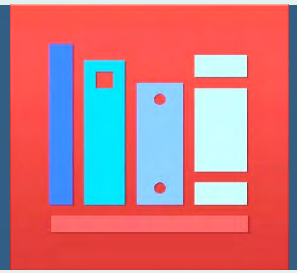
Regulatory Initiatives for Streamlining Code & Standards Endorsement



- **Moderator:** Wendell Morton, Branch Chief, NRR/DEX/EEEB

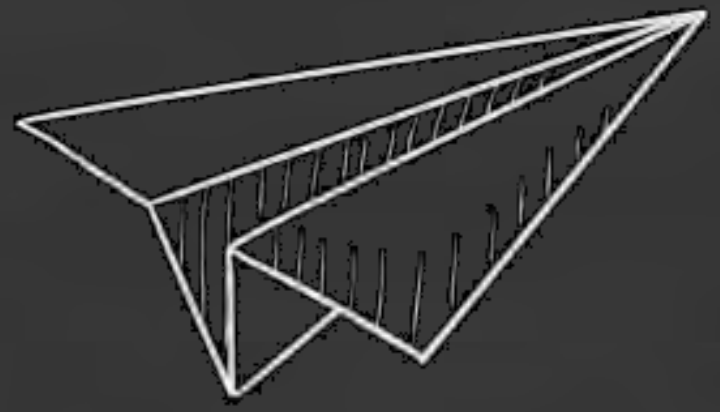
- **Panelists/Speakers:**
  - Ian Tseng (NRR/DEX/EMIB)
  - David Rudland (NRR/DNRL)
  - Sheila Ray (NRR/DEX/EEEB)

streamlining ASME rulemaking

NRC Standards Forum

September 28, 2022

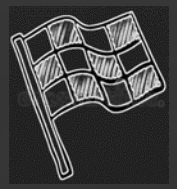
the mission:



A working group was formed in response to Commission direction to implement remaining EMBARK recommendations to increase the frequency of endorsement of unconditionally-approved Code Cases, coupled with enhanced efficiency for ASME rulemaking processes.

currently we endorse new Code editions every two years…

…and new Code Cases every two years.

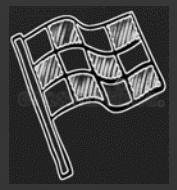


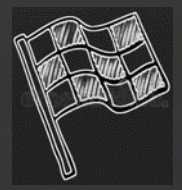
Code Editions

Code Cases

Year 0 Year 1 Year 2 Year 3 Year 4

nominally this process looks like this…





Code Editions

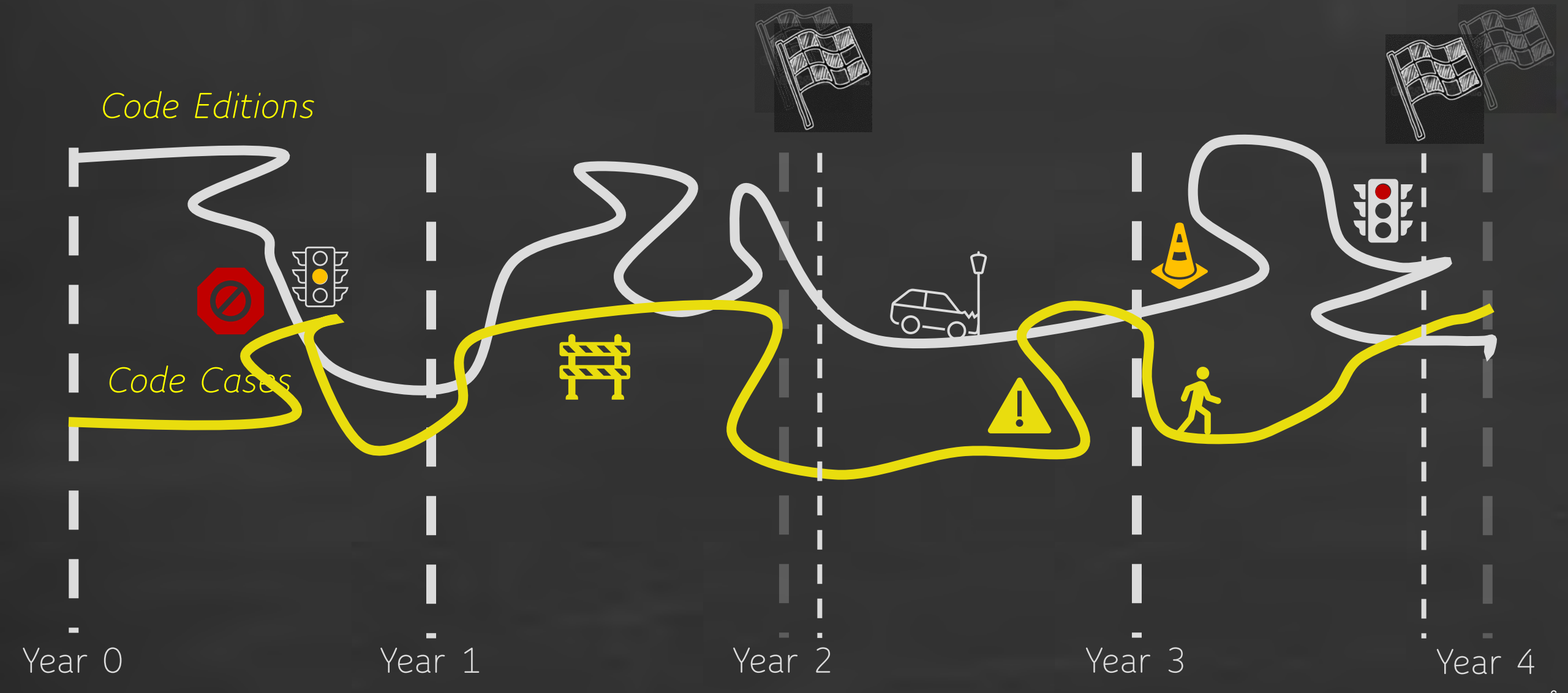
draft rule	final rule	draft rule	final rule

Code Cases

draft rule	final rule	draft rule	final rule

Year 0 Year 1 Year 2 Year 3 Year 4

...but in reality behind the scenes it can sometimes look a little more like this...



why is that?

Well for one thing, to avoid overburdening the public with federally sponsored data collections, the Paperwork Reduction Act of 1995 requires government agencies obtain Office of Management and Budget (OMB) approval before requesting or collecting most types of information from the public.

→ OMB CLEARANCE LANE FOR 10 CFR PART 50 USE ONLY →

We currently have only one OMB control number for all of 10 CFR Part 50, and are only allowed one item per control number to be submitted at a given time, so we have to wait our turn, sometimes for months.

Even our Code edition and Code Case rulemakings compete with each other.

why is that?

Well for one thing, to avoid overburdening the public with federally sponsored data collections, the Paperwork Reduction Act of 1995 requires government agencies obtain Office of Management and Budget (OMB) approval before requesting or collecting most types of information from the public.

We currently have only one OMB control number for all of 10 CFR Part 50, and are only allowed one item per control number to be submitted at a given time, so we have to wait our turn, sometimes for months.

Even our Code edition and Code Case rulemakings compete with each other.

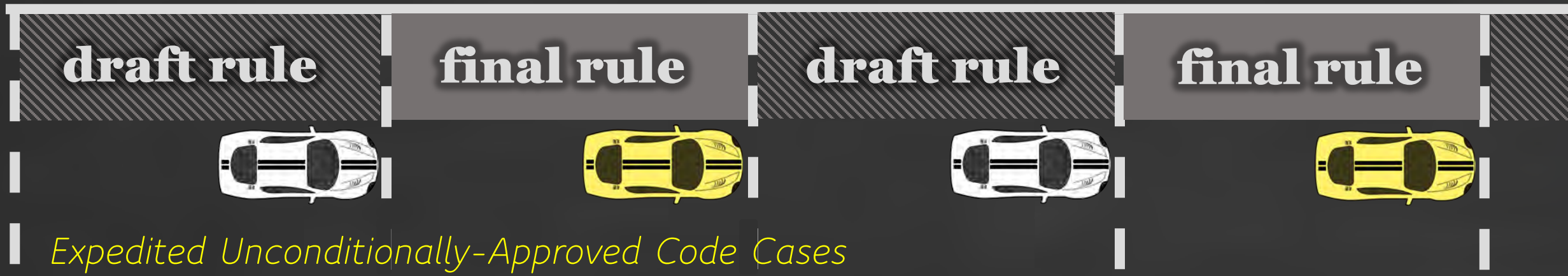
what can we do about that?

The working group is working on plans to develop a dedicated 10 CFR 50.55a OMB clearance, and to reanalyze information collection impacts to develop guidance on when submission to OMB might not be required, potentially allowing for an expedited process for unconditionally-approved Code Cases.

why should I care?

The hope is that this streamlining may allow the NRC to provide ANNUAL endorsement of unconditionally-approved Code Cases while maintaining biannual endorsement of Code editions & conditionally-approved Code Cases.

Code Editions & Conditionally-Approved Code Cases



Expedited Unconditionally-Approved Code Cases

the mission:

A working group was formed in response to Commission direction to implement remaining EMBARK recommendations to increase the frequency of endorsement of unconditionally-approved Code Cases, coupled with enhanced efficiency for ASME rulemaking processes.

our goals:

- Annual endorsement of
  Unconditionally-approved Code Cases
- Biennial endorsement of
  Conditionally-approved Code Cases
- Biennial endorsement of
  Section III, Section XI, and OM Code editions

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

Summary of SECY-22-0075

Staff Requirements - SECY-21-0029 Inservice Testing And Inservice Inspection Program Rulemakings Update

David L. Rudland
Senior Technical Advisor for Materials
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

2022 NRC Standards Forum
September 28, 2022

SECY-21-0029

- Requested Commission approval to initiate a proposed rulemaking plan that would amend the regulations in 10 CFR 50.55a to extend the code of record (COR) interval for inservice testing (IST) and inservice inspection (ISI) programs.
- The proposed rulemaking plan included the following:
  - Prepare a proposed rule to increase from 10-year COR interval to 20-year COR interval for licensees that have updated their IST/ISI programs to the 2019 Edition of the ASME BPV Code and the 2020 Edition of the ASME OM Code
  - Prepare a proposed rule to extend the COR interval from 20 years to 24 years in the future, if ASME increases the ISI interval to 12 years
  - Request delegation of signature authority for these rulemakings to the Executive Director for Operations (EDO)
- Provided other information on 10 CFR 50.55a streamlining efforts
- SECY paper was provided to the Commission on March 15, 2021 (ML20273A286)

SRM-21-0029

- Commission approved both proposed rulemakings
- Commission approved delegation to the EDO
- Commission remarked that staff should move expeditiously to implement the remaining streamlining recommendations
- SRM was published on November 8, 2021 (ML21312A490)

Need for SECY-22-0075

- Staff proposes to combine this rulemaking with the upcoming ASME Code Case Revision 40 rulemaking.

- In 2022, ASME published BPV Code Case N-921 and OM Code Case OMN-31, which allow 12-year ISI and IST program intervals, respectively, as an alternative to the 10-year intervals currently required by the ASME codes. ASME requested Code Case N-921 be included in the Rev 40 rulemaking (ML22046A112).

- With certain conditions, the inclusion of these code cases creates an option for a licensee to implement either a 10-year or a 12-year ISI/IST program interval. To be consistent and aligned, the same option needs to be in place for the COR interval.

- The Commission needed to be informed of this deviation from the original plan described in SECY-21-0029.

SECY-22-0075

- Informational SECY – sent to the Commission on August 1, 2022 (ML22124A178)

- Explains the deviation from SECY-21-0029 and how the staff plans to develop the proposed rule

- Three major changes:
  - Combine the two proposed rulemakings into one
  - Make conforming changes to 10 CFR Part 50, Appendix J
  - Propose conforming and clarifying changes to address issues encountered during the development of the proposed rule

Combine the Two Proposed Rulemakings

- Needed to avoid a misalignment, e.g., 20-year COR interval with a 12-year ISI interval
- Condition both code cases to allow their use only by licensees that have updated to the ASME BPV Code and ASME OM Code, 2019–2020 editions (latest editions incorporated into 10 CFR 50.55a) or later. This is needed to maintain consistency with SECY-21-0029 (only 20- or 24-year COR interval would be acceptable)
- Linking the COR update to the ASME ISI/IST program interval to ensure alignment, e.g., COR interval is equal to two consecutive ISI or IST program intervals once licensee has updated to the most recent edition of the code incorporated by reference in 10 CFR 50.55a

Changes to 10 CFR Part 50, Appendix J

- Appendix J contains requirements for containment leak testing (including containment isolation valves)

- Type A tests for Option A requires three leak tests, the third must be performed “when the plant is shutdown for the 10-year plant inservice inspection.” References 10 CFR 50.55a for these tests.

- Staff might propose a revision to Appendix J to conform with the proposed changes to 10 CFR 50.55a consistent with the alternative 12-year ISI/IST program interval

Other Changes

- Current version of 10 CFR 50.55a refers to the current 120-month interval requirement in a variety of ways. Staff plans to propose changes to 10 CFR 50.55a to establish consistency in the terminology.

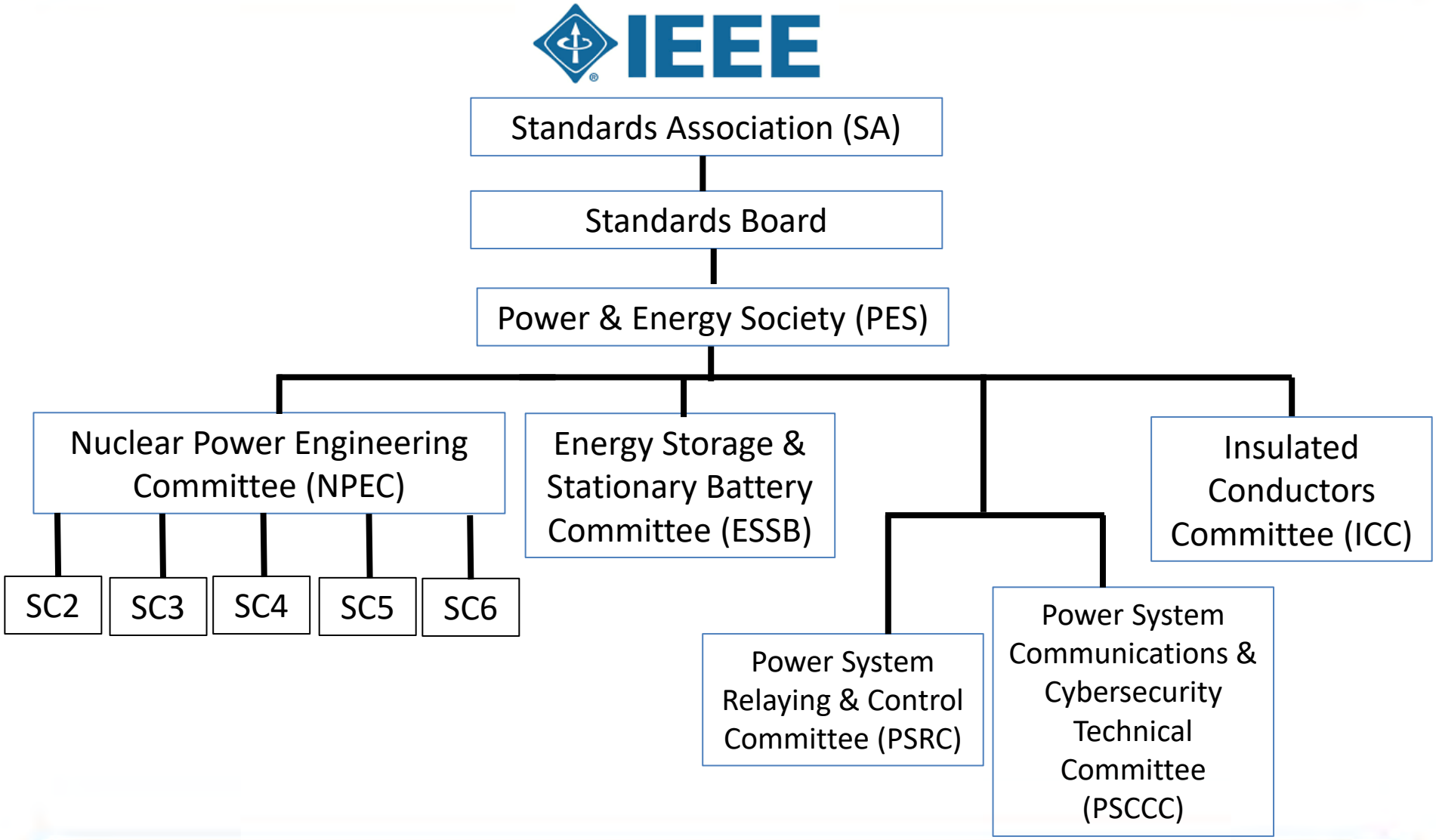
- Staff plans to develop a definition section to enhance regulatory clarity and modify the language of 10 CFR 50.55a to be consistent with those definitions.

ANY QUESTIONS

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

Regulatory Guidance Framework for IEEE Electrical Standards

Sheila Ray, P.E.
NRR/DEX/EEEB
September 28, 2022


IEEE
Standards Association (SA)
Standards Board
Power & Energy Society (PES)
Nuclear Power Engineering Committee (NPEC)
Energy Storage & Stationary Battery Committee (ESSB)
Insulated Conductors Committee (ICC)
SC2
SC3
SC4
SC5
SC6
Power System Relaying & Control Committee (PSRC)
Power System Communications & Cybersecurity Technical Committee (PSCCC)

Regulatory Guide Scope

- Develop electrical regulatory guidance to be inclusive of nuclear power plants, new and advanced reactors, small modular reactors, & non-power production and utilization facilities.

Status of Significant Regulatory Guides

- Environmental Qualification: RG 1.89
  - To endorse IEC/IEEE Std. 60780-323-2016
  - Received public comments
  - Final publication expected by end of 2022
- Environmental Qualification of Connection Assemblies: RG 1.156
  - To endorse IEEE Std. 572-2019
  - Final publication expected first quarter 2023
- Environmental Qualification of Actuators: RG 1.73
  - To endorse IEEE Std. 382-2019
  - Draft in development

Status of Significant Regulatory Guides

- Protection of Class 1E Power Systems: new RG
  - To endorse IEEE Std. 741-2022
  - Expected to have draft out for public comment by mid-2023
- Guidelines for Lightning Protection: RG 1.204/DG-1409
  - To endorse various IEEE, UL, and NFPA standards
  - Expected to have draft out for public comment by end of 2022

Status of Significant Regulatory Guides

- Assessing, Monitoring, and Mitigating Aging Effects: new RG 1.248
  - To endorse IEEE Std. 1205-2014
  - Final publication expected before end of 2022
- Risk-Informed Categorization of Electrical and Electronic Equipment
  - To endorse IEEE Std. 1819-2016
  - Determining path forward of endorsing in a new RG or an existing RG 1.201 on categorization of SSCs

Status of Significant Regulatory Guides

- Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications: RG 1.129/DG-1401
  - To endorse IEEE Std. 450-2020
  - Draft out for public comment (Comments due 9/30/22 - https://www.regulations.gov/document/NRC-2022-0159-0001)
- Qualification of battery chargers, inverters & UPS: RG 1.210
  - To endorse IEEE Std. 650-2017
  - Draft in development
  - Expect to have draft for public comment in 2023
- Sizing lead-acid batteries: RG 1.212
  - To endorse IEEE Std. 485-2020
  - Draft in development
  - Expect to have draft for public comment in 2023

Acronyms

AC – Alternating Current
ACRS – Advisory Committee on Reactor Safeguards
IEC – International Electrotechnical Commission
IEEE – Institute of Electrical and Electronics Engineers
RG – Regulatory Guide
NFPA – National Fire Protection Association
SSC – system, structure, and component
Std. – Standard
UL - Underwriters' Laboratories
UPS – uninterruptible power supply

Questions?

Vision & Strategy of IEEE Electrical Standards - ROADMAP

- Focus on the agency mission and regulatory requirements when determining a RG is needed or requires updating.
- Represents a technically viable approach for allowing licensees, manufacturers, vendors, and NRC staff to effectively navigate and use regulatory guidance.
- Prevents the ad hoc approach of generating additional regulatory guidance documents.
- Combine related standards on a technical topic into one RG.
  - Reduced staff hours as compared to updating and maintaining several RGs
  - Reduced costs as compared to updating and maintaining several RGs
  - Technical Efficacy - Generates efficiencies such that industry/users have a one-stop shop on NRC positions on a particular topic
  - Process Efficiency – review process is streamlined for one RG on a technical topic (i.e. one public comment period on a technical topic)
  - Updates to a combined RG endorsing several standards would only be considered when there are significant changes that impact the staff's position or provide additional clarifications
  - Examples:
    - RG. 1.100 (seismic qualification) includes both 60980-344 & C37.98
    - One RG on the design of DC systems to include 946 (design), 1189 (selection of batteries), 1375 (protection), & 2405 (battery chargers), all of which are critical to a DC system design.
- For standards in the early stages of development, NRC action will be determined once early drafts are available to ascertain how the standard fulfills the agency's mission and provides methods to meet regulatory requirements.