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ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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724TH MEETING

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
(ACRS)

+ + + + +

THURSDAY

APRIL 3, 2025

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The Advisory Committee met via
Videoconference, at 1:00 p.m. EDT, Walter Kirchner,
Chair, presiding.

COMMITTEE MEMBERS:

WALTER L. KIRCHNER, Chair
GREGORY H. HALNON, Vice Chair
DAVID A. PETTI, Member-at-Large
RONALD G. BALLINGER
VICKI M. BIER
VESNA B. DIMITRIJEVIC
CRAIG D. HARRINGTON
ROBERT P. MARTIN
SCOTT P. PALMTAG
THOMAS E. ROBERTS

1 MATTHEW W. SUNSERI

2
3 ACRS CONSULTANT:

4 DENNIS BLEY

5 CHARLES BROWN

6 STEPHEN SCHULTZ

7
8 DESIGNATED FEDERAL OFFICIAL:

9 LAWRENCE BURKHART

10
11 ALSO PRESENT:

12 SABRINA ATACK, Deputy Director, Office of
13 International Programs

14 MIKE KING, Special Assistant for ADVANCE Act
15 Implementation

16 PHIL MCKENNA, Deputy Director, Division of
17 Reactor Oversight, NRR

18 JAMIE PELTON, Deputy Director, Division of
19 Operating Reactor Licensing, NRR

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

1:02 p.m.

CHAIR KIRCHNER: Good afternoon. This is the second day of the 724th meeting of the Advisory Committee on Reactor Safeguards. I'm Walt Kirchner, Chairman of the ACRS.

ACRS members in attendance today in person are Ron Ballinger, Vicki Bier, Craig Harrington, Gregory Halnon, Robert Martin, Scott Palmtag, Dave Petti, Thomas Roberts. And virtually, we have Vesna Dimitrijevic and Matt Sunseri. And Vicki is dealing with a badge issue, and Scott is working on one of our letter reports.

And we also have our consultants. I believe Steve Schultz, Charlie Brown, and Dennis Bley are out there as well. So I'll go around the table and just ask starting with Ron. Just introduce yourself quickly so Mike gets to meet you and the short version.

MEMBER BALLINGER: Hello. I'm done.

(Laughter.)

MEMBER BALLINGER: I'm Ron Ballinger and I'm an emeritus faculty member from MIT. And I do corrosion materials which is otherwise known as a black art.

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1 CHAIR KIRCHNER: He's being humble. He's
2 our resident metallurgist.

3 MEMBER HARRINGTON: Craig Harrington, one
4 of the new members. Just joined last year.
5 Background is materials degradation issues in both
6 commercial nuclear at a power plant and also at EPRI.

7 MEMBER ROBERTS: Tom Roberts. I retired
8 from Naval Reactors, was the Director of Reactor
9 Safety and Analysis. I spent about 25 years working
10 on I&C. Been on the committee about two years.

11 MEMBER PETTI: Hi, Mike. I'm Dave Petti,
12 been on the committee six years, six and a half,
13 something like that. I went to MIT. You'll hear that
14 a lot.

15 (Laughter.)

16 MEMBER PETTI: But my expertise is in
17 fuels, source term, and gas reactors.

18 CHAIR KIRCHNER: Great.

19 VICE CHAIR HALNON: Forget everything you
20 ever knew about, Mike.

21 MR. KING: Too late.

22 VICE CHAIR HALNON: I'm Greg Halnon. Been
23 in operating licensing, quality, security, EP through
24 my whole life at about a dozen nuclear plants.

25 MEMBER MARTIN: Bob Martin, on the

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1 committee almost two years. Came in about the same
2 time as Tom did. Primarily been industry nerd guy in
3 safety analysis and severe accident analysis.

4 VICE CHAIR HALNON: Didn't use the word
5 hazard.

6 MEMBER MARTIN: Hazard analysis.
7 (Laughter.)

8 CHAIR KIRCHNER: Vicki Bier is one of our
9 resident experts in PRA. And I think she'll join us
10 shortly if she can get her badge credentials done.
11 Matt, are you out there and Vesna? I see them on the
12 screen here.

13 MEMBER DIMITRIJEVIC: I was giving time to
14 Matt.

15 MEMBER SUNSERI: There we go.

16 CHAIR KIRCHNER: Go ahead, Matt. Why
17 don't you go first.

18 MEMBER SUNSERI: Yeah, for some reason, my
19 mic button was stuck. I'd click and wouldn't work.
20 So I'm Matt Sunseri. I'm a member. Been in my second
21 term almost ten years with the committee now. My
22 focus area is in plant operations in which I've worked
23 for almost 40 years. Thank you.

24 CHAIR KIRCHNER: Vesna.

25 MEMBER DIMITRIJEVIC: And I am Vesna

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1 Dimitrijevic at MIT, another PRA in Boston remotely.
2 More sensitive to camera, so I'm not going to turn my
3 camera.

4 (Laughter.)

5 CHAIR KIRCHNER: Okay. We also have out
6 there Dennis Bley, who was the former chair of the
7 committee back when I joined it eight years ago.
8 Dennis?

9 DR. BLEY: Hi, yeah, I started out in the
10 Navy. My operating experience there was on the
11 Enterprise more 50 years ago. Electrical and nuclear
12 engineer, a lot of PRA work, and chairman once upon a
13 time of this committee.

14 CHAIR KIRCHNER: Steve, are you out there?

15 DR. SCHULTZ: I am. Steve Schultz, my
16 career was with Duke Energy, technical and operational
17 support to nuclear power plants for 33 years. I was
18 appointed to the committee in 2011 and was chair of
19 the Fukushima Subcommittee for four years, became a
20 consultant in 2016 to the committee. And focus in
21 areas of nuclear fuels and reactor analysis.

22 CHAIR KIRCHNER: Okay. And Charlie, is
23 Charlie on? One of our other consultants is Charlie
24 Brown, former member of the committee. He is leading
25 our digital I&C.

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1 MR. BROWN: I'm here. I momentarily lost
2 it, my whole -- I had to log back in. Yeah, I'm
3 Charlie Brown. I was in the naval reactor program for
4 35 years and up until 2000, and then I became a member
5 for -- I guess it was four terms. Now I'm just a
6 lowly consultant to help folks out.

7 (Simultaneous speaking.)

8 MR. BROWN: I was the I&C guy.

9 (Laughter.)

10 MR. BROWN: Sorry. I had to add a little
11 humor in there, Walt.

12 CHAIR KIRCHNER: Yes, okay. And I'm Walt
13 Kirchner. And I was pressed into service on the
14 Savannah some 55 years ago. So then Chairman Hanson
15 put that display out. I have a little corner in the
16 display cabinet in there. Also went on -- I went to
17 the same vocational school in Cambridge, and then my
18 career was with Los Alamos and Argonne. So Mike,
19 we'll turn it back to you and to introduce your
20 colleagues and yourself.

21 MR. KING: Great. Thank you so much for
22 the introductions. A distinguished panel you have
23 here. So first of all, thank you for the opportunity
24 to kind of brief you on what's going on across the
25 agency in response to the ADVANCE Act.

1 We're about nine months into since the law
2 was passed. And just we'll quickly introduce
3 ourselves. And then we've prepared some material to
4 kind of give you an overview.

5 But this is your opportunity. Please feel
6 free to interrupt at any point. Ask questions,
7 follow-ups. We want to make this as productive as
8 possible for your members.

9 So I spent the -- I was former Navy
10 submarines. So I appreciate the Naval Reactors. I
11 went through that experience, trying to get my
12 engineering quals. So I don't recognize any of the
13 faces.

14 So I spent the first 11 years -- I've been
15 with the agency now about 20, first 11 years in Region
16 2 office in Atlanta. Eight years ago, I came up to
17 headquarters and had the privilege to lead the ADVANCE
18 Act activities over the past nine months in the Office
19 of the Executive Director. But next week, I start as
20 acting NRR director.

21 And luckily with us here today is Sabrina
22 Attack who will be picking up the reins on the ADVANCE
23 Act behind me. So Sabrina, you want to introduce
24 yourself?

25 MS. ATTACK: Thanks, Mike. I'm Sabrina

1 Atack. I have about 20 years with the agency as well
2 where I worked in Naval Shipyard.

3 CHAIR KIRCHNER: Sabrina, could you just
4 pull that microphone closer?

5 MS. ATACK: Sure.

6 CHAIR KIRCHNER: Yeah, I didn't do all of
7 my script. That's one of the things we always warn
8 people.

9 MS. ATACK: My name is -- okay, there we
10 go. My name is Sabrina Atack. I've been with the
11 agency about 20 years. I've worked in Naval Shipyard
12 a couple years prior to that.

13 I've work in the Office of International
14 Programs right now. And I'm the lead for the mission
15 statement implementation guidance. And as Mike said,
16 will be taking the reins for the remaining ADVANCE Act
17 rotation effort.

18 MR. MCKENNA: I'm Phil McKenna. I'm
19 currently the deputy director of the Division of
20 Reactor Oversight at NRR. Previous to that, I had 25
21 years in the Navy as a submarine officer. Joined the
22 NRC 2008, five years at Region 1, three of those as
23 resident inspector in Salem, five years in Region 2,
24 all as the senior resident inspector at Surry. And
25 then I joined headquarters in 2018.

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1 MS. PELTON: Good afternoon. My name is
2 Jamie Pelton. I am the acting director of the
3 Division of Operating Reactor Licensing at NRR. I've
4 been with the agency for about 22 years. I started my
5 career here at headquarters actually in the Office of
6 Nuclear Security and Incident Response, spent 12 years
7 down in Region 2 in the construction organization
8 through various positions, a couple of years in Region
9 3. And I've been back in DORL for two and a half
10 years.

11 CHAIR KIRCHNER: Great. Thank you all for
12 being here. And we have to point out that Ron is also
13 a sub mariner.

14 MEMBER BALLINGER: Before you were born.

15 CHAIR KIRCHNER: His boat has been long
16 retired.

17 MEMBER BALLINGER: I'm older than I look.

18 MR. KING: I'll take that. So as many of
19 you are aware, in fact, your background, recently
20 celebrated our 50th anniversary as an agency. And
21 over that time period, you're well aware we've evolved
22 our regulations and our oversight programs in response
23 to different external factors and internal factors
24 over the years and advances in technology.

25 And so the ADVANCE Act has just provided

1 us another opportunity to accelerate our efforts in
2 that area. And so we've risen to challenging
3 circumstances in the past. And we're very confident
4 we're doing the same thing today in response to the
5 current environment.

6 And I just wanted to highlight some of the
7 landscape that we see today has significantly changed
8 over the past several years. The growing energy
9 demands partially in response to the nearly explosive
10 growth in AI has resulted in significant increase in
11 forecasted energy demands in the U.S. and
12 internationally. And potential uses for nuclear
13 outside of just electrical generation, for example,
14 the recent Dow announcement yesterday is a good
15 example of that.

16 So a lot of interest in nuclear, we're
17 seeing that. In fact, part of the lessons learned
18 that we've experienced over the years is to really
19 keep our eyes open looking over the horizon about what
20 challenges the agency may be facing. What sort of
21 expertise and skills do we need. What technology is
22 on the horizon.

23 And so all indications are and in
24 particular in response to the ADVANCE Act and the
25 bipartisan support from both houses of Congress

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1 indicates that there's significant importance to the
2 role the NRC plays in enabling energy security in the
3 United States and being ready for the anticipated
4 growth. So the ADVANCE Act is just one signpost and
5 marker as we call it amongst many indicating the
6 importance of what we've got to do in response to the
7 Act. In fact, NEI just recently released an updated
8 survey results of its members where 93 percent of the
9 95 units surveyed said they indicate they plan to come
10 in for approval job rate past 80 years and for at
11 least 80 years.

12 So that means the vast majority of their
13 current fleet is going to operate to 2050 and beyond.
14 Seventy-three percent of the surveyed sites have
15 interest in power uprates. So in response to tax
16 incentives and other things, we anticipate an
17 significant uptick in that area, so we have to be
18 ready for that.

19 And that can add in the relatively near
20 term up to 3 gigawatts additional capacity in a
21 situation where we need capacity relatively quickly to
22 meet our energy needs. For the first time in the U.S.
23 recommissioning a plant that started decommissioning
24 and not only one but potentially three. So in fact,
25 it's great that Jamie is here at the table.

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1 I understand we've also got a briefing to
2 the ACRS on what's going on in Palisades in
3 particular. Look forward to that. And we'll give you
4 a lot more details on that.

5 But when we saw the Palisades opportunity
6 come in front of us, we anticipate there may be others
7 to follow. So we did take steps to make sure we'd be
8 ready for the follow-on. And the number of mega data
9 centers and the tech companies that have announced
10 efforts to do things like the Crane Energy Center,
11 unprecedented purchase in 20 years of full production
12 capacity of that facility.

13 All of that's indicating that we're on
14 track or there's lots of interest for us adding
15 capacity that we need. So if you go to the next
16 slide. Actually, two slides. Got to keep up.

17 So I'll just highlight there's lots of
18 sections in the Act. The Act is pretty broad sweeping
19 in scope. And certain areas, there's very direct
20 specific guidance on things they want, direction they
21 want the agency to do. And some areas are more broad
22 sweeping.

23 And we'll touch on in detail -- a little
24 more detail on the things that we've already
25 accomplished. And we try to anticipate some of the

1 more heavy hitting things that are coming down the
2 road in the near term that your members may be
3 interested in. But here are some of the -- kind of
4 the larger areas of the Act.

5 The first one deals with their updated
6 mission statement. This was a topic of discussion at
7 the RIC. At the ADVANCE Act public meeting, we talked
8 on this quite a bit, our ADVANCE Act Commission
9 meeting.

10 But the Commission did approve on an
11 updated mission statement. And so we're in the
12 process currently of developing implementing guidance.
13 And we'll go into that, a little bit more detail.

14 That's a very important piece of the
15 overall ADVANCE Act response because we think that's
16 one of the biggest pieces will help us to drive
17 sustained culture change, accelerating our efforts to
18 be more efficient and risk-informed performance-based
19 down the road. A lot of the Act is focused on us
20 becoming more efficient, timely, and predictable and
21 how we do our licensing activities, not just within
22 the reactor business lines but the other business
23 lines as well. So we'll tell you a little bit about
24 what we're doing there.

25 There's a section in the Act that deals

1 with what we call qualified new reactor license
2 applications. So in situations like, for example, the
3 AP1000s that we built at Vogtle, if another facility
4 was to come and request, hey, we'd like to take that
5 previously improved design and build it somewhere
6 else, we ought to be able to do that efficiently. And
7 so what the direction in the Act tells us to do is
8 develop a procedure such that you can do that in a
9 more expedited timeline, reflecting the fact that you
10 don't need to repeat a lot of items.

11 So that effort is underway. There was a
12 section of the Act that helped to reduce fees for new
13 reactor applicants. And our response to that, we
14 actually just issued the draft fee rule, and it's out
15 for public comment currently.

16 And that explains how we're going to have
17 that. And the net impact of that is for these new
18 reactor applicants or for applicants that come to us
19 with a plan that shows that they're on the ultimate
20 path to get a license, they effectively cut their
21 hourly fees in half that they would pay. So instead
22 of paying roughly 300 dollars an hour, it's, like, 150
23 dollars an hour. Those numbers, don't hold me to it.
24 It's close. So next slide, please.

25 The Act has us continue our efforts to

1 work on the regulatory framework for fusion technology
2 and for making use of brownfield sites or former
3 fossil fuel power plant sites. What can we do there
4 to make that process a little more streamlined? So
5 we've got ongoing efforts there.

6 We signed a -- relating to nuclear fuel,
7 there was a signing ceremony not that long ago where
8 we signed an agreement with Department of Energy on a
9 memorandum of understanding to improve our technical
10 coordination on that. I'll tell you a little bit more
11 about that later. And there's some direction in the
12 Act for us to relax some of the former ownership
13 control restrictions. And so we've initiated efforts
14 in that. Next slide, please.

15 Just a few more before we dive into some
16 of the details. There was some direction to reinforce
17 our ongoing support for international activities. In
18 fact, there was a section that dealt specifically with
19 how they may internally consider being structured
20 within the Office of International Programs.

21 Continuing our previous efforts on
22 microreactors, there's a lot of work going on in that.
23 We've held a number of public meetings in that area.
24 And of all the areas, this has a lot of police issues
25 in particular that would need to be worked out.

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1 In fact, we've got a large matrix of
2 things that we need to consider in terms of
3 microreactors. And I would imagine this is of
4 particular interest to the ACRS. One of the
5 additional flexibilities that was provided by the Act
6 was pay and hiring flexibilities. I'll talk to you in
7 a little more detail about that because we did deliver
8 that congressional report.

9 And it also provided us -- we're directed
10 to establish a nuclear energy traineeship program
11 which is a subset of our nuclear university program.
12 So those activities are ongoing as well. Next slide,
13 please. So just a little bit of a history lesson.

14 From about nine months or so, we started
15 this journey. Shortly after Mirela become the EDO,
16 she asked me to come up and be a special assistant for
17 the ADVANCE Act. And we recognized early on this is
18 an agencywide, whole of agency response.

19 So we established a core team of high
20 level executives from across the agency covering all
21 these areas. And you could see here we got
22 representatives from General Counsel, NMSS, Chief
23 Financial Officer, and a field office in Region 3 in
24 Atlanta -- or Region 3. So we meet weekly to discuss
25 the status of things and make sure that we're seeing

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1 all perspectives as we're developing our
2 recommendations.

3 But as I mentioned, if you hit the next
4 button this -- oh, it didn't transition. We had a
5 magical transition showing Sabrina superimposed taking
6 my face on that slide. I apologize. That didn't work
7 out.

8 So yes, so Sabrina is stepping in to be
9 the lead there. We've discussed that. But more
10 importantly, behind the scenes, there is a lot of work
11 going on. It's a small group within the Office of the
12 Executive Director that are kind of project managing
13 across the organization.

14 And these are the folks that are behind
15 the scenes doing really the heavy lifting, and the
16 names that you're likely going to see if you interact
17 with the ADVANCE Act team at all. So couldn't thank
18 them enough for all the hard work they're doing behind
19 the scenes. And Jessica Hammock is the latest
20 addition to the team. Next slide, please.

21 So what we did early on was we took the
22 ADVANCE Act and we carved it up into bite sized chunks
23 and tasked those items out. And what you'll see there
24 is we had about -- currently, we've got a count of
25 about 36 different items that were discretely ticketed

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1 to different offices throughout the agency. So far,
2 we've completed about nine of those actions on
3 schedule.

4 But those different actions are logically
5 grouped. So we have about 20 different project teams
6 that are accomplishing those actions. And as part of
7 the efforts, the Act is pretty explicit in different
8 places about who we need to interact with in terms of
9 DOE or other organizations for different sections of
10 the Act.

11 But we recognize the importance of keeping
12 the public and our own staff engaged into what's going
13 on here. So we've had so far over 30 public meetings.
14 And those meetings have resulted in a number of
15 improvements to the products we've produced so far.
16 Some of the suggestions that have come through have
17 directly resulted in changes or additions to the
18 report. So they've been valuable.

19 (Simultaneous speaking.)

20 VICE CHAIR HALNON: Are you getting
21 feedback from others besides NEI or from the public?
22 Are you getting feedback from them as well?

23 MR. KING: Yeah, and I think the nature of
24 the feedback sometimes we get from members of the
25 public is pretty focused on a particular area whereas,

1 for example, some of the input we've gotten from NEI
2 has been pretty broad sweeping, touching a lot of
3 different areas. And hopefully, what you'll see in
4 the reports that we generate, the congressional
5 reports, is we try to acknowledge the interactions
6 we've had with public, the areas with which they
7 provide input where we've benefitted from it. We've
8 talked a little bit about some of those improvements
9 at the ADVANCE Act Commission meeting as well, how
10 we've changed some areas of the report in response to
11 that. But the nongovernmental organizations have
12 probably been the most vocal. But we have had some
13 individual members of the public --

14 VICE CHAIR HALNON: One common thread we
15 seem to be getting quite a bit is transparency. And
16 the advent of the new reactors, the vintage or the
17 maturity where they're at, a lot of the stuff is
18 proprietary. We get a lot of comments about lack of
19 transparency. I was curious if they were bringing
20 that up as part of this ADVANCE Act. It's sort of a
21 potpourri of topics that you could bring.

22 MR. KING: Yeah, no, I haven't heard any
23 concerns raised about lack of transparency. I have
24 hears a thirst, and not just from members of the
25 public but across the board of us making sure we

1 provide an opportunity to engage at multiple points as
2 opposed to just collecting information once and going
3 away and coming back and here's the final answer. And
4 so we've tried to do that where we can arrange
5 multiple public meetings, even on the same topics.
6 But I haven't heard that.

7 VICE CHAIR HALNON: I've been to a lot of
8 public meetings.

9 MR. KING: Yeah. Next slide, please. So
10 I can offer this opportunity up to Sabrina. Like she
11 mentioned, she's the lead on this section of the Act.

12 MS. ATACK: Thanks, Mike. I have a
13 whopping one slide, so I'm really going to make it
14 count. All right. So this slide contains a mission
15 statement that was approved by the Commission.

16 As you can see, there's a lot in there.
17 And there are a lot of concepts that are relatively
18 new, right? Some of the same core concepts and ideas
19 that we've had in the previous mission statement are
20 carried through.

21 But then you have concepts like enabling
22 deployment that are novel for us as an agency. So the
23 guidance is intending to provide more specific
24 expectations to the staff of what does this mean to
25 you and how do we expect you to implement these

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1 actions, your day-to-day work. So what we're doing in
2 the guidance, and we've had multiple touch points with
3 the staff.

4 We've been soliciting input from the staff
5 as we've developed sort of an outline of the guidance
6 and then continuing to iterate on it. And then we'll
7 have a town hall with the staff later this month to
8 give them a better perspective of what the guidance is
9 shaping up to look like and field any feedback from
10 them. In the realm of public engagement, we did have
11 a public meeting on the guidance on the margins of the
12 RIC and got some really helpful feedback as well
13 that's helped us to iterate on the guidance.

14 So it's been very helpful feedback from
15 both NEI and Breakthrough Institute and our staff as
16 well. So what we're doing in the guidance as we're
17 breaking the mission statement into four separate
18 elements. And we're going to describe each of those
19 elements so that we can really pay attention -- oh,
20 Dennis, did you want to hop in?

21 DR. BLEY: Yeah, I just wanted to ask a
22 question because the Act -- back in '74, they split
23 Atomic Energy Commission into two pieces to take
24 promotion out of the role of the AEC. This kind of
25 puts it back in. Is that right or am I misreading how

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1 this comes across?

2 MS. ATTACK: I think it's nuanced. And
3 that's part of the challenge in making sure the
4 guidance is very, very clear. So it doesn't give us
5 any promotional responsibilities if you will.

6 But what's intended with the enabling is
7 really to make sure that the way that we're operating
8 is efficient and doesn't create an unnecessary burden,
9 right, so that our licensing activities are efficient.
10 We're applying the right level of effort commensurate
11 with the safety or security significance of something.
12 Just because the technology is new, we don't say, all
13 right, we're going to need at least twice as much time
14 to look at this because we really need to think about
15 it harder or treat it with more scrutiny than
16 something of a commensurate importance or risk.

17 So that's the idea behind it. It's
18 definitely -- that's why especially in that enabling
19 the deployment, we need to be very clear with the
20 staff. This doesn't change our core mission, the
21 statutory responsibility we have.

22 And really the first thing in the guidance
23 is our primary principle is public health and safety
24 and security, common defense and security. So we're
25 not changing that. That's our north star, safety and

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1 security. And we won't compromise on maintaining
2 that. Mike, was there anything you want to jump in
3 on?

4 MR. KING: Yeah, you may want to mention
5 the efforts we've got going on, on clarifying the line
6 between begin a consultant and -- because I think that
7 helps and that's part of what we're doing in the area
8 of clarifying. What do we mean by that?

9 MS. ATACK: Yeah, absolutely. So part of
10 -- as we break down the guidance in separate elements,
11 we'll have sort of these key words and phrases that
12 really will accentuate with the staff. And one of the
13 concepts embedded in that is really explaining that
14 there's a difference between consulting and guidance.

15 And I think you all are well aware that
16 the agency has really pounded in a culture that we
17 don't consult, right? That's not our job. We're not
18 consultants.

19 We're here to ensure safety and security.
20 But with that, we want to make sure that the staff
21 understand, well, where is that line, right? Because
22 we're generally very risk adverse in terms of, like,
23 not wanting to cross that boundary.

24 So there's an effort to develop some
25 guidance. And we'll have some of those concepts in

1 the mission statement implementation guidance as well
2 to describe what is that difference. Where does that
3 boundary lie?

4 And really the underpinning concept is
5 that we don't need to play bring me a rock to maintain
6 that delineation between consulting and guidance. We
7 can explain, here's what you need to do to have a
8 successful engagement with the agency. Here's what
9 you need to do to meet the regulations.

10 We don't need to be prescriptive about how
11 to accomplish that, right? That's where you get into
12 the line of consulting. So really trying to make it
13 clear to staff so they feel more comfortable with
14 having meaningful engagements with applicants and
15 licensees and not being worried that if they explain
16 a process, for example, that that would be viewed as
17 consulting.

18 DR. BLEY: Okay, thanks. That's a nicely
19 nuanced answered, and I hope you're able to keep that
20 clear.

21 MS. ATACK: Thank you. I appreciate that.
22 So --

23 MR. BROWN: This is -- oh, I'm sorry. I
24 didn't mean to interrupt you. This is Charlie Brown.
25 I wanted to springboard off of one of Dennis' comments

1 when you're finished.

2 MS. ATACK: Yeah. No, please go ahead.

3 MR. BROWN: Along the lines of promotion
4 and the safety aspect, when it was split out of the
5 AEC, from '59 to '79, the government didn't build all
6 those nuclear power plants. It was roughly the
7 commercial world. But there was -- I guess was it
8 Price-Anderson provided some liability background.
9 I'm not familiar with it in total.

10 But right now, there's nobody, no
11 government. Is there some way to get the industry to
12 combine? People want to build nuclear power plants
13 because need electricity.

14 And yet your all's primary responsibility
15 is safety and make sure you can deal with the
16 commercial industry in an efficient, safe manner and
17 not delay things. But whereas industry's stress to
18 come out with at least two water reactors are
19 available today, pressurized and BWRs. And a couple
20 of them have been approved. A couple of them have
21 been built.

22 So who is expected in your all's view to
23 do the cheerleading to get the industry to start
24 coming forth and building plants with a little bit of
25 liability help from the government but not expect the

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1 government to pour money in? Because the government
2 is not going to spend money building a bunch of power
3 plants. In over 20 years, we've built over 100
4 plants. So is anybody involved in that or do you all
5 know anything about that or just focusing on this one
6 area?

7 MR. KING: Yeah, so we definitely aren't
8 involved in any cheerleading aspects of things.

9 MR. BROWN: Exactly.

10 MR. KING: So our focus is solely on
11 making sure we adhere to our principles of good
12 regulation. And if we do that or when we do that
13 successfully, we think that meets the enabling intent
14 of the mission. Because if we're operating
15 efficiently, if we're reliable, we're clear, and we're
16 operating that way, then licensees or potential
17 applicants are going to see the NRC as a credible
18 regulator that if they provide us a high quality
19 design, high quality application, that they have some
20 level of confidence that they're going to get through
21 and be treated fairly. But ultimately, it does rely
22 on the quality of them coming in with a design that is
23 safe and engaging us at appropriate points. But yeah,
24 so you probably -- you're asking the wrong folks that
25 question, I think.

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1 MR. BROWN: I understand you all can't do
2 that. A hundred plants in 20 years, if we hadn't
3 stopped in '79, we could have 300 today at that rate.
4 And everything came to a stop obviously.

5 But it's interesting that it doesn't seem
6 to be between NEI, EPRI, all the other general
7 commercial world doesn't seem to be coalescing
8 together to say, hey, look, I've got a whole bunch of
9 nuclear operators. Why can't we build more plants?
10 And then propose and get together in some way and get
11 that. But you don't see any of that.

12 All you're doing is positioning yourself
13 to do the right thing in terms of the regulation which
14 I understand. So I was just curious whether you had
15 seen any other movement outside of your old
16 organization that is trying to develop a game plan for
17 getting back to building nuclear power plants. It's
18 nice you talk about brownfields and to hear the
19 government official talking about it in the
20 administration. But there doesn't seem to be an
21 coalescence. And I was just wondering if you heard
22 anything because you're the only person we know to
23 talk to.

24 MR. KING: I will offer up, though, in the
25 role of the ADVANCE Act lead, I have had the

1 opportunity to present on the ADVANCE Act at a number
2 of industry and stakeholder sessions, including state
3 public service commission meetings and one recently.
4 In fact, the last two that I attended, in fact, the
5 National Academy of Sciences Pathways for New Nuclear
6 conference, that point you just raised about is there
7 a way for industry to come together to kind of spread
8 the risk out, so to speak? And that was a topic of
9 discussion at one or multiple panels. So I know it's
10 being discussed. But that's about the extent of it.

11 MEMBER PETTI: Charlie, there's minutes
12 for that workshop. I participated as well as the, I
13 guess, director of the study committee, whatever they
14 called it.

15 MR. BROWN: Oh, okay.

16 MEMBER PETTI: Once the minutes are
17 available, I will distribute them. I've seen a draft
18 but not official yet.

19 MR. BROWN: Okay. That'd be great. Well,
20 thank you. I appreciate your discussion on the
21 subject. It's from a guy who participated in a
22 program that built -- when I retired, there were 140
23 nuclear power plants boogying around in submarines and
24 aircraft carriers.

25 And you can do it, but you need to -- it

1 needs to be focused. And that's not your job. So
2 that's for feeding me back. I'd like to see the
3 minutes once they become available just for interest.
4 So thanks a lot for the response.

5 MS. ATACK: Yeah, and I would add that I
6 think the Department of Energy does have a number of
7 initiatives underway to try to clear some of the
8 barriers to deployment. And then even
9 internationally, there's a lot of effort between the
10 Department of State, Department of Energy to go out to
11 other countries and help with development of
12 regulatory programs and advertising technologies and
13 trying to boost the deployment if you will. We go and
14 wave the flag for strong, independent, technical
15 competent regulators as part of that program.

16 And that's is a little bit of broader
17 context. But yeah, not so much in the domestic realm.
18 Do we have a cheerleading club? I think the
19 competitive nature of the industry right now is
20 holding them back from being collaborative that would
21 entail.

22 All right. If there are no further
23 questions, I'll plug along and just give a little bit
24 more information about the guidance before I end my
25 slide here. So we've got the narrative sections where

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1 we break the mission statement down into four separate
2 elements and explain what they mean. Within that
3 realm of the guidance, we're also providing some
4 success stories.

5 So it's clear to the staff what does good
6 look like in these realms and what does good look like
7 in these behaviors. What are the outcomes you would
8 expect to see? And then there will be a series of
9 appendices associated with the guidance where we break
10 down by functional area.

11 For example, there's an appendix that
12 applies to all employees. And then you'll have
13 licensing, oversight, mission support, communication,
14 external engagement, those sort of functional areas.
15 And then we'll provide one page of bullets that
16 describe behaviors that are consistent with the
17 mission statement, though the staff can use that as a
18 reference to really do a routine calibration of what
19 does implementing this mission statement look like.
20 How do I bring it in to my day-to-day implementation
21 of my work activities?

22 I think that's the end of my summary.
23 I'll just note that we are in the final stages. We
24 have a draft of the mission statement implementation
25 guidance that's been developed. We have a SECY paper

1 with the list of implementation guidance due to the
2 Commission in early May and then a report to Congress
3 due in early July.

4 So we've been keeping a pretty solid pace
5 on developing this and then iterating with the staff
6 to ask for feedback. We asked for feedback with our
7 initial outline. We've asked for feedback for success
8 stories. And then we'll provide an update to the
9 staff and ask them for more feedback, one last round
10 of feedback opportunity if you will before we provide
11 the product to the Commission. I'll hand it back to
12 Mike.

13 CHAIR KIRCHNER: Before you go back to
14 Mike, I would just observe that when you collect your
15 success stories, there's a success story here in the
16 agency and this committee was involved in it with a
17 foreign entity, Korea Hydro and Nuclear Power. Ron
18 Ballinger led the review team for us on that. And
19 getting your gold stamp of approval, then went out and
20 sold that system to, I think, Unite Arab Emirates.

21 So it's not a story, perhaps, that the
22 domestic legacy vendors want to hear. But just it's
23 an example that when they got that, that was a major
24 factor in their successful sale of that technology.
25 And it was U.S. technology. It was the CE80 system.

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1 MEMBER BALLINGER: And they came in on
2 schedule and under budget.

3 CHAIR KIRCHNER: Yeah. So just maybe put
4 that in your -- it's probably not one you want to lead
5 with because it's a foreign sale. But it certainly
6 was something where the NRC had a major impact on
7 deployment, enabling deployment of safe nuclear
8 energy.

9 MS. ATACK: That's a great point, and we
10 do see that internationally as well that a lot of the
11 countries we're talking to, we'll want to make sure
12 has the NRC seen this technology, right? That gold
13 standard regulator, have they reviewed it? Have they
14 approved it?

15 And has it been built somewhere? That's
16 really -- especially for newcomers to nuclear, they're
17 really looking to meet those criteria. You have the
18 credible regulator looked at this.

19 And then has somebody successfully built
20 and operated it? So that's why you see Poland, the
21 AP1000s being deployed there. And then the BWRX-300,
22 right, interest is increasing in those.

23 MEMBER BALLINGER: As an added comment,
24 that Korea plant is a System 80+. So what goes
25 around, comes around, I guess.

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1 CHAIR KIRCHNER: Yeah.

2 MS. ATACK: Thank you.

3 MR. KING: Great. So if you go to the
4 next slide. I'm going to kind of give you some
5 highlights of a few of our first congressional reports
6 that we issued. The first one I'll mention is Section
7 401 of the ADVANCE Act which dealt with the advanced
8 manufacturing -- advanced methods of construction and
9 manufacturing.

10 And this is one, Greg, where we did get
11 some public feedback that was useful. In particular,
12 there was an interest in us doing what we can to go
13 beyond our traditional reliance on nuclear code
14 standards and look for alternatives. And there was a
15 lot of focus on alternative manufacturing for large
16 components in particular. There's use of new
17 materials that'd be suited for a high temperature
18 environment for advanced reactor use such as new Class
19 A advanced austenitic stainless steel alloys.

20 And based on that, the NRC identified
21 development of some additional guidance that we
22 thought would be useful for emerging technologies.
23 And for each of the reports that we've issued, you'll
24 notice at the end of the congressional reports, we're
25 trying to have a standard kind of format for an

1 enclosure where we highlight things that we recently
2 completed that we think are consistent with this
3 section of the Act, things that are ongoing, and
4 future things that we might want to potentially
5 consider. And so for this section of the Act, we did
6 identify some things that we want to look at.

7 VICE CHAIR HALNON: That brings up a
8 question then. Are you projecting impact and then
9 measuring that impact as you go forward to ensure that
10 what you expected and what you're getting?

11 MR. KING: Yes. And in fact, we're going
12 through this process right now of we task each of the
13 offices who are leads for these reports to take each
14 of the items we specifically identified in the tables,
15 come up with how are we going to measure whether or
16 not we'll have the intended outcome if we're pursuing
17 those items.

18 VICE CHAIR HALNON: That's the danger of
19 clogging up the process too. We've seen that happen
20 where we thought we were making great improvements
21 too. And it just seemed to take longer which is not
22 obviously what we want.

23 MR. KING: Yeah, in a particular -- some
24 of these early reports, six months from when the Act
25 was signed --

1 VICE CHAIR HALNON: It's hard to see an
2 impact.

3 MR. KING: You never know. And so it is
4 important. It's even more important for us to put
5 measures in place, for us to check and adjust. These
6 are --

7 VICE CHAIR HALNON: These are public
8 measures?

9 MR. KING: Yes. No, we're going through
10 the process of determining which metrics would be
11 appropriate to be publicly available.

12 VICE CHAIR HALNON: Yeah, they've got to
13 be understandable and --

14 MR. KING: Right.

15 VICE CHAIR HALNON: -- clear.

16 MR. KING: But that is the intent is for
17 -- and not only for these individual reports. But one
18 of the things we're doing is looking more broadly of,
19 hey, what can we do from a broader perspective? Like,
20 for example -- and I neglected to mention this in
21 earlier comments.

22 But the Act gives us things specifically
23 to do. But we also said, what can we do in the spirit
24 of the Act? And so the EDO launched these
25 initiatives, we call strategic direction initiatives.

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1 And they're kind of cross cutting things.
2 And so we've launched a number of initiatives in that
3 area. One of them is for us to put in place some
4 publicly available, broad sweeping, challenging
5 metrics.

6 If we have an expectation which we do to
7 resolve better and more timely resolving low level
8 safety issues, we got an expectation for the amount of
9 time it should take us to do that. Let's establish
10 that expectation. Let's develop a metric and hold
11 ourselves accountable to it and show how we're
12 performing in that area.

13 And we've got an expectation that we are
14 more accurate in the amount of time it takes us to
15 accomplish a licensing -- a type of licensing action
16 and that we're on budget and on schedule in accordance
17 with what we estimated in our acceptance review.
18 Let's establish a metric for that and let's hold
19 ourselves accountable to that in a public way. That's
20 just a few examples of things -- some things that
21 we're doing that the Act didn't direct us to do it.
22 But it's things we think makes sense and are
23 consistent with the spirit of the Act.

24 (Simultaneous speaking.)

25 CHAIR KIRCHNER: Could I interrupt now?

1 MR. KING: Yes.

2 CHAIR KIRCHNER: You'll find we're an
3 interruptive committee.

4 MR. KING: Good. It's more dynamic.

5 CHAIR KIRCHNER: And you glossed over
6 something that we make part of the chair of any of our
7 meetings opening statement. And that is that all
8 member comments should be regarded only as those with
9 the individual -- as the individual opinion of that
10 member and not a committee position. You'll find we
11 have lot of opinions, so I'm going to give you one.

12 That first one up there, I think the
13 committee -- I'll speak for myself -- would really
14 strongly endorse your more active participation in
15 codes and standards development. Don't cut costs
16 there. It's a benefit to the agency to be in sync
17 with what's going on, whether it's ASME or IEEE.

18 Have input to what they're doing and then
19 get the knowledge that comes with participating in
20 that. And to the extent that you can help those by
21 your participation, prioritize to the extent you can.
22 These are NGOs and professional societies. But the
23 code cases as appropriate that support things like
24 advanced reactors and higher temperatures. That's a
25 win-win for the agency as well as the industry, so one

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1 member's opinion.

2 MEMBER BALLINGER: You can make a big bang
3 for your buck if you get a lot of commercial
4 dedication and place some of the more stringent --
5 well, on paper, stringent codes and standards.

6 MR. KING: Yeah, so -- yeah, and I think
7 those types of discussions were definitely part of the
8 engagement in our public meetings. And the focus was
9 -- and if you look at the report, it's more about what
10 can we do to accelerate our endorsement of codes that
11 we think would be applicable and less about how do we
12 save resources by not participating in code type
13 interactions.

14 CHAIR KIRCHNER: No, I didn't mean it in
15 that spirit. But your participation will help you
16 expedite endorsement because you'll be part of the
17 creators of those codes and standards.

18 MR. KING: Great. Yeah, and so I think
19 I've touched on this last point of really it's about
20 focusing on what can we do to accelerate our efforts
21 to endorse codes and even commercial construction
22 codes for areas that are of low risk and figuring it
23 out where it makes sense to do that sort of thing. So
24 next slide.

25 CHAIR KIRCHNER: Before you go on --

1 MR. KING: Yes.

2 CHAIR KIRCHNER: I interrupted you again.
3 Your research arm provides a valuable service to the
4 agency. And so often when we hear about efficiency,
5 sometimes it's code for cutting costs.

6 But your investment in research and we
7 have a triannual report on the research programs will
8 pay off in a number of those previous slide's bullets,
9 the second two bullets on the previous slide. If
10 you're going to deal with emergent technology, you
11 have to have an informed staff to deal with them and
12 the endorsement process. If they're informed they can
13 be an active and more agile regulator. And we've seen
14 some promising results out of the future -- what's the
15 --

16 MEMBER PETTI: Future-Focused Research.

17 CHAIR KIRCHNER: Future-Focused Research
18 and addressing emerging technologies. Great. So just
19 a pitch on behalf of RES. Helping you meet that goal.

20 MR. KING: Great. Okay. So the next
21 report I wanted to highlight is the report we did on
22 ways we can be more efficient with our environmental
23 reviews. And I'll just highlight a couple things in
24 particular. We did take a comprehensive look, even
25 though we had recently sent a paper to the Commission

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1 with some options in this area.

2 We did take another fresh, holistic look
3 at the program to identify actions we could do to be
4 more efficient. And we've decided to implement a
5 5,500-hour resource model which is roughly a 30
6 percent reduction from previous estimates for
7 operating reactor license renewal environmental
8 reviews. And we're measuring the current applications
9 against this new model to inform future adjustments
10 that we make.

11 We're also working on a new reactor
12 generic environmental impact statement rulemaking.
13 And if this is finalized, we expect it could save us
14 up to 40 percent of staff efforts per application,
15 roughly 6,000 hours. We also see significant benefit
16 in situations where we are establishing memorandums of
17 understanding with cooperating agencies for
18 environmental reviews.

19 And we've got a number of these reviews.
20 We think it provides -- or a number of these in place.
21 We think it provides clarity on roles and
22 responsibilities and schedule for deliverables for
23 environmental reviews.

24 And we've got some in place with
25 Department of Air Force on the Eielson Air Force Base

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1 project, DOE on projects for the Palisades restart,
2 and a trio of reactor projects. In the agreement with
3 the Department of Air Force, they're the lead for
4 consultation, the Section 106 for the National
5 Historic Preservation Act. And we anticipate that'll
6 save roughly half of the NRC staff's effort in the
7 consultation process. So it's not an insignificant
8 efficiency gained in that area.

9 MEMBER PETTI: So Mike, the 5,500 hours,
10 that's only the environmental piece, not what we see
11 a lot of, the licensing piece. Are you guys giving
12 any thought to a resource estimate for the licensing
13 pieces, CP, an OL, a COLA, some sort of metric or
14 benchmark to measure this health against?

15 MR. KING: Yeah, outside of just the
16 license renewal piece, yeah. We do have goals in that
17 area. I don't have the -- we don't have the
18 environmental expert in the room to give you the
19 details on that one. We could follow up.

20 MEMBER PETTI: No, just I mean, the idea
21 of having some good metrics if they can be
22 implemented.

23 MEMBER BALLINGER: Along those lines,
24 again, this one person's opinion, a 35 or 25 percent
25 reduction in the time for environmental reviews or for

1 renewals, why? Why just 25 percent? If they have an
2 environmental review for the plant and it's up to
3 date, I guess, okay, I'm just curious as to why just
4 25 percent?

5 MR. KING: Yeah, so --

6 MEMBER BALLINGER: Not being an
7 environmental person.

8 MR. KING: Right, right. So that's my --
9 and I didn't stay at a Holiday Inn last night either.
10 But that's part of the discussions I know the teams
11 are having. But my understanding of environmental
12 requirements are a little bit different than they are
13 in terms of safety requirements.

14 Since the last environmental review if the
15 requirements have evolved over time when it's time to
16 do the next review, you have to look at -- see what
17 has changed and measure it against that. But I know
18 I'm doing it a disservice. So if you want to go into
19 a deep dive and why that's the case.

20 MEMBER BALLINGER: No, just it strikes me
21 as if you have it in place, up-to-date environmental
22 review. I'm guessing that the intervener, if you want
23 to call it that way, delays related to plants are more
24 environmental -- on the environmental side than they
25 are on anything else. I could be wrong. Am I wrong?

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1 CHAIR KIRCHNER: No, we can go offline and
2 take it up in detail. But NEPA has fixed timelines --

3 MEMBER BALLINGER: Yeah.

4 CHAIR KIRCHNER: -- too. And time is
5 money. So there's some compression that you can
6 obtain in an environmental -- going through the NEPA
7 process.

8 MEMBER BALLINGER: I got you.

9 CHAIR KIRCHNER: But you've got fixed
10 timelines to work against too. And those may
11 sometimes be the long pole in the tent for the
12 applicant.

13 MR. KING: And we're definitely meeting
14 the NEPA requirements in this area. If you look at
15 the paper, we explicitly say that.

16 CHAIR KIRCHNER: Dennis Bley has a
17 question or a comment. Dennis?

18 DR. BLEY: Yeah, I mean, we aren't
19 involved in the environmental reviews. But it kind of
20 sounded like NRC is saving staff time. But it's been
21 moved over to another agency. So overall, are we
22 saving? I'm a little -- I might've missed something
23 in the way you presented it, Mike.

24 MR. KING: Yeah, I think that's NRC staff
25 effort time. So I don't know what the net impact

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1 overall is on the applicant itself. So I have to get
2 back with you on that.

3 DR. BLEY: Okay. Yeah, I think you said
4 one shifted over to the Air Force or another defense
5 department agency to do it. So that doesn't sound
6 like a net savings anywhere.

7 MR. KING: Yeah. Well, I know the goal is
8 overall net savings. But I don't know the -- whether
9 or not this 50 percent is overall big picture of what
10 does that look like. This is 50 percent of NRC staff
11 effort.

12 DR. BLEY: Okay, thanks.

13 MEMBER PETTI: Mike, I mean, in addition
14 to this ADVANCE Act coming down, are there any efforts
15 to empower the staff to come up with ideas on how to
16 streamline and be more efficient? If there's anybody
17 that ought to know, it ought to be the staff. I've
18 always felt that these top-down things are good.

19 But it's where the rubber meets the road,
20 it's hard to see -- sometimes it's hard to see down in
21 agencies -- into agencies. I don't know here where
22 the eyes can see effective down into the agency. But
23 if you can get -- if you can incentivize even
24 financially people that come up with ideas to improve
25 efficiency, that can be very powerful.

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1 MR. KING: Yeah. Do you want to -- I can
2 see you're jumping at the bit to say something.

3 MS. PELTON: Sure. Well, and you're
4 right. A lot of the great ideas we're getting on
5 staff. And in a few minutes, I'll talk about ADVANCE
6 Act 505 and highlight a few initiatives. We have a
7 number of initiatives that are being undertaken that
8 drive towards efficiency, timeliness, and
9 predictability that are staff-driven efforts that
10 build into that framework. So that's definitely
11 happening.

12 MR. MCKENNA: And I will also do the same
13 thing.

14 DR. BLEY: This is Dennis one last time.
15 I think Dave or somebody mentioned construction
16 permits in here somewhere. That's an area where it's
17 kind of unclear what you need to do for a construction
18 permit.

19 Every application that comes through seems
20 to work that out on its own. If we could systematize
21 that a little better, that might be a good place for
22 you to look. I don't know if you're already looking
23 there.

24 MEMBER PALMTAG: This is Scott Palmtag.
25 My comment is not really related directly to

1 environmental but just in reviews in general. And
2 this is off Dave's comment.

3 But I come from industry. In industry, we
4 have -- there's programs like Lean Six Sigma or Lean
5 methodology or Toyota-based manufacturing and just in
6 time. But it's not just a manufacturing process.

7 It can really help. I've seen this
8 tremendous speed up on reviews in the industry. And
9 I'm relatively new to the committee, and I don't see
10 that sort of tools available to the staff.

11 But that's something you may want to look
12 at as -- it's one thing to say, do this faster. But
13 you actually have to bring tools in. And a Lean
14 program can bring tremendous speed up. So just a
15 suggestion.

16 MR. KING: Thank you very much. And
17 there's so much going on, it's hard to share with you
18 in this time frame what all is going on. But one of
19 the strategic direction initiatives is kind of what
20 you're talking about, enabling the -- in particular,
21 there's a big focus on project management skills and
22 tools, right?

23 Helping leverage the latest technology,
24 best practices. And how do you manage projects from
25 cradle to grave? How do you identify areas which are

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1 underperforming, ways you could streamline processes,
2 steps you could take out of the process?

3 And that's a big part of Lean Six Sigma,
4 optimizing what are the hand-offs, who's doing what,
5 how do you track all of it. And I'll just share with
6 you to your point about are we leveraging the creative
7 skills of the staff, empowering them to just move out
8 on things. One of the first things I did as ADVANCE
9 Act lead was meet with all of the offices at all-hands
10 meetings and introduce this topic.

11 And that's the first focus was, hey, don't
12 wait for direction. Nobody knows your job better than
13 you. Please anything that frustrates you, anywhere
14 you know you don't spend time on something that
15 matters or you think you're spending too much on
16 something that doesn't matter, please raise it up.
17 Propose a solution.

18 If there was ever a time to make a change,
19 a bold change, this is it, right? And so that has
20 been a key message. And I think what you'll hear one
21 of the biggest, boldest ideas in terms of potential
22 changes to the reactor oversight process was a staff
23 initiated effort proposal.

24 And Phil is going to talk to you a little
25 bit about that one. And we have seen a lot of

1 engagement from the staff. I think the slide I showed
2 earlier, there were over 200 ideas that have come in
3 so far.

4 And we maintain kind of a list of things
5 that we're looking at, temporary shed activities to
6 make room for us to do other stuff. So I mean, there
7 is a lot going on behind the scenes. And staff, my
8 experience, they've used this as opportunity to
9 propose all the things that frustrate them.

10 They've really used this as an opportunity
11 to kind of highlight that and what can we do to stop
12 spending administrative time on things. And let's
13 focus on the technical things and things that matter.
14 So good questions. Thank you very much. Next slide.

15 So I mentioned earlier we signed a
16 memorandum of understanding with Department of Energy
17 to coordinate on fuels. And this will provide an
18 opportunity for us to increase the level of technical
19 chairing between our organizations. So we'll have
20 access -- better access to do these experimental data
21 and codes to hopefully give us some efficiency gains
22 in our use for the licensing process to advanced
23 nuclear fuels.

24 I mentioned also that a section in the Act
25 gave us some initial hiring and pay flexibilities.

1 And so we did issue the report back in December to
2 Congress. And we think this is going to be a very
3 important tool because it gives us direct hire
4 authority for areas where we think we're going to need
5 really specialized skill sets so we can just do
6 noncompetitive hirings in areas that we feel like we
7 really need to.

8 Or if we got a demonstrated area where we
9 -- despite multiple efforts, we just been unsuccessful
10 bringing in the skills we need. We can use this tool.
11 It's an opportunity for that. It also provides us
12 increased pay above current limits for those
13 qualifying positions when and if we need it to retain
14 or attract.

15 It gives us the ability to do hiring
16 bonuses for those particular skills. And the -- yeah,
17 so the big opportunity there is the ability to -- in
18 addition to the hiring bonuses, we have the increased
19 flexibility to give performance awards, up to 25,000
20 dollars. And this is an opportunity for us to
21 incentivize the folks who are looking for ways to do
22 business in a smarter, more efficient way because
23 we'll be able to apply these bonuses or performance
24 awards to those individuals through their performance
25 system. So --

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1 CHAIR KIRCHNER: Mike, could you elaborate
2 on the fuels MOU? I mean, traditionally, the two
3 agencies have always cooperated in this area. What's
4 new? What's different? What's going to change as a
5 result of this MOU?

6 MR. KING: So my understanding is it just
7 clarified and expanded the range of sharing of
8 experimental data with DOE and particularly access to
9 their codes and any data that may come out from their
10 testing of fuels. So this is an area where there are
11 more details than that.

12 (Simultaneous speaking.)

13 CHAIR KIRCHNER: The funding comes from
14 the same taxpayer for both agencies. So I presume
15 this is just -- okay, it's focused in RES and NRR
16 probably and NMSS. Okay.

17 MR. KING: And this is an evolution of
18 previous agreements that we've had. So to the extent
19 we identify areas in the future where we feel
20 constrained by the MOU, then we will not be hesitant
21 to make revisions to it if we feel like that would be
22 beneficial to us.

23 VICE CHAIR HALNON: Have you been able to
24 use the ADVANCE Act hiring and pay authorities to
25 override some of the executive orders and other

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1 executive actions, the freeze hiring and probation
2 employees, stuff like that?

3 MR. KING: So we haven't executed on it
4 yet. But we've laid the groundwork. We've got
5 internal procedures in place. But it's fairly new, so
6 we haven't had the opportunity to execute on it yet.

7 CHAIR KIRCHNER: Do you have an agencywide
8 plan that looks at your staff? And I'm thinking
9 mainly the technical staff that identifies the skills
10 you need. And how do you implement that, or is it
11 just different organizations go out on their own and
12 find individuals? Is there some strategic view of
13 candidly replenishing the brain drain that the agency
14 has suffered over the last years?

15 MR. KING: Yeah, and we have a tool called
16 the strategic workforce planning tool where we
17 forecast our current skills and expertise of the staff
18 against the anticipated needs, both, like, within the
19 next year or the next few years, look for those gaps.
20 And we're in the process right now of streamlining
21 that tool, updating it to make it a little more
22 effective, to be more closely tied to our hiring
23 systems and our budgeting systems so that we can have
24 a more integrated and useful outcome from our efforts
25 to work on strategic workforce planning. But that --

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1 we agree with you.

2 That is an area which is increasingly --
3 particularly in an environment where we're seeing lots
4 of interest in stakeholders, with varying
5 technologies, dynamic workforce folks. We recently
6 lost a fair number of experienced folks who were
7 focused on knowledge management, knowledge transfer.
8 So having a current survey of what are your expertise
9 and what areas compared to where you think you need
10 those areas based on your current look of what's
11 coming down the road is very important. So we're
12 focused on that right now.

13 MEMBER BALLINGER: Isn't it kind of a
14 two-path process, kind of short-term and long-term?
15 In the industry, a lot of these plants will literally
16 fund students -- their entire education expense as
17 long as they come and work for them. So that's the
18 young people.

19 And then there's the stuff you've been
20 talking about. And the agency has a number of
21 programs in places, internship programs, those kinds
22 of things. Is there a thought to enhancing some of
23 that stuff? Because that's your long-term pipeline.
24 Actually, it's a long-term pipeline for the industry,
25 even if they don't come to work for you.

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1 MR. KING: Yeah, in fact, the Act directs
2 us to shift to an annual solicitation of our NRAN
3 program, Nuclear Regulatory Apprenticeship Network
4 program. So that's one thing in particular that's
5 directed by the Act. But the apprenticeship program
6 that I mentioned earlier as an extension of our
7 university leadership program was also directed by the
8 Act. So having a healthy look at folks coming
9 straight out of college as well as folks that are new
10 to career that are coming in, having a healthy
11 balance.

12 MEMBER BALLINGER: Is there a way to --
13 are you expanding it?

14 MR. KING: Well, yes, we are in process of
15 handing the annual NRAN program -- or expanded it to
16 be annual instead of biennial before. And the
17 university leadership program, expanding that to
18 include the apprenticeship program as well. Now that
19 program doesn't commit them necessarily to come work
20 at the NRC.

21 It's more broader than that. It helps
22 industry -- all nuclear industry as a whole. But the
23 NRAN program in particular, that's our steady stream
24 of entry level folks to be able to meet our needs.

25 So that in combination with these new

1 direct hire authorities which will allow us to be more
2 competitive at selecting particular skill sets that we
3 need. It helps us be in a better position. Okay.
4 Next slide. So I mentioned that we're also looking
5 for actions that we can take wherever possible to do
6 things consistent with the Act and not necessarily
7 waiting until the report is due for us to move out on.

8 So some of the things we did early on, we
9 recognized an opportunity to share you what we've
10 experienced in the past is sometimes in response to
11 inspections that go on in the regions, the regions ask
12 for help from headquarters. And what we found is
13 sometimes we're a little slow to recognize where we
14 spend a lot of time on issues at headquarters. And so
15 we decided to take action right away to provide some
16 clear expectations for the amount of time we should
17 spend on an issue before we ask ourselves the very low
18 safety significance issue resolution questions of, is
19 this a low level issue? If it is, does it make sense
20 for us to continue to expending effort on it?

21 So we ran a little more discipline into
22 our process there. We went ahead and implemented that
23 guidance right away rather than waiting for a report
24 to be issued. We also issued a memo on expectations,
25 and this was on how it could be more efficient,

1 licensing.

2 And this was in response to a couple of
3 meetings that we had in advance before the events had
4 came out of pre-applications. How do we make the most
5 of those engagements? And so we issued a memo
6 clarifying expectations on issuing your safety
7 evaluation report, gaps identified in it before we go
8 asking any questions for licensees for follow-up.

9 That's a best practice. It's been in
10 place for years. But we wanted to reinforce that
11 expectation. We're following that memo up with some
12 metrics to hold ourselves accountable to actually
13 measure are we doing what we're expecting to be done.
14 And I mentioned earlier the things we're doing to
15 measure ourselves in a more public way in response to
16 Greg, the discussion we had.

17 VICE CHAIR HALNON: So Mike, I want to
18 expose myself here. Do we have access to these memos
19 that you're writing?

20 MR. KING: Yes, I just put down the links.

21 VICE CHAIR HALNON: Okay, so I'm not a
22 fast clicker. So the only other comment -- and you
23 probably get back to the water cooler saying I
24 expected that comment from him. When I look at the
25 ROP from this, it looks like things we've been talking

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1 about since 2012, and now we're just now getting an
2 excuse that we can go do them because we have the
3 ADVANCE Act pushing us.

4 Over the years, a lot of the things have
5 been kept arm's length, some not. I'm not saying
6 there hasn't been many improvements. But my overall
7 impression was that we weren't very bold in really
8 taking credit for the 50- to 60-year operating of
9 these plants and how safe they've been, how they've
10 improved, the number of low level findings below that
11 we're getting at, relatively steady but still not
12 serious.

13 The improvements made in the resident
14 inspector programs and quality of the people you have
15 full time at the site, it just seems like we could've
16 taken a really bold move and said, okay, design basis
17 stuff, we've look at that for 40 years. We don't need
18 to continue to look at that. We went through license
19 renewal. We looked at it all again. Why do we have
20 to keep regurgitating minor low significant safety
21 compliance issues?

22 Why are we even finding those, because a
23 difference of opinion, difference of level of detail
24 and documentation from the '70s to now? You can
25 regurgitate all that, those reasons. Are you talking

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1 about maybe even a more progressive move in the
2 reactor oversight process from the existing lightwater
3 fleet?

4 MR. MCKENNA: Two slides from now. I can
5 talk about it now.

6 VICE CHAIR HALNON: So you did anticipate
7 that question.

8 MR. MCKENNA: It's coming up. As soon at
9 Jamie does he slide, I'll be into my slide.

10 (Simultaneous speaking.)

11 MR. KING: And I don't know if you got the
12 chance to watch the ADVANCE Act Commission meeting.
13 But Jeremy Groom presented on this topic. And he had
14 a chart on there that was very insightful. To your
15 point about over the years, it showed what has changed
16 in terms of level of oversight total hours to conduct
17 the baseline inspections over time compared to some
18 charts, proxies to industry performance over time. So
19 it's a valid point. That's part of the information
20 we're using to inform the improvements we're making.

21 VICE CHAIR HALNON: My data point was just
22 early public meeting had some details of the ROP. So
23 I'll give it to you that I'm not current as I should
24 be.

25 MR. MCKENNA: So I can speak to that early

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1 data point. So we -- that first initial meeting we
2 had, we changed the plans since then. And I'll speak
3 to it at the slide.

4 MR. KING: Are you going to talk about the
5 metric for resolve on low level safety issues?

6 MR. MCKENNA: You can mention it.

7 MR. KING: So in addition to all the stuff
8 he's going to talk about, I think -- one of the things
9 that I think for us as an agency that is rather bold
10 is being very clear what our expectation is for how
11 long we should spend resolving low level issues,
12 right? Many of us have experienced times where it's
13 taken us too long, perhaps even over a year or
14 multiple years to resolve issues that at best would've
15 been green findings. So what we're putting in place
16 -- and we're not waiting to do it for the report,
17 we're launching this effort now -- is a metric that
18 says when you leave the site, you're done with
19 inspection, you've got so many days with which you
20 need to have the low level safety issues resolved.
21 Otherwise, we're going to have escalated engagements
22 on should we enter the VLSSIR process to make a
23 deliberate decision on how much more resources we need
24 to make on issue if we agree it's a low level issue
25 that doesn't warrant that amount of resources.

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1 VICE CHAIR HALNON: So let me give you --
2 this is a Greg talking point. Once you determine it's
3 a low level issue, why is it the time frame is zero?
4 Once you're in line that is the low level safety
5 issue, it should be zero. Move on to the next thing.

6 MR. KING: Well, I think we may disagree
7 on that somewhat. If you're right at the edge, you
8 need an hour or two more to finish.

9 VICE CHAIR HALNON: We agree it was a low
10 level safety issue. Okay.

11 MR. KING: Yeah.

12 VICE CHAIR HALNON: That's what you expect
13 to hear from me.

14 CHAIR KIRCHNER: Individual opinions.

15 MR. KING: I know Greg well.

16 (Laughter.)

17 MR. KING: All right. So next, I'll pass
18 it over to Jamie who's going to talk to you a little
19 bit about Section 505 which is some of the things
20 we're looking at in the area of licensing
21 efficiencies. And this is an area where we did make
22 a decision deliberately to expand beyond what was
23 directed in the Act. And she can tell you a little
24 bit more about that.

25 MS. PELTON: Okay. So Section 505 of the

1 ADVANCE Act calls for the director of NRR to establish
2 techniques and guidance for the efficient,
3 predictable, and timely review of licensing actions
4 for nuclear reactors. As Mike just said, we did
5 expand that. We're applying the principles that we're
6 apply for NRR across business lines.

7 So we are working closely in partnership
8 with NMSS to ensure that what we are learning, the
9 ideas that we are hearing, the activities that we're
10 undertaking that we're sharing best practices across
11 the business lines to make sure that as an agency we
12 are going in the same direction for efficient, timely,
13 and predictable licensing. So at a high level in all
14 of the efforts that we're undertaking, and Sabrina
15 said safety, security, those are still our north star.
16 But efficient licensing is now built into our mission
17 statement.

18 So the work that we're doing as part of
19 505 is very well aligned with the new mission. So
20 between the two offices, we've established a reactor
21 licensing efficiencies and processes team and a
22 partner materials licensing and efficiencies and
23 processes team. These teams are evaluating our
24 licensing processes to see where we can gain
25 efficiencies, where we can focus in on the areas that

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1 we can enhance our processes to give us more clarity
2 and communication with the industry, drive more
3 efficient licensing reviews, and move licensing
4 forward in the most efficient way possible.

5 Mike had mentioned the pre-application
6 engagement and safety evaluation with gaps efforts.
7 Those teams right now are undertaking efforts to
8 enhance our guidance and not only to train and
9 communicate with our staff. But someone mentioned
10 earlier high quality applications from the industry
11 are important.

12 We can look at our processes and come up
13 with internal process efficiencies. But it also
14 requires high quality applications from the industry.
15 As part of that, we've had a number of public
16 meetings.

17 We're planning another workshop to have
18 that conversation so that as we approach issues, we're
19 looking at how we update our guidance, how we train
20 our staff, and how we also engage the industry to make
21 sure that moving forward in licensing there's mutual
22 understanding of what a high quality application
23 entails. So we have LEAP teams that are working
24 together, evaluating our processes. We're also
25 looking at we have a number of initiatives ongoing in

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1 NRR that are driving towards efficiency.

2 And I'll pause and say, what does
3 efficient mean? To define what we are going after, we
4 really looked at our principles of good regulation.
5 Efficiency has been part of that since the beginning.

6 We look at project management principles,
7 our strategic plan to drive at -- efficiency can mean
8 reduced cost and schedule of licensing applications.
9 Driving into efficiency also goes to risk-informed
10 decision making, data driven decision making, being
11 proficient in our processes and accountable to those
12 processes. So as we evaluate our initiatives, we're
13 ensuring that those objectives of efficiency,
14 timeliness, and predictability are met.

15 So we have a team for power uprates, for
16 example. That is looking at how we can grade power
17 uprate reviews to ensure that we're focusing our time
18 on the most important areas of power uprates using
19 historical data. I believe you recently had a meeting
20 on streamline license renewal reviews.

21 So a lot of activity is happening there to
22 streamline that process and those reviews. Mike has
23 mentioned improving the project management processes
24 and techniques. Beyond this, we're working towards
25 how do we enhance our LIC-206 processes, integrated

1 review teams bringing risk into the very front of the
2 review to make sure that we're applying the right
3 resources in reviews.

4 And those are just a few examples of some
5 of the initiatives that we're undertaking to drive
6 licensing efficiency within NRR and across the agency.
7 Our next public workshop is scheduled for the late May
8 -- we're trying to nail down the schedule for the late
9 May time frame to talk to the industry, the public,
10 and the non-governmental organizations to get
11 feedback.

12 And we're also very focused on how we are
13 measuring. So licensing, the easiest measure for how
14 we're efficient in licensing is schedule duration and
15 the number of hours spent. So that's one measure.

16 And we've seen success so far, even with
17 some of the pre-ADVANCE Act changes that we've
18 implemented. So for example, we changed just how we
19 schedule our reviews. So prior to -- FY '23 and
20 prior, we established a one-year schedule for the vast
21 majority of our licensing actions.

22 And data showed us that we were actually
23 getting those done much sooner. Some would work
24 towards a one-year schedule. But we were using data
25 for various categories of licensing action to see this

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1 action should be done in eight months or six months.

2 So shifting from the generic one-year
3 schedule, we made our metric the estimated completion
4 schedule to drive behavior change in our project
5 manager's end and our reviewers using data. So we
6 were not crunching the safety review. We were saying,
7 what does data tell us this review should take?

8 And we reduced the schedule by 18 percent
9 on average and our duration of the review by 6
10 percent. As we go through -- so for each of our
11 initiatives -- so that's our long view. Licensing, it
12 is a lagging indicator.

13 So we won't be able to measure the
14 schedule and hours duration impacts until those
15 actions are issued. So we're looking at interim
16 measures to make sure that we're driving in the right
17 direction for each of these initiatives. So for all
18 of the initiatives that we're undertaking, the teams
19 are looking at how do we show success in the interim.
20 And to make sure that, as you said, we are not gumming
21 up the system, that we're actually going in the right
22 direction. So those are just a few of the highlights.

23 MEMBER HARRINGTON: So in your public
24 engagements with NEI and other organizations, to the
25 point of high quality applications, are they

1 recognizing their role in that process?

2 MS. PELTON: Absolutely, absolutely. And
3 that's been part of the dialogue. And we're really
4 looking forward to the workshop in May because we will
5 have completed products that we can share and have the
6 open dialogue to see what are the best practices.

7 So for a pre-application meeting, we're
8 going to think about what is the right time to have
9 that meeting. What is the right level of information
10 to have at that meeting? Because if there is a piece
11 of the review, for example, that might be first of a
12 kind but it's not brought up during that
13 pre-application meeting.

14 It might not be the most effective. So
15 those up front and transparent communications as
16 Sabrina talked about, ensuring that our staff know
17 when to lean forward and ask questions and present
18 information and describe processes in a way that's not
19 consulting but adding clarity for the industry, those
20 are all best practices that are going to help us get
21 better in the long run. And the industry is
22 absolutely receptive and looking forward to -- at
23 least from the feedback I've heard to our workshop and
24 future dialogue.

25 MR. KING: Yeah, and if I could add onto

1 that a little bit, consistent with the new mission
2 language of enabling, I think this is an area where we
3 could do better also to help industry be more
4 successful engaging with us. And in particular, being
5 able to answer simple questions, like, under what
6 circumstances does it make sense to come to the NRC as
7 pre-application engagement? Because it may be less
8 efficient to do that in some situations.

9 But today we don't collect unnecessary
10 data internally to know if are these type of licensing
11 actions -- if you come in for a pre-application
12 engagement, does it typically result in fewer RAIs?
13 Does it typically result in less overall review? We
14 got to do better on our end to be able to collect that
15 information so we can help share, hey, these are the
16 situations as we see it where it makes sense to do
17 that.

18 Also, doing a better job of tracking
19 throughout the life cycle of a review. Who has the
20 ball and who is causing delays and being very
21 transparent about it. If we are behind, we need to be
22 very clear.

23 Hey, we're behind our schedule. It's the
24 NRC causing this delay. But if the delay is caused by
25 a licensee who is provided not adequate quality, us

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1 being very transparent with the licensee and saying,
2 okay, we consider the amount of time to these delays
3 to be as a result of this. Do you agree?

4 And let's have that candid conversation,
5 right? And we track that. If we do a better job of
6 tracking all that, then we will be able to provide
7 more high quality feedback to licensees and applicants
8 on, hey, these are the areas where we have
9 historically seen challenges with the quality of
10 reviews.

11 Today, it's a little hit or miss. It's
12 about what you recall was a challenge on an issue. We
13 can do better there. And I think all that falls in
14 the area of being much more transparent and enabling
15 in the sense of the new mission not crossing any lines
16 it doesn't make sense to cross.

17 MEMBER BALLINGER: To the extent that I
18 can blow your horn, I personally -- only one person's
19 opinion. I think we've seen improvements in that area
20 with the last reviews that we've been doing. And so
21 there's much more engagement I think along the lines
22 of what you're talking about. So I think it's
23 happening.

24 VICE CHAIR HALNON: Yeah, I think the
25 advent of a lot of new licensing folks is a double

1 edged sword. You get folks that come in and they are
2 truly looking at lessons learned because they don't
3 know otherwise. And you have the other folks that
4 think that they know everything and they pop out
5 whatever they want to pop out, thinking they don't
6 need pre-engagement.

7 And the pre-engagements is what staff has
8 a chance to really give expectations what they want to
9 see and need to see. So it's a double edged sword on
10 the new ones. But the workshops, I was going to make
11 a comment.

12 They're highly valuable. I think that the
13 coming into an atmosphere of a bunch of new companies
14 coming in, new licensing folks, and a lot of retiring
15 that used to do licensing, it's real important to have
16 full day, multi-day in-person type workshops. And
17 we've encouraged that in other areas as well.

18 MEMBER PETTI: Yeah, also -- and I
19 mentioned this at the meeting -- the use of audits,
20 foreign or AI, is just huge. We see it in all those
21 ones we've done, electronic reading rooms which is
22 more on the licensee side. But there are better ways
23 to engage with technology today. And it's showing --
24 it's paying dividends.

25 MS. PELTON: Absolutely. And that is one

1 of the focuses -- focus areas on the reactor LEAP team
2 that we'll be talking about at the workshop next month
3 because how we get supplemental information from the
4 licensees is so important. How we can be mutually
5 effective in that is very important, absolutely.

6 MR. KING: Okay, great. And now I'll turn
7 it over to Phil who's going to talk to you a little
8 bit. If you go to the next slide. And sorry, the 505
9 report is not a congressional report. It's a report
10 to the EO. But it's a very important, broad, cross
11 cutting area for us.

12 So we think it's of high importance in
13 particular. And of course, Section 507 which deals
14 with improving our oversight inspection programs is
15 another very important area. And this one is a
16 congressional report. So Phil, go ahead.

17 MR. MCKENNA: And I'll just say that the
18 congressional report is due at least to the EDO on May
19 19th. So the report is already in its first draft.
20 And so we were tasked with Section 507 which is
21 improving oversight and special programs across all
22 the business lines in the agency does not operate on
23 reactors.

24 And the specific task was to identify
25 specific improvements to a nuclear reactor and

1 materials oversight and special programs that the
2 Commission may implement to maximize the efficiency of
3 such programs through appropriate risk-informed
4 performance-based procedures, expanding incorporation
5 of information technologies, and staff training. So
6 Mr. Halnon, you had spoken about the first public
7 meeting that we had on this effort.

8 And we initially had gone after -- it was
9 a two prong approach where we were going to give
10 licensees credit for sustained performance in column
11 1 of the action matrix for ROP and then later go on
12 and go after new performance indicators. We pulled
13 all that up. And the current plan is to revise all
14 the performance indicators which will start next month
15 to work in earnest on and doing a holistic review and
16 rebaselining of the entire ROP based on getting new
17 performance indicators that are going to take in place
18 of an inspection itself.

19 VICE CHAIR HALNON: You think you'll be
20 expanding the number then?

21 (Simultaneous speaking.)

22 MR. MCKENNA: Yeah, absolutely. It would
23 be more performance indicators than we have now and
24 potentially treating the performance indicators
25 different where it's not a movement in the action

1 matrix. It's a movement in the amount of inspection
2 that occurs.

3 VICE CHAIR HALNON: And get rid of the
4 MSPI.

5 MR. MCKENNA: And change that performance
6 indicator. Yes, sir. So like I said, this was across
7 all oversight processes and programs in the agency.
8 Some of the actions in the Act itself are very
9 specific to entrance and exit meetings. We're
10 adopting that across all the business lines, making
11 entrance meetings optional.

12 Exit meetings can be as simple as talking
13 to the licensing manager if there's no performance or
14 no documentation of findings as part of the
15 inspection. That can be done remotely after the
16 inspection is done. There's some specific language in
17 there for the CCI program for operating reactors which
18 we'll have a discussion on in the report to Congress
19 and in the separate paper to the Commission for
20 recommending what to do with that program.

21 We've taken action on reducing the amount
22 of documentation in inspection reports in particular,
23 very low safety significant issues, i.e., green in the
24 ROP or Severity Level IV in traditional enforcement
25 where we're not spending a lot of time on documenting

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1 those, one or two paragraphs and move on to a more
2 significant inspection. We're also recommending that
3 we give licensees credit for finding their own issues
4 that screen to white. Now we don't do that.

5 If there's an issue that screens to white,
6 we take credit for it. And we have movement in the
7 action matrix. So the plan right now would be if the
8 Commission approves, that licensee would get that
9 credit.

10 We would still have some follow-on
11 inspection afterwards. But the licensee would remain
12 in column 1 of the action matrix. Like we said in
13 that first public meeting, we talked about adjusting
14 the amount of baseline inspection for licensee
15 performance.

16 We're going to give guidance in our
17 current manual chapters where that may be appropriate
18 to go to minimum samples that we have right now.
19 There's a range of minimum, nominal, and max samples
20 for each inspection procedure. It may not make sense
21 to go to nominal level to complete the inspection
22 procedure.

23 It may make more sense based on the number
24 of samples that are available and the licensee's
25 performance just to do the minimum. So they're kind

1 of the aspects of the change we're doing. Like I
2 said, as the project team itself, all the ideas that
3 we discussed and most of the ideas were staff driven.

4 Our starting point was the past ROP
5 enhancement effort. So we pulled that all in,
6 evaluated all those old recommendations from ROP
7 enhancements, and came up with the list of items that
8 were going on right now. And we spread those across
9 all the business lines.

10 VICE CHAIR HALNON: Just a couple, and I
11 do see that those early letters are sprinkled
12 throughout this. I think that's very positive and
13 they were conceptional ideas originally. I know some
14 of them are difficult to implement.

15 There was -- I thought I heard somewhere
16 that you were considering some kind of relationship
17 with INPO that you could get some of this, at least
18 that data. I know you may not want to open up the
19 INPO indicators to the process. But you can -- the
20 data that gets sent, at least you can reduce the
21 burden on the licensees.

22 MR. MCKENNA: Right. We had some initial
23 indications or discussions with INPO. And that's the
24 right thought process, that we know the licensees are
25 already collecting the data. So they could report

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1 some set of data directly to us that we could use for
2 our performance indicators. So that's the starting
3 point for the new performance indicators.

4 VICE CHAIR HALNON: And that'll help with
5 the safety culture aspects of the site too, which is
6 really one of the key areas of corrective action and
7 how programs are being maintained. One other
8 question, when we redid the engineering inspection
9 programs, I believe -- correct me if I'm wrong -- that
10 we did take an emphasis away from the old design
11 basis, licensing basis and looking at more
12 programmatic and how the equipment is operating. I'm
13 looking forward to the aging management project.

14 MR. MCKENNA: That is correct. And as
15 part of this effort of rebaselining the ROP, we will
16 reevaluate the engineering inspection program. We're
17 going to do the effectiveness review of the current
18 four-year cycle which just started in 2023 this year.
19 So we can have those recommendations ready to go live
20 when nominally the new ROP will be in place for the
21 beginning of 2027. But yes, so all the inspection
22 effort will get relooked at again.

23 VICE CHAIR HALNON: Thanks.

24 MR. KING: Okay. So if you go to the next
25 slide. So that's all the reports that we've already

1 issued and a couple of the big ones that we wanted to
2 spend significant time kind of catching you up on.
3 And these are just some deadlines for some of the ones
4 I mentioned early on, the combined license review
5 procedure for things like someone wants to follow with
6 another AP1000.

7 What's our expedited review? How would we
8 qualify somebody for that? We've had a couple
9 meetings on that one. That one is due September of
10 this year.

11 The discussion we've had earlier about
12 brownfield sites, that one is due a little bit later
13 on. That's July of '27. So we still have a lot of
14 public engagement opportunities on that one. And
15 similar with a microreactor frameworks, the
16 brownfields and the microreactor framework, those are
17 a little further out in terms of timelines.

18 VICE CHAIR HALNON: So Mark, what is the
19 issue on brownfield sites? And I realize that they're
20 attractive because they've already got the services
21 around the transmission and that sort of thing. Is it
22 the amount of real estate and the environmental piece
23 the most because of what was there before?

24 The amount of real estate based on the
25 fact that there's probably a smaller footprint. You

1 might need a bigger footprint. Is that the main
2 issues there, environmental?

3 MR. KING: Yeah, I think coordinate with
4 the states, figuring out what we can do to make use of
5 this land that potentially has legacy environmental
6 issues and how can we be smart about the approach we
7 use to make that site productive, working through
8 those issues of how do you deal with the legacy.

9 VICE CHAIR HALNON: You might pull the
10 industry for plants. I know that when I was at my
11 previous utility, we sited a plant, an SMR when you
12 look at brownfield sites. And we put them on the list
13 and took them off the list for various reasons. But
14 there may be some lessons learned from some of the
15 false starts that some of these utilities had back in
16 mid-teens when they used the process to site it just
17 to get some, hey, this is what stopped us.

18 MR. KING: Yeah, in fact, I was able to
19 attend at least one of the brownfield site public
20 meetings that we've had. And the states were very
21 active. In fact, some of the states participated in
22 those discussions.

23 And sharing experiences in the past and
24 what do we think the unique challenges would be. How
25 can we overcome those challenges? That's a key

1 aspect, the discussion. And we've got a lot more work
2 to do on this one. So there'll be a lot more
3 opportunities for stakeholders to weigh in on.

4 MEMBER HARRINGTON: Is there also some
5 guidance to help figure out siting --

6 (Simultaneous speaking.)

7 VICE CHAIR HALNON: Yeah, there's an EPRI
8 document out there, plus Oak Ridge has a big -- I
9 can't remember what they call it, but some kind of
10 siting geo program that helps you drill down into just
11 below the soil levels that you can determine what was
12 the best spot for it.

13 MR. KING: Okay. Next slide. And if
14 you've attended any of the previous ADVANCE Act, these
15 slides are going to look very familiar. But early on,
16 we did establish a public website. And if you scan
17 that QR code, it'll take you to the public website.

18 On there, we've got a dashboard that shows
19 all the 36 actions we're tracking and the current
20 status of them. And we thought this was particularly
21 helpful for stakeholders because for each of those
22 actions, there's a way you can click on the
23 information. On the right, it'll show you their point
24 of contact.

25 So if they want to reach out and share

1 thoughts to anybody in particular who's leading those
2 projects, they can do that. So we thought that was a
3 way for us to be more transparent about what's going
4 on. Go to the next slide. Also, on that website, we
5 consolidated every public meeting related to the
6 ADVANCE Act.

7 If you notice when they're posted, there's
8 a hashtag, ADVANCENRC, embedded somewhere in there.
9 And we use that as an automated way to kind of keep
10 track of everything that's ever occurred. So if you
11 miss a meeting, you're interested in what may have
12 happened in a meeting, you can come there and it's all
13 in one place.

14 And upcoming meetings that have been
15 noticed will all be there as well. And then there's
16 a Contact Us link on the right. If you go to the next
17 slide. And I mentioned earlier in the presentation
18 we've had over 30 ideas submitted externally.

19 Many of them have come through this
20 website itself. Makes it easy for folks to give us
21 ideas, comments, suggestions, or just general
22 feedback. In fact, someone invited me to speak at one
23 of the state utility conferences through this website.
24 I got an invite to that.

25 So this is -- and also on the website,

1 we're maintaining a list of all the relevant
2 references. Any of the congressional reports, any of
3 the deliverables, we're trying to keep it up to date
4 to make it easier for folks to see. Okay. Say we're
5 done with something. Where is that document at? We
6 try to list it on the website. So keep us honest. If
7 you see we're falling behind on something, let us
8 know. So next slide.

9 MEMBER ROBERTS: Can you go back to slide
10 16, the three things, potential interest of the ACRS?
11 Looking at the ADVANCE Act, there's some interim dates
12 that are considerably more aggressive than the three
13 dates you have listed there. How are you tracking
14 that?

15 For example, microreactor framework,
16 there's a deliverable in January of 2026 which if we
17 were to review it, it would come right in the middle
18 of a very busy period for us. I'm just wondering
19 what's in there. How do we track to what we would
20 expect to be coming?

21 MR. KING: So we've got a much more
22 detailed breakdown for each of these. And at the
23 public meetings, we talk about the interim milestones.
24 And I don't have them broken out here.

25 But you're right. For several of these,

1 there are deliverable dates to EDO, separate
2 deliverable dates to the Commission, and separate
3 deliverable dates to -- if there's a congressional
4 report to Congress. So I don't have the detailed
5 breakdown for each of these.

6 (Simultaneous speaking.)

7 MEMBER ROBERTS: But for example, Section
8 208 starts with the Commission shall not later than 18
9 months after the date of the enactment of the Act
10 developed risk-informed and performance-based
11 strategies and guidance to license and regulate
12 microreactors. So what does that mean? Does that
13 mean you come through all the ACRS reviews that will
14 be required and Commission approval and just you don't
15 have to tell Congress yet? Or is there some better
16 definition of what that actually means in terms of
17 what you're going to do?

18 MR. KING: So that's the Commission's
19 opportunity to get an early look at what would
20 eventually be in the congressional report. So for
21 that reason, they decided to break it up. They knew
22 they wanted to take an early look at what the staff
23 was working on.

24 And they didn't do that -- they didn't
25 take that approach with all of them clearly. But for

1 some of them perhaps longer term items where they may
2 want to have more substantive interaction with the
3 staff, they did specify some interim milestones. And
4 to the extent there's desire amongst ACRS to be
5 involved, we would need to coordinate in advance of
6 any of those.

7 MEMBER ROBERTS: Okay, thanks.

8 MR. KING: So any other questions, burning
9 questions? Happy to answer.

10 CHAIR KIRCHNER: Well, one observation is
11 that the ADVANCE Act did not really call out ACRS. So
12 where do you see ACRS engaging with these initiatives?
13 And where could we help the agency most?

14 MR. KING: Yeah, that's a good question.
15 And coming into this meeting, I kind of asked myself
16 that. I really didn't see an area where we're really
17 diving in to make substantive changes to our approach
18 to the technical areas of review.

19 It's more largely what can we do with our
20 processes to ensure we're focused on the most safety
21 significant things. And so I didn't -- nothing really
22 jumped out at me in particular. But obviously, you
23 all have your unique areas of expertise.

24 VICE CHAIR HALNON: Yeah, part of our
25 mission is the ACRS is like a safety policy too. So

1 if you ever start messing with actual safety policies,
2 and that's a real nebulous term. I get it. But it
3 should have some nexus to safety in some respect.

4 I think like the ROP stuff, if you're
5 really drawing back on the amount of inspection, that
6 might be an area that you may want to get maybe an
7 independent look and either some advice and/or
8 confirmation that you're in the right area or from us
9 saying roger that could be helpful for you to sell
10 something because you're trying to move against a
11 headwind. So you can use us to your advantage. Or
12 there's also some possible areas we might call in
13 because we see a safety policy that's significant.

14 MR. KING: Understand. And I think with
15 regards to the voter ROP ideas, having discussions
16 with things like Scott Morris who is around. And when
17 we formulate the existing ROP, this is not a departure
18 from the original principles of ROP. It's a fresh
19 leveraging all the technology and the information
20 that's already been collected and going back to first
21 principles --

22 (Simultaneous speaking.)

23 VICE CHAIR HALNON: Yeah, I agree. I
24 think it's going in the right direction, and I think
25 that you got the right people on it.

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1 CHAIR KIRCHNER: What do you see doing in
2 the area of fusion framework?

3 MR. KING: Again, this is an area where
4 I'm not the expert.

5 (Laughter.)

6 MR. KING: And that one is certainly a
7 little further out.

8 CHAIR KIRCHNER: We touched on that a
9 while back. I think where the industry was bonding
10 very strongly with Congress and the Commission. It
11 was a pretty light touch while they're in the R&D
12 phase. The question of if and when they actually turn
13 these devices into something that resembles a power
14 plant, maybe move up on your screen, I guess, in terms
15 of priorities. Members, any other questions or
16 comments? Online, Matt, Vesna?

17 (Simultaneous speaking.)

18 MEMBER DIMITRIJEVIC: I'm good.

19 CHAIR KIRCHNER: Well, we typically --
20 when we do our meetings so you know how we operate, we
21 usually have a public comment period. I haven't
22 checked who is -- and these are open meetings. So if
23 there's anyone out there from the public who wishes to
24 make a comment, please state your name, affiliation as
25 appropriate, and make your comment. Yes, we see

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1 someone with a hand raised. Joy Jiang, you wish to
2 make a comment?

3 MS. JIANG: Yes, can you hear me?

4 CHAIR KIRCHNER: Yes, we can.

5 MS. JIANG: Yes, thank you. This is Joy
6 Jiang with The Breakthrough Institute. We are a think
7 tank here in Washington, D.C. I just want to make a
8 comment saying that we have been focusing on following
9 the ADVANCE Act, all kinds of activities really
10 closely.

11 And we are really happy that our name was
12 mentioned earlier when you were discussing the Section
13 501, the new mission statement. I think of our input
14 into the ADVANCE Act not only for Section 501 but also
15 for the other sections is just trying to be a good
16 public engagement force and try to cooperate with the
17 NRC and the ACRS and all of the stakeholders to make
18 sure that the ADVANCE Act was signed into law. But
19 it's also implemented successfully as it should.

20 So we will continue to doing that. And
21 hopefully, you will mention our name more and more in
22 the meeting and also in the report. Yeah, so one more
23 comment is that hopefully in the future upcoming
24 meetings, all the -- not written comment but just the
25 comment stage in the meeting would also taking into

1 account as important as the written letters and
2 comments. We do have several letters in our draft
3 box. And we look forward to future engagement with
4 all the stakeholders. Thank you so much.

5 CHAIR KIRCHNER: Thank you, Joy. Any
6 other members of the public? I forgot to mention our
7 ground rules, Mike. You don't have to answer the
8 questions. They can be sent into a designated federal
9 officer for the meeting.

10 Okay. Anything else? Well, then on
11 behalf of the committee, I thank you for taking the
12 time to come down and brief us. And we certainly wish
13 you success in your efforts. And we look forward
14 interacting with you as appropriate as you make
15 progress on your agenda. So thank you.

16 For those online, we will pick up letter
17 writing again at 3:10 Eastern Time. So we are going
18 into recess for the next 15 minutes.

19 (Whereupon, the above-entitled matter went
20 off the record at 2:55 p.m.)

C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: 724th Meeting of the ACRS

Before: U.S. NRC

Date: 04-03-25

Place: teleconference

was duly recorded and accurately transcribed under
my direction; further, that said transcript is a
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NRC's Implementation of the ADVANCE Act

Mike King

Special Assistant for ADVANCE Act Implementation

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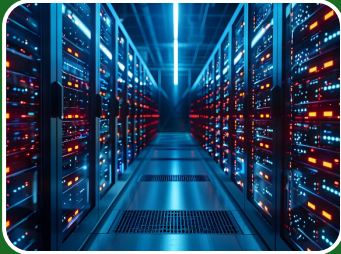
Deputy Director, Division of Operating Reactor Licensing, NRR

Phil McKenna

Deputy Director, Division of Reactor Oversight, NRR

April 3, 2025

The Landscape Has Changed



Growing demand to support advanced tech



Increased need for energy security



Improved public perception

Overview of the Act



Update mission statement and develop implementing guidance



Enhance initiatives for efficient, timely, and predictable license application reviews



Establish an expedited procedure for reviewing qualifying new reactor license applications



Implement changes regarding fee recovery, including a reduced rate for advanced reactor applicants and pre-applicants

Overview of the Act



Develop a regulatory framework for fusion technology



Assess the licensing review process for new nuclear facilities at former fossil-fuel power plant sites and brownfield sites



Implement new requirements relating to nuclear fuel



Remove certain limitations on foreign ownership of some types of licensed facilities

Overview of the Act



Continue to support international coordination on nuclear technologies and licensing activities



Develop strategies and guidance for microreactors



Establish a nuclear energy traineeship subprogram to meet critical mission and nuclear workforce needs



Take appropriate actions on new pay and hiring authorities

The Core Team



**Mike
King**
Special
Assistant



**Jessica
Bielecki**
Assistant
General Counsel



**John
Lubinski**
Director,
NMSS



**Owen
Barwell**
Chief Financial
Officer



**Jack
Giessner**
Administrator,
Region 3

The Support Team



**Aaron
McCraw**
Communications



**Annie
Ramirez**
Project Management



**Jessica
Hammock**
Project Management



**Luis
Betancourt**
Project Management

ADVANCE Act by the Numbers

36

Actions tasked related
to the ADVANCE Act
(9 completed as of March 26)



20

Agency project teams
formed to address actions



Over
30

Public meetings held to
engage interested parties on
ADVANCE Act topics



Over
30

Submissions from the public
related to the ADVANCE Act

Over
130

Ideas from the NRC staff
related to the ADVANCE Act

Section 501 – ADVANCE-ing the Mission

NRC Mission Statement

The NRC protects public health and safety and advances the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment.



Section 401 – Report on Advanced Methods of Manufacturing and Construction



Benefited from public input to explore alternatives beyond the traditional reliance on nuclear codes and standards



Identified development of additional guidance for emergent technologies as action to enhance efficiency in staff reviews and provide greater clarity to applicants



Examined accelerating the endorsement process to provide regulatory predictability for applicants using code-approved innovative manufacturing techniques and materials

ADVANCED METHODS OF MANUFACTURING AND CONSTRUCTION FOR NUCLEAR ENERGY PROJECTS

A Report for the
U.S. Senate Committee on Environment and Public Works and the
U.S. House of Representatives Committee on Energy and Commerce



U.S. Nuclear Regulatory Commission
January 2025

Section 506 – Modernization of Nuclear Reactor Environmental Reviews

MODERNIZATION OF NUCLEAR REACTOR ENVIRONMENTAL REVIEWS

A Report for the
U.S. Senate Committee on Environment and Public Works and the
U.S. House of Representatives Committee on Energy and Commerce



U.S. Nuclear Regulatory Commission
January 2025



Focused technical review level:
30% resource savings for subsequent license renewals



Enhanced resource analyses: 5500-hour
model for reactor renewal environmental
impact statements



Leveraging MOUs on over ½ of new reactor
projects: 50% resource saving when other
agencies lead consultations

Other Milestones of Interest



Signed Memorandum of Understanding with DOE on advanced nuclear fuels, as required by Section 404
December 12, 2024



Issued report on new hiring and pay authorities to Congress, as required by Section 502
December 17, 2024

Consistent with the Spirit of the Act

- Revised inspection manual chapter for light-water reactors
 - Provides clear expectations and best practices to monitor technical support between Headquarters and Regions
 - Helps ensure timely resolution of low-level safety issues
- Issued memo on expectations for reactor licensing efficiencies
 - Disciplined, safety-focused, risk-informed reviews
 - Enhanced pre-application engagements
- Establishing effective metrics to track the timely completion of licensing actions, inspections, resolution of low-level issues and differing professional views

Upcoming Actions of ACRS Interest

Section 505 - Nuclear Licensing Efficiencies

- Licensing Efficiencies and Processes (LEAP) teams
- Leveraging our licensing experience on power uprates requests
- Streamlining license renewal reviews
- Improving project management processes and techniques

Upcoming Actions of ACRS Interest

Section 507 - Improving Oversight and Inspection Programs

- Comprehensive review of the NRC's Reactor Oversight Process including security
 - All performance indicators (17 total)
 - All inspection procedures (42 total)
- Interim changes to reactor safety inspections frequency & scope based on industry performance
- Frequency, schedule, and content of security inspections
- Treatment of white findings
- Inspection preparation and documentation enhancements

Future Actions of ACRS Interest

Section
207

Combined license review procedure

Tasking due Sept 2025

Section
206

Brownfield sites

Final action due Jul 2027

Section
208

Micro-reactor framework

Final action due Jul 2027

How to Follow Our Progress



Follow NRC's ADVANCE Act implementation with this Dashboard



How to Stay Engaged



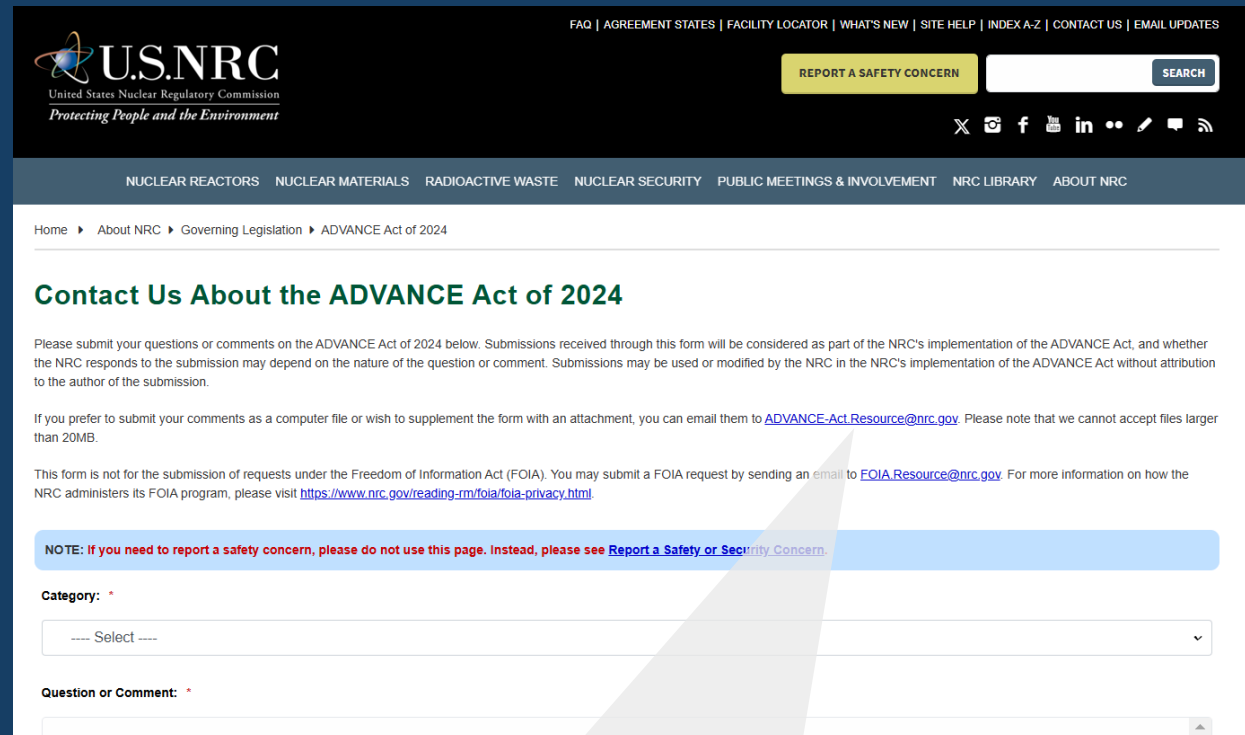
For NRC's public meeting
information on
ADVANCE Act activities

A screenshot of the U.S. Nuclear Regulatory Commission (NRC) website. The page features the NRC logo at the top left, navigation links at the top right, and a main content area. The main heading is "ADVANCE Act (Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024)". Below the heading is a photograph of two workers in hard hats and safety vests. At the bottom of the page, there are two columns: "Public Meetings" and "Questions, Comments, or Ideas". The "Public Meetings" column contains links for "Upcoming Meetings" and "Past Meetings". The "Questions, Comments, or Ideas" column contains a link for "Contact Us about the ADVANCE Act". A large orange arrow points from the "Upcoming Meetings" link towards the left side of the slide.

How to Ask Questions and Submit Ideas



Contact us with ADVANCE Act questions, comments, and ideas



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U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

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Home > About NRC > Governing Legislation > ADVANCE Act of 2024

Contact Us About the ADVANCE Act of 2024

Please submit your questions or comments on the ADVANCE Act of 2024 below. Submissions received through this form will be considered as part of the NRC's implementation of the ADVANCE Act, and whether the NRC responds to the submission may depend on the nature of the question or comment. Submissions may be used or modified by the NRC in the NRC's implementation of the ADVANCE Act without attribution to the author of the submission.

If you prefer to submit your comments as a computer file or wish to supplement the form with an attachment, you can email them to ADVANCE-Act.Resource@nrc.gov. Please note that we cannot accept files larger than 20MB.

This form is not for the submission of requests under the Freedom of Information Act (FOIA). You may submit a FOIA request by sending an email to FOIA.Resource@nrc.gov. For more information on how the NRC administers its FOIA program, please visit <https://www.nrc.gov/reading-rm/foia/foia-privacy.html>.

NOTE: If you need to report a safety concern, please do not use this page. Instead, please see [Report a Safety or Security Concern](#).

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