



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

March 18, 2025

MEMORANDUM TO: Jamie Pelton, Acting Director  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: Hipólito González, Chief /RA/  
Plant Licensing Branch I  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF FEBRUARY 19, 2025, INFORMATION PUBLIC  
MEETING ABOUT NRC'S IMPLEMENTATION OF SECTION 507  
OF THE ADVANCE ACT OF 2024 RELATED TO DIGITAL  
INSTRUMENTATION AND CONTROLS  
(EPID G-2024-AGN-0023)

On February 19, 2025, the U.S. Nuclear Regulatory Commission (NRC or the Commission) staff from the Office of Nuclear Reactor Regulation (NRR) held a public meeting to discuss Nuclear Energy Institute (NEI) comments related to Section 507 of the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act of 2024 regarding nuclear licensing oversight and inspection programs.

Section 507 of the ADVANCE Act ("Section 507") specifically states:

(d)(4) assess the ability of the Commission, consistent with the mission of the Commission, to enable licensee innovations that may advance nuclear reactor operational efficiency and safety, including the criteria of the Commission for timely

This public meeting focused on NEI's recommendations provided by letter dated October 28, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24302A311). Specifically, the meeting addressed NEI's recommendations related to digital instrumentation and controls (DI&C) provided on pages 8 and 9 of Attachment 2 to the October 28, 2024, NEI letter.

The meeting notice and agenda dated January 28, 2025, are located at ML25028A146. The NRC staff's presentation is available at ML25045A054; NEI's presentation is available at ML25052A111. A list of meeting attendees is provided in the enclosure.

CONTACT: Rob Kuntz, NRR/DORL  
301-415-3733

The meeting began with introductions then the NRC staff provided a description of ADVANCE Act activities. The NRC staff noted that the public meeting for further information on the NRC staff's activities in response to the ADVANCE Act will be held on March 4, 2025. The NRC staff then presented a background on the ADVANCED Act Section 507 and began discussing responses to NEI's recommendations

Recommendation 1 from NEI was to eliminate Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.55a(h) (10 CFR 50.55a(h)). The provisions in 10 CFR 50.55a(h) incorporate by reference Institute of Electrical and Electronics Engineers (IEEE) standards IEEE 279-1968, IEEE 279-1971, and IEEE 603-1991. The NEI comment stated that the general design criteria (GDC) in Appendix A to 10 CFR Part 50 could be relied upon to meet the requirements for design. The NRC staff stated that a near-term effort to revise 10 CFR 50.55a(h) through the rulemaking process to incorporate IEEE 603-618 is ongoing. The NRC staff further stated that eliminating 10 CFR 50.55a(h) would be considered but cautions that gaps between the requirements in the GDC and system design requirements would exist for DI&C systems if 10 CFR 50.55a(h) were to be eliminated that could result in other rulemaking. The NRC staff further noted that proposed 10 CFR Part 53, "Risk-Informed, Technology-Inclusive Regulatory Framework for Commercial Nuclear Plants," rulemaking does not require any consensus codes and standards.

Subsequent to the NRC staff discussion on NEI Recommendation 1, NEI provided its opening comments. NEI noted that improved regulatory infrastructure is being pursued through the integrated action plan as well as other activities. NEI stated that further opportunities existed such as removing unnecessary duplicate regulatory requirements as well as the use of modern standards and more efficient guidance.

NEI supplemented its recommendations from the letter dated October 28, 2024, on Recommendation 1 to state that eliminating 10 CFR 50.55a(h) and relying on the GDC would eliminate duplicate regulatory requirements and that including by-reference guidance inhibits the use of modern standards. NEI presented a summary of instances where requirements are duplicative in the existing regulations. NEI then presented guidance that could potentially be used by licensees that are not included by reference in the rule and therefore would require an exemption to use and noted that future developed guidance would face the same constraints on adoption. NEI stated that moving the accepted guidance from the regulations to regulatory guides would be consistent with the purpose of regulatory guides and improve the overall efficiency.

The NRC staff next addressed NEI recommendation 2 which recommends Design Review Guide (DRG): Instrumentation and Control for Non-Light Water Reviews in lieu of the guidance in NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," (SRP) SRP Chapter 7 for DI&C licensing reviews. The NRC staff commented that it is focusing on lessons learned from Interim Staff Guidance (ISG) DI&C-ISG-06 "Digital Instrumentation and Controls Licensing Process," Revision 2 (ML18269A259) for light water reactors and the DRG for non-light water reactor licensing. The NRC staff also noted that SRP Chapter 7 modernization will occur after the NRC updates its internal guidance for SRP development.

NEI stated in response to recommendation 2 that the review guidance in SRP Chapter 7 could be more efficient which would improve predictability, efficiency, and timeliness of reviews. NEI pointed out that SRP Chapter 7 contains many different Chapters, Appendices, and Branch

Technical Positions and that guidance is repeated in these various components. NEI presented a comparison of the DRG to SRP Chapter 7 and recommended that consolidation of SRP Chapter 7 would improve efficiency.

NEI recommendation 3 recommended creating clear concise review guidance in a single document for human factors engineering (HFE) in lieu of the current guidance which is contained in several NUREGs. The NRC staff responded that combining the guidance into a single document could cause additional confusion and could make updates more challenging. The NRC staff noted that a table was added to SRP Chapter 18 to improve clarity and that a revision to Chapter 18 is planned. A public meeting to address specific industry concerns is being considered as part of the update. The NRC staff recommended that preapplication meetings are useful for the NRC staff to provide clarity on which guidance document is appropriate for the particular licensing activity being considered.

NEI stated for recommendation 3 that significant revision and consolidation of HFE guidance would improve the overall efficiency with no reduction of reasonable assurance of adequate protection. The NRC staff stated that it would support a future public meeting in which NEI can provide specific feedback about how such an update would be beneficial.

NEI recommendation 4 recommended revising NRC guidance for DI&C using a systems engineering approach in lieu of the prescriptive regulatory guidance associated with each phase of the lifecycle process currently incorporated in the guidance documents. The NRC staff stated it is reviewing guidance using system engineering approaches and would consider revising existing guidance. NEI presented a list of NRC guidance documents that reference superseded or inactive standards and noted that the existing Regulatory Guide structures inhibits the use of modern standards. NEI notes that current standards recognize the importance of systems engineering approaches.

NEI recommendation 5 stated that the Alternate Review Process (ARP) in DI&C-ISG-06 provides streamlined digital specific review criteria, but license amendments often impact other review areas such as HFE, technical specifications, and equipment qualification that do not follow the ARP. NEI suggests that all the potential review areas be addressed in the ARP. NEI also recommended that the guidance should be moved out of an interim staff guidance into a long term, durable, regulatory document. NEI encouraged the NRC staff to incorporate lessons-learned and to incorporate the guidance in the ISG into a durable guidance document.

The NRC staff stated that a collection of lessons-learned are being gathered to be incorporated into the next revision of DI&C-ISG-06 including a public workshop scheduled for March 13 and 14, 2025. The NRC staff plans to transition the guidance in the ISG to a durable guidance upon the next revision.

A member of the public questioned the NRC staff on expanding the Codes and Standards in 10 CFR 50.55a(h) to include the examples provided in NEIs remarks. The NRC staff stated that rulemaking to include additional guidance would be considered as appropriate and noted that expanding the guidance incorporated by reference would not address NEI's underlying recommendation.

At the end of the meeting, the NRC staff and NEI gave closing remarks. NEI requested timelines and public meetings to solicit further input for each of the planned activities discussed in the meeting.

The enclosure provides the attendance list for this meeting.

Enclosure:  
List of Attendees

SUBJECT: SUMMARY OF FEBRUARY 19, 2025, INFORMATION PUBLIC MEETING  
ABOUT NRC'S IMPLEMENTATION OF SECTION 507 OF THE ADVANCE ACT  
OF 2024 RELATED TO DIGITAL INSTRUMENTATION AND CONTROLS  
(EPID G-2024-AGN-0023) DATED MARCH 18, 2025

**DISTRIBUTION:**

PUBLIC	RidsNrrDorlLpl1 Resource	ARivera-Varona, NRR
RidsNrrDanu Resource	RidsOpaMail Resource	DKing, NRR
RidsNrrDex Resource	RidsACRS_MailCTR Resource	HGonzález, NRR
RidsNrrDnrl Resource	RidsNrrLAKEntz Resource	DTaneja, NRR
RidsNrrDorl Resource	MKing, OEDO	JMonchan, NRR
RidsNrrDra Resource	ARamirez, OEDO	MMarshall, NRR
RidsNrrDro Resource	AMcCraw, OEDO	
RidsNrrDss Resource	LBetancourt, OEDO	
RidsNrrOd Resource	JPelton, NRR	

**ADAMS Accession No.: ML25066A092****NRR-106**

OFFICE	NRR/DORL/LPL3/PM	NRR/DORL/LPL1/LA	NRR/DORL/LPL1/BC
NAME	RKuntz	KEntz	HGonzález
DATE	3/7/2025	3/10/2025	3/18/2025

**OFFICIAL RECORD COPY**

## **List of Attendees**

### **U.S. Nuclear Regulatory Commission Public Information Meeting**

#### **Section 507 of the ADVANCE Act Related to Digital Instrumentation and Controls**

**February 19, 2025**

<b>Name</b>	<b>Affiliation</b>
Samuel Akinlolu	Sargent and Lundy
Shirelle Allen	General Electric (GE)
Jim Anderson	Nuclear Regulatory Commission (NRC)
Christina Antonescu	NRC
Neil Archambo	Archamboec.com
Steven Arndt	
Marissa Bailey	NRC
Thomas Basso	Nuclear Energy Institute (NEI)
Eric Benner	NRC
Earl Berry	Southern Nuclear
Sam Bina	NRC
Maddie Blalock	EPW.senate.gov
Gilberto Blas	NRC
Jay D. Boardman	Westinghouse
Alexander Joseph Bowman	Tennessee Valley Authority
Andrew Bowman	Westinghouse
Lindsay Braithwaite	GE
Jesse S. Brown	Constellation
Thomas Buffone	NRC
Jeffrey Burns	Curtiss Wright
Alan Campbell	NEI
Norbert Carte	NRC
Helen Chang	NRC
Robert Chenkovich	Dominion Energy
Yi-Lun Chu	NRC
Cristina Corrales	Electric Power Research Institute (EPRI)
Amy D'Agostino	NRC
Samir Darbali	NRC
Mari de Jesus	NRC
Mike Dunevant	
Denise Edwards	NRC
Theo Edwards	NRC
Jason English	NRC
Larry Erin	Framatome
Ashley Ferguson	INPO

Enclosure

<b>Name</b>	<b>Affiliation</b>
Jasmine Ferguson	
Nicole Fields	NRC
Steven Fox	Duke Energy
Allen Fulmer	Dominion
Jason Gasque	Enercon
Matt Gibson	EPRI
Hipolito Gonzalez	NRC
Brian Green	NRC
Pablo J. Guardado	Constellation
Tyler Hammock	NRC
David Harrell	MPR
David R. Heinig	Sargent and Lundy
Raymond Herb	Southern Nuclear
David Hooten	Sargent and Lundy
Ronald Jarrett	Enercon
Geno Keller	Talen Energy
Daniel King	NRC
Mike King	NRR
Audrey Klett	NRC
Patrick Koch	NRC
Rob Kuntz	NRC
Shao Lai	NRC
Landau	
Ming Li	NRC
Michael Marshall	NRC
Aaron McCraw	NRC
Philip McKenna	NRC
Jaison Monachan	NRC
Jill Monahan	Pennsylvania State University
Marvin Morgan	Dominion Energy
Marty Murphy	Curtiss Wright
Anrew Nack	River Mist Engineering
Jared Nadel	NRC
Caty Nolan	NRC
Warren Odess-Gillett	Westinghouse
Trace Orf	MRPW
Richard Paese	Sargent and Lundy
Jason Paige	NRR
Andy Patz	NRC
Christopher Prescott	NRC
Steven Pope	
David Rahn	NRC
Deann Raleigh	Curtiss Wright

<b>Name</b>	<b>Affiliation</b>
Annie Ramirez	NRC
Jeremiah Rey	NRC
Tim Riti	NEI
William Roggenbrodt	NRC
Fanta Sacko	NRC
Mark Samselski	Constellation
Gabrielle Schreier	GE
Undine Shoop	NRC
Alan Smith	MRPW
Dinesh Taneja	NRC
Spenser Toohill	
Congjian Wang	Idaho National Laboratory
Isaac Wang	NRC
Jack Zhao	NRC