

Workshop on NEI's DI&C Recommendations
NRC Questions to Gain Industry Perspectives
February 13, 2026

On January 14, 2026, the Nuclear Regulatory Commission (NRC) staff hosted a public meeting to discuss its plan for evaluating and identifying actions for implementing the Nuclear Energy Institute (NEI) recommendations for enabling the efficient deployment of modern technology at nuclear power plants. During the meeting, NEI presented additional technical and regulatory justification for its recommendations.

On February 13, 2026, the NRC staff is hosting a public workshop to have a collaborative, deep-dive discussion on specific details presented during the January 14, 2026, public meeting. Specifically, the discussion will include guidance and methods for addressing common cause failure (CCF) for modifications to safety-related systems, available data and operating experience for defining credible, realistic failures (e.g., CCF), and further streamline the NRC staff's licensing review of digital upgrades by applying recent lessons-learned. Below are staff questions developed from NEI's January 14, 2026, presentation and from its ongoing evaluation of the NEI recommendations. The purpose of the questions is to help facilitate the discussions during the workshop, which will support the completion of the staff's evaluation of NEI's recommendations.

Common Cause Failure

1. Implementation of instrumentation and controls (I&C) safety-systems under Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.59, "Changes, tests, and experiments," evaluation process
 - a) Regarding Regulatory Information Summary (RIS) 2002-22, Supplement 1, "Clarification on Endorsement of Nuclear Energy Institute Guidance in Designing Digital Upgrades in Instrumentation and Control Systems," what are your insights on the "additional considerations" that are needed in addition to a qualitative assessment for addressing CCF for safety-related systems under 10 CFR 50.59?
 - b) Do you believe that digital system upgrades to existing reactor trip and engineered safety features actuation systems can be performed and implemented under the 10 CFR 50.59 evaluation process? If so, what is your proposed framework to support these types of upgrades that preserve safety?
 - I. In performing upgrades under 10 CFR 50.59, would the industry continue to use NEI 96-07, Appendix D Rev.1 for screening and evaluations?
 - II. If a proposed digital safety system results in a reduction in the redundancy, diversity, separation, or independence of divisions or channels of existing reactor trip or ESFAS system functions, would that still be considered to have an adverse impact on that design function for screening purposes?
 - III. If so, what type of evaluation is proposed to be performed to demonstrate that the proposed new reactor trip or ESFAS system design would not be
 - IV. vulnerable to experiencing a potential common cause failure?

2. Branch Technical Position (BTP) 7-19, "Guidance for Evaluation of Potential Common Cause Failure in Digital Instrumentation and Control Systems," Section B.3.4.3, Criterion b currently allows for a risk-informed defense-in-depth and diversity assessment without evaluating the effects of a CCF concurrent with a limiting event. What does industry view as the perceived benefit of NEI's recommendation of a likelihood of 1×10^{-4} for a CCF in safety-related digital systems? What challenges or hurdles is this recommendation trying to address?
3. What are industry's views to provide the necessary and sufficient conditions to ensure a likelihood of 1×10^{-4} for a CCF? How should these conditions be addressed during regulatory oversight?
4. Slide 15 of NEI's January 14, 2026, presentation, summarizes design attributes, quality products and processes, and operational experience to address the likelihood of CCF being sufficiently low. Does NEI's method also address the "different result" criterion in 10 CFR 50.59?

Licensing Guidance

1. ISG-06 defines the licensing process used to support the review of license amendment requests associated with safety-related digital I&C equipment modifications. ISG-06 defines two licensing processes, the tiered review process and the alternate review process (ARP). Through coordination with industry, the ARP was developed to support the efficient review and issuance of the staff's LAR safety evaluation. However, recent digital I&C LARs have deviated from the ARP, and the staff has worked with licensees to adjust the review process accordingly for each licensing review. What are the challenges with implementing the ARP? Does industry believe that a new digital I&C licensing review process is needed?
2. What are the most important lessons learned identified by industry from using ISG-06, "Licensing Process"? Please rank or prioritize the lessons learned and explain the significance of each lesson learned.
3. What technical areas currently within the scope of ISG-06 are addressed by existing licensee programs or obligations subject to inspection?
4. What are industry's insights on how SRP Chapter 7 should be restructured and consolidated to better align with digital technologies and system architectures? (Please be specific.)
5. With the ADVANCE Act and EO 14300, there is more focus now on the timeliness of licensing reviews. LARs that are complete and of high quality reduce the need for RAIs and thus play a significant role in ensuring the timeliness of the licensing review process. Should additional guidance be provided to licensees and applicants to help improve the quality and completeness of digital I&C modification LARs?

Codes and Standards

1. Are there any challenges with the existing framework of Institute of Electrical and Electronics Engineers Standard (IEEE Std.) 603-1991 being incorporated by reference in the regulations (10 CFR 50.55a(h))?
2. Are there any challenges or hurdles with the existing framework with utilizing 10 CFR 50.55a(z), which facilitates using alternatives to the codes and standards codified in 10 CFR 50.55a? (Please explain why these are challenges or hurdles and past examples, if applicable)

Human Factors Engineering (HFE)

1. Is there any new information not currently addressed in NRC HFE guidance that would also be helpful?
2. How is industry using NUREG 1220 which drives the need to consolidate the content with other HFE guidance documents?
3. Does the recommendation of HFE guidance consolidation include the overlap of information between SRP Chapter 13, Conduct of Operations and SRP Chapter 18, HFE?
4. Has industry identified any areas of conflicting direction present in any of the guidance documents pertaining to HFE?
5. Although the SRP is staff guidance for reviewing licensing actions, the staff recognizes that the guidance is used by industry to inform the contents of an application. How and when does industry typically use SRP Chapter 18?

Expanded Performance-based Review Methods

1. What set of industry consensus standards are necessary and sufficient “to reflect current engineering practices, such as system’s engineering approaches to digital system design?”
2. To enable learning from operating experience under new guidance, would the industry be willing to maintain and provide to the NRC more complete experience reports?
3. Does industry’s recommendation to implement a systems engineering review method consider a range of approaches or is industry recommending a specific review method?