there.

COMMISSIONER WEAVER: Yes, hi, thanks.

Just real quickly, you -- it makes sense why turbine-generated electricity is more robust for the reserved energy that's there.

Does that imply there's a limit on the grid on how much inverter based generation there can be or is it, well, you just need more tools and guidance on what to do?

MR. LAUBY: It doesn't imply that, it doesn't imply that there's a limit.

What it implies is that we need to then start thinking about different technologies to add to the grid.

For example, I talked about grid forming inverters, and grid forming inverters actually have an algorithm inside them that makes them think

they're a synchronous machine, and they're trying to synchronize to the grid, and they're trying to provide frequency.

That was the big kind of ah-ha in the 1950s that we can synchronize this grid and we can then use alternating current to, you know, to up, you know, to step up voltage in our current and voltages and get, you know, and send power long distances with low losses and then step it back down again.

If we synchronize the grid, we can take advantage of all that.

And that's why the sync, you know, the Eastern interconnections is 60 Hertz all across the whole area, and so, they can move energy around easily.

But then, there's a risk, and that's why NERC was formed and, you know, they got to manage those risks.

And so, again, the main thing is as we go through this transition, if we -- we need to be able to understand, are we creating some frequency deserts out there, places where they need frequency, but they're none -- none is provided?

And so, then, you start stepping in with newer technologies like grid forming inverters.

At some point in that, it would be great to have, you know, power electronic transformers and power electronic breakers, but that's kind of like small modular nuclear reactors, they're not here yet, they're almost, but not quite.

So, I think that, in the grand experiment we're seeing in

South Australia, they've been able to use synchronous condensers to respond to the frequency needs.

They got a spinning unit providing frequency, good, strong transmission, and a lot of solar and sun.

So, we'll have to watch that and see if there's some lessons learned there.

But there's no kind of -- I remember back when wind was coming into focusing, that's all we can take 20 percent, that's it.

And then, they blew by that and they went to 30 and then they went to 50.

So, the main thing is managing what is the essential reliability services I need to make sure that I withstand events and also, under normal operations, am I creating some issues on the grid and to be able to manage that?

COMMISSIONER WEAVER: Chairman Swett, do you or any of your fellow Commissioners have any comments or questions for Mark?

COMMISSIONER LACERTE: I had a real brief practical question that I never really considered before today, but I know NERC always engages with all the Commissioners on the 11th floor at FERC, and of course, we just approved your budget two weeks ago.

MR. LAUBY: Thank you.

COMMISSIONER LACERTE: So, I imagine we engage with you pretty regularly.

But how -- what's the level of frequency with engaging with

our colleagues at the NRC, and tell us about that a little bit?

MR. LAUBY: This has been my level of engagement with the NRC.

I don't' know if Fritz comes over or not, I mean, I don't know, yes.

COMMISSIONER LACERTE: Yes, I think you've been a really valuable resource.

So, I encourage the, you know, the cross-agency engagement I think it's really valuable.

MR. LAUBY: Thank you, that's good, that's good feedback, yes.

CHAIRMAN NIEH: All right, well, thank you, Mark.

MR. LAUBY: Thank you.

CHAIRMAN NIEH: And you love nuclear, and we love nuclear safety, so we welcome you back any time.

Okay, next we'll welcome Mr. Deepak Ramlatchan, who is the Deputy Director of the Office of Electric Reliability at FERC, you have the floor.

MR. RAMLATCHAN: Good afternoon, Chairs and Commissioners.

This afternoon, FERC staff would like to present a few slides to you focusing on the generator interconnection queue and its processes.

We'll also provide an overview of the electric supply and demand picture, as well as an update on the large load orders to show cause

that FERC issued earlier this year.

Let's get our first slide up there? There we go.

We can go to the next slide.

Okay, before we begin, a very quick disclaimer that we will not be discussing the merits of any specific FERC proceeding, including the ones that have relevant issues to our discussion today listed on our slide, though they are amazing dockets, I won't talk about them.

Next slide?

As you all have heard many times over the last couple of years, and we just heard this afternoon, we are experiencing an unprecedented period of demand growth.

According to NERC's most recent LTRA, you all know what that term means now, summer peak demand is forecast to grow by 224 gigawatts over the next 10 years.

That's an almost 70 percent increase over the previous LTRA forecast, with new data centers accounting for most of that projected increase.

FERC is in the process of modernizing generator interconnection, regional planning, interregional coordination, and transmission service to meet these new challenges.

Industries implementing interconnection queue reforms required by Order 2023, which is intended to clear longstanding delays and backlogs in the traditional serial interconnection queues.

Order 1920 establishes new long-term regional

transmission planning requirements, including consideration of improvements to resource adequacy and the generation mix.

And lastly, FERC is looking at reforms regarding transmission service to large loads, including loads co-locating with or electrically proximate to new generation, and we'll talk more about this later.

Next slide?

So, this is a current look at the nationwide generator interconnection queue.

It seems pretty robust with nameplate generation in the queue being around ten times the demand growth I just mentioned.

But when you account for the Q attrition, the actual accredited capacity of the load equivalent megawatts and project delays, the average time for -- to get online -- generation online has been right around five years recently.

With all of those factors, we have a much smaller amount of megawatts coming online, and we know that the load addition is happening much faster.

Next slide?

So, as I alluded to, most of the generation in the queue will not actually make it online.

Historical queue attrition has been right around 80 percent, we do expect this percentage to improve, and a move to cluster studies should help with the timing, and prevent the cascading need for restudies, but challenges will remain.

Adding to the various supply chain issues, upgrade cost concerns, permitting, and financing issues, we also have recent anecdotal reports from certain regions, especially the Mid-Atlantic, that suggest that there is a shrinking labor pool, since data centers can pay more for their construction crews compared to competing generators that need to get their projects online.

So, with all the issues we've been facing, there's another one that leads to a difficult path to power.

Next slide?

So, taking a closer look at the interconnection process, transmission service providers are responsible for ensuring that the interconnection of generators and associated injection rights do not threaten the reliability of the grid or shift costs onto other customers.

Order 2023 consolidated and streamlined studies into a two-staged study process.

The system impact study, what's often referred to as a cluster study, is a technical analysis of power flow impacts, the determination of necessary network upgrades, and an initial cost estimate.

Again, all of this is applied to a portfolio, or a cluster of generation.

The facility study is a more individualized, final engineering design study for required upgrades with firm cost estimates and construction time lines.

A good way to think about the facility studies is that they

combine the macro analysis of the system impact study with the individualized engineering requirements to get a specific generator online.

So, what does it take to get this particular project online?

And just to restate more generally, Order 2023 replaced the serial process with a first-ready, first-served, cluster-based approach.

Prior to Order 2023, most interconnection studies resulted in rolling restudies and multi-year delays as the queue struggled to keep up.

As a result, 2023 replaced the serial approach with a streamlined process with stricter financial and site control requirements to prevent speculative projects, and also required the consideration of alternative transmission technologies to reduce upgrade costs.

Next slide, please?

So, to give you a sense of timing, this is what the new Order 2023 pro forma interconnection time line looks like.

This process involves the studies we described earlier, and importantly, the potential restudies because those still do happen, and also involved what’s called an affected system study that ensures a generator interconnection request does not negatively impact reliability on a neighboring region.

Because this study is performed by the affected system transmission provider, it does not necessarily occur at the same time as the traditional facility study.

But there are general rules to make sure that it doesn’t go too long and that it happens in a timely manner.

And just as a side note, the affected system study is actually a combined system impact and facility study, so, it's not a novel set of engineering requirements, it's just the same set of requirements applied to the adjacent system because of the interconnected nature of the grid.

So, in the best case with no affected system study and no restudies, the process can take just over a year or around 375 days.

In the worst case, it could take almost two years and potentially be delayed further if we have disputes in negotiating the interconnection service agreement.

However, it represents a dramatic improvement to the prior system, which resulted in gridlock often due to restudies involved in a serial interconnection approach.

Next slide?

Large independent system operators and RTOs have unique interconnection processes.

These can be longer than the pro forma, involve multiple cycles, additional financial requirements, and have other differences.

These transmission regions cover around two-thirds of the nationwide load.

So, really quickly, some examples of differences.

In PJM, we have a three-cycle cluster study process with two -- with three impact studies and two facility studies.

MISO has a similar three-phase definitive planning process.

SPP has what we call a consolidated planning process

which integrates the generator interconnection with transmission planning.

This type of integration might be where we see other regions move as well, that's really me speculating though.

Regions may have expedited processes for resources that could come online quickly and limit their impact on the system.

PJM has what's called an expedited interconnection track, and SPP and MISO have the expedited resource study.

So, those are processes that can get some generation online quicker to meet that growing demand.

Outside of RTOs, other regions may have variations from the pro forma, but those differences are very much less dramatic.

Next slide?

So, generators are responsible for the up front cost of the transmission system improvements needed to connect their resources.

For large generators, this can be substantial.

Power flow models for new or novel resources must be accurate and compatible with the models used for the system impact study and the facility studies.

Resources must have their ducks in a row.

While the process has been designed to be sped up significantly, the use of cluster studies means that a request cannot -- if a request isn't model ready at the beginning of one cluster, it has to wait for the next one, which can be time consuming for that project.

Lastly, and generalizing a bit here, while all interconnection

projects undergo the same level of engineering rigor, repowering projects, capacity increase projects, and new generators can undergo differing steps in their interconnection tracks.

Next slide?

To this last point, generators can utilize interconnection rights from other generators, either retiring or deactivated to bypass much of the interconnection study process, avoid network upgrades, and come online quickly.

This is known as capacity rights transfers or generator replacement.

We have a few examples of these.

The Duane Arnold Nuclear Plant used interconnection rights transferred from an onsite solar plant.

The Crane Clean Energy Center utilized interconnection rights from Constellation's retiring Eddystone Plant.

So, those interconnection rights were transferred from one plant to another at a different site.

And in the case of Palisades, Palisades needed a waiver request under MISO's tariff that would have otherwise required it to relinquish its interconnection rights.

And this last example is more of an easing of a deadline than a transfer of rights.

So, in summary, FERC has worked to remove barriers to new capacity, allowing waivers of tariff provisions to allow nuclear generation

to return to commercial operation through the transfer of capacity interconnection rights, and in the case of Palisades, to ease deadlines that would have otherwise forced resources into more burdensome interconnection paths.

With that, I'll turn it over to Jason, who will talk about the large load orders to show cause.

MR. FEUERSTEIN: Thanks.

Can we go back to the slides? Perfect, thank you.

To address pending issues from large load demand growth, on June 18, the Commission issued six orders to show cause, one to each RTO and ISO.

These orders built on prior Commission proceedings, including rulemaking, Section 206 investigations, and tariff filings, all of which dealt with large and co-located load.

The orders preliminarily found that RTO and ISO tariffs appear to be unjust and unreasonable because they do not address the challenges associated with the integration of large and co-located load into the transmission system.

In particular, the Commission identified five areas of reform that may be needed.

I'll just note that all of the findings that were in the orders to show cause were preliminary, we have not made a final decision on them.

That is going to sound a little awkward to articulate, so I'm just going to pretend that they're all in effect.

Next slide? Fantastic.

First, transmission service providers must improve their application and study processes, including consideration of alternative transmission technologies in order to shorten speed to power.

Second, operators must have clear financial safeguards, such as mandatory cost recovery agreements, that prevent large loads from shifting network upgrade costs onto other consumers, and must also provide for cost transparency.

Third, transmission service providers must modify their study processes and transmission services to account for the unique characteristics of co-location arrangements and behind the meter generation.

Fourth, new transmission services must be made available for flexible large loads that are willing to curtail power use during peak grid stress in exchange for faster, cheaper grid interconnection.

And finally, transmission service providers must consider expedited study processes and potentially new services for generating facilities serving either electrically proximate large loads or large co-located loads.

In the interest of time, I'm going to leave out the discussion of cost recovery agreements, but just be aware that it's there.

Next slide, please?

With regards to the transmission service study process, first, the application requirement has been added to disclose substantially similar requests, so a developer cannot fill the queue with speculative requests that

have the possibility of inflating load forecasts.

Second, a new study process has been contemplated that evaluates the transmission system's ability to withstand risks observed by large load behavior, including consideration of the unique operational characteristics of flexible large loads.

Mr. Lauby mentioned some of them, harmonics flicker and oscillation or other ones.

I'll note here, we've noted that electromagnetic transient studies, or EMT studies, may become either useful or required in order to ensure that transmission service can be provided reliably.

And finally, there are specific ongoing operational requirements that we've highlighted in order to ensure reliability.

And again, I'm not going to go into them in depth, you can see them on the slide.

I will note, however, that a number of the operational requirements that we've contemplated either complement or overlap with the efforts that NERC is currently going through the large load action plan.

And we expect those to be able to work together in order to ensure reliability.

Next slide, please?

So, co-location arrangements, we define a co-located load as an end-use customer that is directly connected to the facilities of an existing or planned generator on the generator side of the point of interconnection.

The June orders contemplate that generation facilities in a

co-location arrangement can request interconnection service at a level below the facility's maximum output in order to serve co-located load, use existing procedures in order to accelerate the interconnection process, and use either surplus or provisional interconnection service to provide faster interconnection.

Surplus interconnection process -- sorry -- surplus interconnection service is a permanent service that allows a generator to utilize an existing generator's interconnection capacity while that generator isn't using it.

Provisional interconnection service is a temporary service that allows the generator to come online in a limited fashion while the network upgrades are being constructed in order for it to come online in full.

Next slide, please?

Under the June order, transmission service providers must make available transmission services that reflect that co-located loads, loads with behind the meter generation, and flexible large loads may be willing and able to limit their use of the transmission system under certain circumstances.

We've introduced three new services.

One is an interim form of network integration transmission service that is available while network upgrades are being constructed.

A firm contract demand service which allows a customer to take transmission service up to a specified megawatt level while prohibiting withdrawal of energy beyond that level.

And non-firm contract demand which allows a customer to

reserve transmission service up to a specified megawatt level on a non-firm or as available basis being one hour to one month.

In all cases, customers must have necessary control technology or protection schemes in order to limit unapproved withdrawals from the system.

Next slide?

Finally, the show cause orders contemplate a faster interconnection service, either temporary or permanent, that recognizes that where load and generation are physically close from an electrical standpoint, they may have a more localized impact on the transmission system.

The show cause orders did not set an exacting definition of electrically proximate, but stated that this entails large load that is sufficiently electrically close to the interconnection customers requested point of interconnection that the impact on the transmission system of the combination of the generator on the load, with the exception of the local transmission facilities between the two, will be effectively the same as if they are located at the same substation.

The show cause orders did not specify what precise form these new services might take, but the premise that we articulated is that co-location or service to electrically proximate large loads can increase speed to power and reduce potentially cost network upgrades by linking the operation of the load and the generator and reducing the net impact on the transmission system.

Next slide, please?

The show cause orders directed parties to respond within 60 days.

At the moment, all of the six show cause proceedings have been held in abeyance until November 16th, unless you're SPP, in which case it's four days later with the intent to allow parties to resolve the Commission's concerns independently through Section 205 filings.

We've seen a number of those filings.

The Commission will act on each 205 filing independently, and then, we will pick up the show cause orders at the specified date in November.

Thank you, I think we're happy to take questions.

CHAIRMAN NIEH: Okay, great, thank you, Deepak, and Jason, that was really informative.

I've got two quick ones, I guess first one for you, Jason.

You know, you talked about those operational requirements that you didn't go into detail with, especially for the co-located load.

So, I counted maybe nine or so NRC licensed nuclear power plants that have signed deals with tech companies like Meta, Amazon, Google, I forget the other one, Microsoft, to take power.

I think one of them, at least, Susquehanna, looks like they're going to have a load upstream at the point of interconnection.

So, who's responsible for meeting those operational requirements?

I guess, you know, Mark, you kind of talked about some of

the standards that are insufficient that need to be upgraded, but who's responsible for meeting it?

Is it going to be the operator of the nuclear power plant or is it the load?

MR. FEUERSTEIN: So, at the end of the day, from a practical perspective, it has to be the load.

From the standpoint of FERC, it is the eligible customer who is taking transmission service on behalf of that load, because they are the person or the entity that is subject to the requirements of the transmission service agreement.

To the extent that there is a nuclear plant co-located, and yes, I think with regards to Susquehanna, they've changed their configuration such that they're no longer actually co-located.

It is certainly possible to envision requirements that allow a nuclear plant or another generating plant to assist the load in meeting some of the operational requirements.

But at the end of the day, it is the load that will be subject to those requirements.

CHAIRMAN NIEH: Yes.

It's kind of interesting, too, because I just think about nuclear power plant operations, right, if you have something that causes an automatic turbine trip or reactor trip, you lose -- I mean, that load's going away from the generator.

So, I think it's probably something that I'm sure you guys are

thinking about as you kind of work through these things.

Hey, a quick one for you, Deepak.

So, if I got your slides right, you went from the five-year study process to one to two years about, so great job there, I don't know how you accomplished it.

I know we're looking at streamlining a lot of our licensing things, but we're quite different, I suppose, than what you are.

Are there any statutory things that you had to work through on that, or were you able to, you know, streamline your process just through your own requirements?

I'm not familiar with your regulatory structure.

MR. RAMLATCHAN: So, one point of clarification, the five years was to actually get a generator online.

CHAIRMAN NIEH: Oh, okay.

MR. RAMLATCHAN: And so, the one to two years would be for them to get through the engineering and administrative sort of paperwork that they need to undergo before they start that --

CHAIRMAN NIEH: Oh, I see.

MR. RAMLATCHAN: -- the procurement of their resources and getting the generator online.

So, that one to two years used to be three years and longer for --

CHAIRMAN NIEH: Okay.

MR. RAMLATCHAN: -- going through the interconnection queue.

But connecting online, that's where that five-year mark hits.

So, if we reduced it, if we reduced the generator interconnected queuing administrative and engineering process by about a year, we're hoping to see that same translation for when the generator gets online.

CHAIRMAN NIEH: And the requirements to do those studies, are they through statute or is it just for requirements?

MR. RAMLATCHAN: Yes, so those studies are based both on what's in the tariff and having the transmission provider, be this regulated entity under NERC, they do have to fulfill these fairly rigorous transmission requirements and behave in a way and provide the model that actually reflects the way that they will act on the system.

And so, that's really important.

There's a lot of work to do, I think, still on the load side of things in terms of getting those models.

On the generator side of things, Mark mentioned these new inverter-based resources, those are newer technologies.

We are doing much better in terms of getting those models and ensuring that we understand the way that those resources will behave.

CHAIRMAN NIEH: Thank you.

Questions?

COMMISSIONER WRIGHT: I've got a quick question, and I'm not sure that y'all are the right people to ask, but I'm going to ask it anyway.

So, you know, nuclear plants have closed and, you know,

we've decommissioned some, now we're bringing them back, right, Palisades, Crane Clean Energy Center, and others, and hopefully, maybe even Indian Point, we'll see how that goes down the road, Madam CHAIRMAN.

But how does -- what problem does that cause you or RTOs or whatever, if -- because they've taken that power offline, right, you've got other projects that are in the queue to do stuff they want to supply, be it wind, solar, whatever.

When a plant says they want to interconnect again or they're getting ready to do it and they're going to put a large amount of electricity on the grid, what problems does that cause you?

And is there legal risk for the plant by somebody who thinks they ought to be interconnected first?

MR. RAMLATCHAN: So, I think as a baseline, we'll start off with whether or not they still have their capacity interconnection rights.

COMMISSIONER WRIGHT: Okay.

MR. RAMLATCHAN: If they don't and the system has changed dramatically, all of that needs to be restudied.

So, we talked about our three examples where those units were able to either transfer their rights back or retain those rights.

I think there's something like a 36-month limit from your deactivation where, if you don't get back online, you lose that interconnection right.

So, that's a pretty big tariff requirement, and there's obviously underlying engineering reasons behind it.

So, that's sort of a first step.

If you get past that, or if they don't have -- if they don't -- didn't retain those interconnection rights, they would have to be at the beginning of the queue again, and we know that does take, you know, a number of years if they have to start at the beginning.

COMMISSIONER WRIGHT: Okay, thank you.

COMMISSIONER CROWELL: Thank you for the presentation.

I have two hopefully quick questions.

At what point, for a nuclear -- for a new nuclear power generation project, at what point does it have to reach in the NRC process in order for FERC to consider it as part of their upcoming capacity queue or whatever the proper way to ask that question is?

MR. RAMLATCHAN: I think that's a very nexus question, it's super interesting.

I feel if you don't pass the nuclear licensing portion of it, then you wouldn't want to go through this lengthy, you know, generation queue process.

So, I would assume there's some parallel processing there, but you would likely need some assurance that your nuclear licensing is well on track, if not in hand, before you want to go a lengthy process.

But I'll leave it to my NRC counterparts when they come up next.

COMMISSIONER CROWELL: So, you guys wouldn't

include it in your forecast unless that power generator has engaged in the FERC process to be in the queue?

MR. RAMLATCHAN: We wouldn't.

So, Mark has what we call the long-term reliability assessment, and there's different levels of what we can expect as far as what comes on as supply.

And Mark, if you want to --

MR. LAUBY: Sure.

Yes, we have different tiers of certainty, and, you know, and we ask industry, well, you know, what -- how certain this new capacity is going to be, and we tier up by one, two and three, I believe.

COMMISSIONER CROWELL: Industry probably tells you at certain though, right?

MR. LAUBY: Pardon?

COMMISSIONER CROWELL: Doesn't industry tell you at certain, I mean if you ask them?

MR. LAUBY: We have some, we have a pile in tier two and some in tier three, you know, it depends on how many years out you're looking because we'll look ten years.

So, they're not all tier one.

But anyway, whenever -- we certainly added into our calculations when we're looking at the different types of disruptions and scenarios.

And that's one thing I did want to mention, too, is scenarios

make a big difference, weather scenarios make a big difference as to how, you know, how much you can count on some of these resources, wind and solar.

But getting back to your question, and when we look forward, we ask for that kind of certainty.

And when we look at scenarios around what could happen on the grid, we can then fold in tier two and say, well, tier one, you're going to run out at this point.

Tier two, you may want to start bringing some of that online.

You're less certain about it, but maybe you want to put it -- move it forward into the queue because you're going to have some capacity uses during certain types of weather events, et cetera.

COMMISSIONER CROWELL: So, if a project developer were projecting that they're going to develop a project with so much power, a nuclear project specifically, but they haven't engaged the NRC with the, would the -- would FERC still include them in for NERC in any of the forecasts?

MR. LAUBY: We work our data gathering through the planning coordinators, and so, they -- they'd have to be aware of it, and if they wanted to include it in their resource mix.

COMMISSIONER CROWELL: Okay, thank you.

MR. FEUERSTEIN: So, I do want to clarify, FERC does not have an interconnection queue.

We do not process interconnection requests.

And to the extent that generators are working through the

NRC licensing process, that would be subject to the individual utilities or in the case of the RTOs, the RTOs readiness requirements.

So, at no point would we look at where somebody is in the licensing process and say, you are ready to either go through the interconnection process or come out of the interconnection process and sign an agreement.

COMMISSIONER CROWELL: I'm just trying to drill down on, you know, I think we all have an interest in knowing what's real and what's not in terms of projected new generation, and that's an element of it.

So, thank you.

CHAIRMAN SWETT: I have a point to make on that, and my staff will keep me honest, but we often get waiver requests for generation that's in the queue that's actually not ready to go but has progressed.

And the waivers are of the -- for jurisdictional tariffs.

And if they have not built to where they should be for the Q requirements, they will come to us, and FERC often does grant waivers to extend time for commercial readiness.

Now, I don't think that I've seen a single one about a nuclear unit in my time here, but that is a legal possibility.

Thank you.

COMMISSIONER MARZANO: Well, I think to my colleague's line of question here, the -- we have many new applicants, new to nuclear, new to power generation, really, and a combination of behind the meter and on the bulk power system.

And so, I think this is informational.

It's a very important line of conversation for those folks to understand the timing of how these things need to play out.

I think there's opportunities for the NRC to engage with the RTOs, ISOs through FERC, and looking at updates to our memorandum of understanding and agreement, to have that dialogue to assess or adequately express the readiness.

Because nuclear power construction is a long process in itself, our licensing, we're getting better, we're getting faster, but that's a process.

So, there's, you know, risks on that side as well.

So, I just encourage us to kind of really continue to have a dialogue as these things are moving through the queue.

CHAIRMAN NIEH: Well, thank you very much to our presenters, and I think we're going to go to the NRC team, I think you guys all set. All right. Great.

I'm going to turn it over to Jake Zimmerman. He's one of the deputy office directors in the Office of Nuclear Reactor Regulation. Just for the audience here, we're going to finish up this panel and the questions by 1500, and then we'll take a quick break, and then resume with the last part of the open session.

So, Jake, you've got it.

MR. ZIMMERMAN: Thank you, sir. Chairs, commissioners, it's a pleasure to be here to present at this joint commission

meeting and acknowledging the 20 years. That's quite a long time. I was actually in the operations center during the blackout with former Commissioner Merrifield, so it will certainly bring back some near-term memories of that.

So I am the deputy office director in NRR for the licensing programs. So as it's been discussed, the NRC and FERC and NERC, they do share a strong interest in the reliability of the nation's electric grid in the safety and security of nuclear power plants. And that includes coordination on grid reliability, cyber security, physical protection, and emergency response. And as noted in Chairman Nieh's opening remarks, these efforts are memorialized in memorandums of agreement, memorandums of understandings; and these efforts that go on in these agreements are key to supporting and maintaining a more efficient regulation, clearer jurisdictional understanding, and stronger safety and security outcomes for both agencies and the public. And we greatly appreciate the partnership with FERC and NERC and all of these interactions that we have, and we do have quite a few.

If we could go to slide three with the organization chart, please. So in June of this year, the NRC completed a major agency-wide reorganization in accordance with Executive Order 14300 to streamline our structure and strengthen regulatory effectiveness. This reorganization aligns the agency around core business lines, new reactors, operating reactors, and nuclear materials. And it also integrates our licensing and inspection functions within each of those areas to improve accountability, coordination, and decision making.

For NRR, we continue to focus on the operating reactors fleet and the research and test reactors, the licensing. The RTR folks also focus on inspection and operator examinations.

Also in this reorganization, we welcomed our partners from the former Office of Nuclear Security and Incident Response, who are now part of our office, as you can see -- well, you can't see it on the chart, but I know you have it -- the new Office of Advanced Reactors, which is focused on licensing and construction oversight for advanced and first-of-a-kind technologies. And that's to ensure that we are ready to move forward toward deployment when called upon.

In addition, our Office of Chief Nuclear Reactor Inspector is another new office, and that provides a dedicated focus on our inspection and security for the operating reactor fleet. Finally, our corporate functions have also been centralized to improve efficiency, consistency, and resource allocation across the agency.

The next thing I wanted to mention is that we are in the process of implementing a new LEAD framework, and LEAD stands for Leadership, Excellence, Accountability, and Discipline. This framework reinforces clear expectations, ownership of results, and continuous learning. And LEAD supports a culture of accountability and excellence as we adapt to the evolving nuclear landscape.

Next slide, please. So consistent with our national priorities and the need to add power to the nation's grid, the NRC's strategic priorities remain focused on enabling the safe and secure use and deployment of

nuclear technology and radioactive materials. Today, we'll provide an update on those activities that help add and sustain power on the grid.

With me today is Jen Whitman, the director of the Division of Risk Assessment and Safety Systems in NRR; MJ Jardaneh, who is the director of the Division of Licensing Projects 1 in NRR, and that division is responsible for operating reactor licensing in the United States; and then third is Josh Borromeo, our partner in the Office of Advanced Reactors. Josh is the director for the Division of Advanced Reactor Licensing.

And with that, I'll turn it over to Jen.

MS. WHITMAN: Good afternoon, chairs, commissioners. As Jake said, I'm Jen Whitman, and today I'm going to spend the next few minutes talking about some of the regulatory reform efforts underway at NRC and, in particular, our evolving regulatory approach, the interface between nuclear plant operations in the grid and opportunities for additional generation from the existing nuclear fleet.

Next slide, please. So Executive Order 14300 accelerated many of our ongoing efforts to modernize the NRC's regulatory framework. A number of the changes that are now being realized began even before the ADVANCE Act back in 2024. The ADVANCE Act and the executive order provided urgency, tools, and specific direction in some areas for reform at NRC. The executive order specifically identifies power uprights as an area where we should improve licensing timeliness.

So in response to the executive order, we've looked broadly at how we can make our regulatory processes more efficient, flexible, and

predictable while continuing to maintain our safety mission. The work encompasses modernizing our regulatory framework and oversight approach to improve the predictability of our licensing processes.

Next slide, please. One of the major efforts underway are our proposed reactor modernization rules, which address reactor licensing, safety oversight, and siting. Both of the proposed rules represent a broad modernization, and their major provisions are intended to improve efficiency, clarity, and flexibility, expand opportunities for risk-informed and performance-based approaches, and reduce unnecessary regulatory burden while maintaining

our safety and security responsibilities. These rules are part of our broader effort to make sure our requirements remain appropriate as technologies and industry proposals evolve while continuing to meet our safety and security responsibilities.

Next, I'm going to go into a few specifics of the proposed changes. Next slide, please. So with respect to reactor siting requirements, the proposed rule's graded approach would better account for the varied characteristics of new reactor technologies, creating flexibilities for potential reactor sites to support reliable, efficient energy infrastructure and evolving transmission needs. For example, these changes ensure that NRC requirements can accommodate the evolving technologies and industry plans while continuing to maintain our safety mission.

Next slide please. Over four decades of operating experience combined with our plant performance information -- I am one slide

off. Next slide, please. Slide 10, yes, okay.

Over four decades of operating experience combined with plant performance information collected through our reactor oversight process enables our oversight to focus on risk and safety-significant issues. Earlier this year, the Commission approved changes to make the ROP more targeted and risk focused. Those changes will allow us to reduce the scope or frequency for certain inspection activities where operating experience and plant performance support it while focusing our oversight resources more directly on areas of greater safety significance and poor plant performance.

Taken together with other ROP efficiencies, these changes are expected to reduce baseline inspection hours by approximately 38 percent.

The result is a more focused risk-informed oversight program that better aligns inspection effort with plant performance and safety significance while maintaining our safety mission.

Next slide, please. Operating experience continues to provide important insights into the interface between nuclear plant operations and the bulk power system. We've seen transmission system conditions, voltage and reactive power challenges, and external hazards affect plant operations. For example, we've seen inclement weather produce momentary degraded voltage conditions that resulted in the automatic start of diesel generators, even though reactor power remained unaffected. We've seen requests from grid operators for plants to down power to support grid restoration activities, and we've also seen grid transients resulting in a

generator trip, a turbine trip, or reactor scram. Our staffs actively participate in sharing operating experience of mutual interest to take actions as appropriate. In a recent technical exchange, they discussed how the 2023 FERC black start study could be applied to NRC's probabilistic risk assessment framework.

We use these experiences to better understand potential vulnerabilities and inform our regulatory activities. They also reinforce the importance of continued NRC, FERC, and NERC coordination and information sharing as the generation mix and grid operating environments evolve.

Next slide, please. So, finally, another focus of EO 14300 is improving the predictability of licensing reviews. And so we've taken steps to provide greater certainty around both review schedules and costs.

On the cost side for our FY 2026 final fee rule, we established fixed fee caps on service fees for requested activities that involve issuance of a final safety evaluation. The caps are intended to increase efficiency and accountability while providing greater cost predictability for applicants and licensees.

The framework also allows NRC to establish a lower tailored cap based on the content and complexity of a specific application. We communicate that cap along with the schedule and resource expectations for the review, giving applicants greater visibility into both expected timing and NRC review costs at the outset of the process while maintaining the rigor of our safety review.

And with that, I will turn it over to MJ. He'll talk in more

detail about the operating fleet and our readiness for the anticipated power upgrades.

MR. JARDANEH: Yes. Thank you, Jen. Good afternoon, chairman and commissioners. My name is MJ Jardaneh. I'm the director of the Division of Licensing Projects in NRR. I'd like to take a few minutes this afternoon to update you on the status of the operating reactor fleet, restarts of decommissioning plants, readiness for power upgrades, and license renewal efficiencies.

Next slide, please. Today, we have 95 commercial reactors operating at 55 sites across 28 states providing 19 percent of the nation's electricity. These plants are an important source of reliable around-the-clock power. Over the past decade, the fleet has maintained an average capacity factor of more than 90 percent, demonstrating both its reliability and efficiency. That strong performance highlights the important role the existing nuclear fleet plays in meeting the nation's energy needs and supporting a reliable and resilient electric grid. Next slide, please. Through our risk-informed licensing and oversight processes, the NRC is enabling the safe return of up to 2.2 gigawatts of generating capacity to the grid at three sites. These projects have the potential to restore significant amounts of reliable electricity while making use of existing nuclear infrastructure.

Palisades provided the first opportunity for us to establish a structured and transparent approach to these reviews. We are now applying what we have learned from that effort to other restart projects, including Duane

Arnold and the Crane Clean Energy Center. For each project, our focus remains the same: ensuring that the facility meets NRC safety requirements before returning to operation, while conducting our reviews as efficiently as possible to support licensee schedules.

At Palisades, the staff issued the licensing actions necessary to reauthorize power operations by our committed date of July 2025. Looking ahead, we expect to meet our committed review dates of March 2027 for Crane and January 2028 for Duane Arnold.

Next slide, please. Let me next turn to power uprates. Power uprates have helped sustain nuclear energy's 19-percent share of U.S. electricity generation, even as several reactors have retired over the past two decades. Since 1977, the NRC has approved 172 power uprates, adding gigawatts of generating capacity. The experience shows how uprates can meet growing energy demand by increasing output from the existing nuclear fleet. And we expect activity in this area to increase in the near future.

Over the next five years, we anticipate applications for more than 30 reactor units, with several expected as early as 2027. Based on voluntary responses to our regulatory issue summary we issued in last February, those uprates could add approximately 2.4 gigawatts of nuclear generating capacity.

We are preparing now to ensure timely and technically-rigorous reviews when those applications arise. Our efforts include process improvements to make reviews more efficient, as well as early and substantive pre-application engagement with licensees and stakeholders.

One important improvement is the development of a graded approach that tailors the scope and depth of our reviews to safety and risk significance and complexity of the proposed changes. We are also emphasizing pre-application engagement, including regulatory engagement plans and readiness assessments where appropriate to identify issues early, align on review strategies, and improve application quality before the formal review begins. Taken together, these efforts have positioned the NRC staff to handle the expected increase in power uprate applications efficiently and effectively.

Next slide, please. As we prepare for the expected increase in applications, it's useful to look at the three main types of power uprates and how their scope affects review timelines. The first type is measurement uncertainty recapture, or MUR, uprates. Those uprates typically increase power by up to 2 percent and involve equipment that more accurately measures feed-to-water flow, which is used to calculate reactor power. The NRC review target for MUR uprates is six months after the application is accepted.

The second type is stretch power uprates, or SPUs. These typically increase power by up to 7 percent and involve changes to plant set points and related operational parameters. The NRC review target for SPUs is nine months after acceptance.

The third type is extended power uprates or EPUs. These are typically greater than 7 percent and up to 20 percent and generally involve major modifications to balance-of-plant equipment. The NRC target for EPUs

is 12 months after acceptance.

Together, these examples show how we tailor our review approach to the scope and complexity of the proposed changes. The image here shows Peach Bottom Power Station, Atomic Station, which has been uprated to approximately 122 percent, the highest level previously approved.

Next slide, please. Finally, I want to highlight the progress we have made in license renewal and subsequent license renewal reviews. This slide illustrates the substantial increase in U.S. electric generating capacity that license renewal can provide when compared to the original license capacity shown in blue. The yellow area represents capacity added through initial license renewal, and the orange represents capacity added through subsequent license renewal. The additional capacity that renewal could provide is of great economic value to the U.S. utilities and is in the national interest.

The NRC is also conducting a rulemaking to extend the license renewal period from 20 years to 40 years. The draft rule was issued for public comment and is expected to be finalized next year.

To support the expected increase in license renewal applications, the staff has significantly improved the efficiency of these reviews through implementation of the license renewal roadmap and a more streamlined review approach. These changes have reduced both the resources required and the amount of documentation produced while maintaining the technical basis needed to support our regulatory decisions. We have reduced the planning estimate for these reviews from about 21,000

hours to 8,000 hours, and we continue to look for opportunities to improve further.

The results are already evident. In fiscal year 2026, the NRC completed six license renewal and subsequent license renewal reviews averaging approximately 11,500 hours per review. Looking ahead to fiscal year 2027, we are positioned to review 11 license renewal and subsequent license renewal applications, pending submittal of applications, with a goal of completing each review within 12 months after acceptance.

Across license renewal, our focus is not simply on doing the same work better. It's about applying lessons learned, focusing our resources where they matter most, and continuously improving the efficiency and predictability of our reviews while maintaining our focus and safety.

That concludes my remarks, and I will turn now the presentation to Josh.

MR. BORROMEO: Thank you, MJ. Good afternoon, chairman and commissioners. As my colleagues have discussed, the United States' demand for clean, reliable energy is increasing. In addition to the existing operating fleet of nuclear reactors, the next generation of nuclear energy technology is anticipated to support this rising energy need. The NRC has made significant changes in our regulatory framework and the approaches we take to review these advanced reactors. These improvements ensure our reviews are risk-informed, promote efficient decision making, and we can effectively adapt to new designs and deployment models while upholding the NRC's fundamental commitment to safety.

Next slide, please. Over the past several years, the NRC has built and refined multiple licensing pathways to accommodate the wide variety of reactor technologies and deployment models. In 10 CFR Parts 50 and 52 approaches are our established licensing frameworks. While the requirements of these frameworks are designed primarily for the reactor technology in our current operating fleet, they can and have been adopted for advanced reactor technologies that are different in both the design and the approach they use to demonstrate safety. 10 CFR Part 53 is our newly released, risk-informed, performance-based, and technology-inclusive licensing framework. This framework allows applicants to propose design features to meet safety objectives and outcomes rather than prescribing specific requirements. This allows for a licensing framework that can accommodate any reactor technology, size, and any commercial end-use.

Lastly, we have a proposed licensing framework that's going through the final stages of the rulemaking process, 10 CFR Part 57. This framework is geared towards microreactors and other reactors that have similar low-risk profiles and allows for a simple, efficient, high-volume licensing. To use this framework, applicants would be required to meet entry criteria to demonstrate the simplicity and low-risk of these designs.

With the licensing options provided by these frameworks, developers have the flexibility to select the one that best supports their design and business models, and the NRC staff is continuing to interact with them and provide information to support that position. Regardless of the selection made by the applicant, each framework ensures that these advanced reactors

are designed and operated safely.

Next slide, please. The NRC staff is implementing process improvements that right-size our reviews for advanced reactors. As I discussed in the last slide, we have built and refined our licensing processes. When we review applications using those licensing processes, we're also applying new and improved review practices and techniques. For advanced reactor reviews, the staff is using a core team approach. In this model, all the project management and technical review disciplines report up through the same management team. This supports the team's holistic understanding of the risk of the design to enable focus on what matters most for safety and allows for efficient decision-making, even for new and novel designs.

We're also encouraging developers to utilize robust pre-application engagement with staff. This provides developers the opportunity to engage with the NRC on their designs and proposed licensing approaches, to obtain regulatory approval on select topical areas, and to refine their approaches to reduce regulatory uncertainty.

Additionally, during the review, we have improved a number of our processes that allow us to be more efficient while maintaining a robust technical review of these applications. We prioritize the use of regulatory audits instead of formal information requests from our applications to streamline communication and reduce the amount of paperwork exchange. We have revised our mandatory hearing process to reduce the amount of administrative resources needed to meet that statutory requirement. The Advisory Committee on Reactor Safeguards, the committee of technical

experts that advises our commission on the staff's review, focuses only on the new and novel aspects of the design. And our Office of General Counsel are right-sizing their legal reviews to prioritize their focus on the most challenging legal areas and the unique approaches proposed by our applicants.

These improvements are already delivering measurable results. For example, the Kemmerer Unit 1 and Clinch River construction permit reviews were both recently completed under budget and well ahead of their planned schedules. These accomplishments demonstrate that a modernized and efficient review process can support the timely deployment of advanced reactors while maintaining the NRC's commitment to safety.

Furthermore, we are coordinating closely with our federal partners to exchange insights from our respective reviews, allowing us to identify opportunities to better inform our own licensing decisions. For example, the staff has been observing the Department of Energy's authorization of new technologies under their reactor pilot program and have gained valuable insights for designs that are planned to come to NRC for formal commercial licensing.

Next slide, please. Looking ahead, we expect a significant increase in applications as demand for clean, reliable energy grows across sectors, such as data centers, manufacturing, and expanded communities. We anticipate seeing a broad range of technologies, including both light water and non-light water designs, ranging from microreactors to small microreactors and facilities that produce medical isotopes for cancer treatments.

As we evaluate this diverse pipeline of applications, it's important to recognize that these technologies may be developed in different ways -- deployed in different ways; excuse me. For facilities like TVA's Clinch River, they are designed to operate as a traditional power plant, supplying electricity directly to the grid. Others, like Long Mott Generating Station, combine steam production for industrial applications with electricity generation, serving both on-site needs and the grid. Additionally, some microreactor concepts are being designed to operate entirely behind the meter, providing power directly to facilities like data centers without a grid connection. The diversity in both the reactor technologies and deployment models highlights the evolving role nuclear energy can play in meeting the nation's future energy needs.

As applications arrive, we continue to refine our processes and apparently lessons learned from each review. For designs that build on earlier applications, we expect to gain meaningful efficiencies that reduces resources needed for follow-on reviews. Our new licensing frameworks further support our ability to right-size evaluations while maintaining a rigorous risk-informed process. Overall, our staff is prepared to assess these emerging technologies efficiently and enable their safe use and timely deployment to help meet the nation's rising energy needs while always ensuring that every reactor is reviewed to the highest safety standards.

Thank you for the opportunity to share this overview of our advanced reactor program, and we look forward to your questions.

MR. ZIMMERMAN: Yes. That concludes our remarks.

Happy to take questions.

CHAIRMAN NIEH: Okay. Great. Thanks, team. Chairman Swett, for you and for commissioners, comments and questions.

CHAIRMAN SWETT: I know my colleagues need to leave. Do you want to go first or -- okay. Well, I'm very impressed by the efficiencies that this agency has been able to realize, and I'm sure that's in large testament to the relationships at the table with us.

So I would like to understand more -- from our perspective, litigation risk is heavily built into all of our processes and all of the efficiencies we're able to realize because it's highly litigious for project applications, at least in FERC world. Now, I seen that you have a pre-filing process. Can you tell me a little bit about how litigants play in throughout the licensing process?

For example, if you engage an entity before they file, that is clearly an open communication. But at FERC, once someone files and someone contests it on our live docket, we can no longer engage with them and have a free flow of information. And then everything is completely stalled, and that accordion effect goes throughout the process. So is that something that the NRC grapples with?

MR. ZIMMERMAN: So I'm going to turn to our colleagues from the Office of General Counsel. I don't like to pretend to be an attorney.

CHAIRMAN SWETT: Smart.

MS. SPENCER: So our hearing process, we do have a hearing process that commences when we docket the applications of the pre.

So this pre-application engagement, that's before we've actually got into a proceeding, so there's no proceeding that has started at that time. So that engagement goes on.

We do do that, largely, in a public sort of way. But we do have engagement. We don't start a proceeding until we actually docket the application and issue a notice of opportunity for hearing. But then we can continue to engage with the applicant, but it needs to be in a public way. And we disclose those -- we have public meetings. We can continue to have a public meeting with the applicant, but it's a public meeting, so that, you know, interveners, what we call the folks who request a hearing, can be present for those engagements.

To get way down in the details, we do have rules about separate -- we do have an ex parte rule that does apparently, but ours generally applies only to contested issues. So, for example, if we get a contention the only the only litigated issues in the proceeding are environmental issues, we don't have those same restrictions on communications with respect to, say, safety issues.

CHAIRMAN SWETT: Thank you.

CHAIRMAN NIEH: Oh, hey, Mary, it might be good to tell the FERC commissioners about the Commission's role in these because we serve as the appellate body.

MS. SPENCER: That is correct, too. And so we do have a separation of functions rule as well, which does limit the commissioner's ability to engage directly with the applicants. There is the separation between

the NRC staff, and these are the individuals that are speaking to you. They are the staff, and they would not be able to communicate directly with the commissioners or other Commission adjudicatory employees once there's an application, once a proceeding has commenced.

CHAIRMAN SWETT: Thank you.

MR. ZIMMERMAN: And if I could just add, from a staff perspective, on the pre-application engagement, we find that it really does help to facilitate understanding between the applicant or even some of our licensees when we use that technique. There's no decisions, there's no regulatory decisions made, but it's part of our enabling, which is now part of our mission to helping the industry, the applicants, the vendors, to understand the regulations, the specific requirements, the pathways to success.

And so we really find that very advantageous, and we've received a lot of positive feedback from the engagement that we've had with industry on that.

CHAIRMAN SWETT: Thank you.

COMMISSIONER ROSNER: Well, thank you very much for the presentation. Fascinating to hear about all the work and modernization happening at the NRC. And I'll just offer, from where I stand at FERC, that it's really needed. And I'll just give you a snapshot.

In PJM, that's the grid operator in this part of the country, we just opened up cycle one of their interconnection queue. That's when they first applied this cluster. And they had just over 200 gigawatts of applications. And what's interesting about the types of resources that applied, it was about

100 gigawatts of gas, 60 gigawatts of energy storage, 17 gigawatts of nuclear, 7 gigawatts of hybrid, the rest variable renewables. And so it's something like around 180 of the 200 are dispatchable, and what that tells me is that the market need right now is for dispatchable firm power.

And so I'm excited to see -- I think there were 24 nuclear applications. I'm excited about that. I'm really excited about the new designs that are coming and the SMRs. But what our markets are looking for is what you were licensing. And while we wait for those new technologies, I just wanted to ask you, MJ, you mentioned working through Palisades and Crane and Duane Arnold. And I know a little bit about all those because of, as Chairman Swett mentioned, we had various different filings at FERC to free up their rights to connect to the grid, all of which we adjudicated and they're ready.

But tell me about, like, what did you learn? I think your slide said, you know, you started with Palisades and then you moved on to Crane and Duane Arnold. Like, what have you learned about, you know, recommissioning some of these older units? How's that going? Is it getting faster? You know, what are you seeing?

MR. JARDANEH: Yes, sure. We've learned a lot. It's the first time for us we do this type of work. We have never recommissioned or restarted any decommissioning power plants. We have our oversight team stationed at those locations, but we hear our licensing team in headquarters.

What we did is we learned -- one of the things that we learn early in engagement with the applicants before they came to us to let us know

what they know, to tell us about their plan, what they do. That way, we could align our resources to make it available to support them of what they need. We have a metric of where we have to complete our reviews within 18 months. And in order to achieve that, we have to have the right team available to do the work.

So as we did that early engagement, we were able to align those teams in order to complete the reviews. We learned that through the Palisades, and as we received the applications for Duane Arnold and Crane, we were ready to start the reviews once we have completed it.

In addition, the area where we focused our reviews really, we focused it -- we start focusing it on the risk-significant and safety-significant areas. If an area has been reviewed recently for Palisades, for example, it may not be an area that would get a big focus of us, depending on our finding during the Palisade reviews. But the focus on safety- and risk-significant areas, that would help the staff and resources to be made available for the next subsequent application.

So the NRC state is positioned to provide these reviews within 18 months. So for Palisades, we completed in 15 months; and on Duane, for Crane, we'll be doing the same, but we wait for a readiness letter from the applicant to tell us we're ready to do it. So we're always ready to kind of provide that approval when they need it. And after that, they do implement our bundling for the license reviews.

COMMISSIONER ROSNER: Great. Thanks for the insight.

COMMISSIONER SEE: Well, thank you all. It's a delight to be here today, and I really appreciated this presentation. It's so incredibly informative. And I also want to commend the NRC on the incredible work that's been done in terms of streamlining processes. That's so important in terms of the urgency of the issues in front of us and trying to figure out how we can remove unnecessary regulatory burdens in a way that is consistent with our statutory responsibilities and protects us from legal risks. That's a project that's near and dear to my heart. I know my colleagues and I have been very focused on that, too.

So I guess I'm just curious for some lessons learned on that front. In particular, how you all are walking the line of balancing the incredibly important public safety pieces, and so the certainty that you need in rules, but also having enough flexibility and avoiding unnecessary one-size-fits-all approaches when we are at a time where things are changing so quickly.

I think, Jen, you mentioned changing circumstances. I know, Josh, you're talking about new technologies. I'm just curious about how you're thinking through that push-pull of flexibility within the regulatory process in order to gain some of these efficiencies without sacrificing any of the critically-important public interest factors that you all are focused on.

MR. ZIMMERMAN: I'll start, and then I'll look to my colleagues. Safety is our North Star always. We have a tremendous amount of operating experience, and I think applying that both from the current operating fleet, looking at how we've progressed as an agency from license renewal with the current operating facilities, transitioning to subsequent

license renewal in their advanced reactor reviews that we did.

So continuous learning, it's a focus of ours, but it's always been part of our fiber. I'm sure it's in your organization, too. And I think over the last two years, a lot of this self-reflection started with NEMA and then with the ADVANCE Act.

So the path that we are on started a couple years ago. I think the executive order put a finer point on it, and it was kind of all hands on deck. And I've been here now almost, well, almost 36 years, and I'm really proud to still be at this agency, and this is the most monumental change that I've seen. But I'm really excited about where we are going and what we are doing. While there are challenges with it, I have full confidence in our ability to meet the moment, to move forward, to complete the rulemakings that we have before us; and I look forward to implementing all of those changes and, again, continuing to support the American people and providing, you know, the industry providing stable electric power.

That's a difference than when we've looked at things in the past. You know, I think that enabling really made a difference, at least it did in me, personally. I never really thought about how can I enable. I thought about the safety of the plants for the American people, but I never looked at it until a couple years ago about enabling, because that is an important piece and there is safety that's provided to the American people in that.

And so I think we are working to embrace it across the board, but I'm excited. I think we're on the right path. Josh.

MR. BORROMEO: Sure. So from an advanced reactor

licensing perspective, the first-time application of a new technology or the first-time implementation of one of these new frameworks I see is going to be one of our biggest challenges. But where we can gain a ton of efficiency is the second review of those, the second review of the technologies, and not re-reviewing things that we've made decisions on before. That way, we can continue to make safe decisions but significantly reduce our schedules to meet the needs for the American people for their energy needs.

MS. WHITMAN: I'll just add, while the scope of some of the rulemakings are huge, right, we're making lots of changes, a lot of those changes are changes the staff has been thinking about for a lot of years and we just haven't had the momentum to get things into the rulemaking process, because they were good ideas, but were they good enough to justify the expense of rulemaking.

And so with the executive order and having to do the rulemakings, we got a lot of things off the shelf that we had been thinking about for a long time that we're now getting to put into practice.

COMMISSIONER SEE: That's great. Thank you so much.

COMMISSIONER CHANG: Well, I just want to echo the sentiment. Thank you. First of all, great to be here, but thank you for all the work you're doing. As you can tell from the previous panel, we are definitely engaged with significant load growth, and any enabling that you are helping us, it's really, you know, just important work. So really appreciate that.

I have many, many questions, but I'm going to refrain that

from here just because of time. But, also, it's great to have faces to the names, and I think it would be important, especially from the interconnection point of view and the licensing point of view and how some of the coordination that the CHAIRMAN had mentioned, I think that would be really great to have future opportunities to engage with all of you. So thank you for all your work.

COMMISSIONER LACERTE: Yes, I'll be real brief, a couple comments. I just want to commend the Commission for all the streamlining efforts they've undertaken. We know how cumbersome changing the government can be. And that starts with the Commission all the way down to staff, so everyone having buy-in. I know we have certainly appreciated it on our end of the table because, when we get one of these restart orders in front of us, the question is very simple: it's like we have this asset, should we restart it to serve the American people or should we leave it mothballed? And the answer is simple for us because you're all doing the hard work because the question becomes: have you done the appropriate safety review and is this a manageable level of risk that the American people accept?

So when it comes to us, it's an easy, easy answer. So thank you for all the work you're doing. We really appreciate it and keep it up.

CHAIRMAN NIEH: Well, hey, I think you all should consider the recognition from a fellow commission here that's really proud to be -- I feel really proud of you all to hear the recognition from our FERC colleagues about the great work that you're doing.

Any questions or comments for the NRC staff? Okay.

So I know we have two commissioners here that have tight schedules to meet, so I'll wrap this up very quickly. I think this was a really great discussion to hear from both NERC, FERC staff, as well as the NRC staff. It's very clear that we have overlapping interests in what our agencies and commissions do to serve the American people with safe, reliable, and cost-effective energy. We're focusing on the safety of nuclear power plants. I think we're giving you business. I'm not sure if that's the case, but I know our licensees kind of work in parallel as they seek NRC approvals, as well as working through the FERC system. Yes, we'll give you business. We'll give you safe nuclear power plants that you could figure out how to connect to the grid through your processes here.

On behalf of the Commission, we appreciate what you do for America's bulk power system. It's very important. America urgently needs more energy, and they really can't do that without your leadership and the leadership of the commissioners here at FERC. So thank you.

Any closing comments?

CHAIRMAN SWETT: No. Thank you all for hosting us. It's been very informative. Let's keep the doors open.

CHAIRMAN NIEH: Great. Okay. So we're adjourned. Thanks.

(Whereupon, the above-referred to matter was concluded at 3:14 p.m.)