

NRC ACTIVITIES IN CODES AND STANDARDS

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EXECUTIVE ORDER 14300

- On May 23, 2025, President Donald J. Trump signed Executive Order (EO) 14300, “Ordering the Reform of the Nuclear Regulatory Commission.”
- EO 14300 requires the NRC to take a number of actions to help provide the American people with safe, abundant nuclear energy.
 - Facilitate increased deployment of new nuclear reactor technologies, such as Generation III+ and IV reactors, modular reactors, and microreactors, including by lowering regulatory and cost barriers to entry.
 - Employ emerging technologies to safely accelerate the modeling, simulation, testing, and approval of new reactor designs.
- The NRC is taking action to meet the requirements and timelines of EO 14300.
- The NRC is coordinating its efforts with the actions that were already underway to implement the provisions of the Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy (ADVANCE) Act, which was signed into law on July 9, 2024.
- The NRC recognizes that stakeholder engagement is important in this process. The NRC has established a public website to inform and engage external stakeholders during implementation of EO 14300.



ADVANCE ACT OF 2024

- Signed into law in July 2024.
- Affects a wide range of NRC activities, including establishing an expedited procedure for reviewing qualifying new reactor license applications and developing a regulatory framework for fusion technology.
- ADVANCE Act asks NRC to support international coordination on nuclear technologies and licensing activities.
- The NRC is coordinating its efforts with the actions underway to implement EO 14300.
- To achieve the goals of the ADVANCE Act we are exploring how other standards may be beneficial.



NRC CODES AND STANDARDS PROGRAM: DRIVERS

Key Federal Requirements

- National Technology Transfer and Advancement Act (NTTAA) of 1995
- Agencies must use voluntary consensus standards (VCS) instead of government-unique standards whenever practical.
- Exceptions must be justified and documented.
- OMB Circular A-119
- Provides guidance to agencies on implementing NTTAA.
- Encourages active participation in standards development organizations (SDOs).

NRC Policy

- NRC Management Directive 6.5
- Establishes NRC's policies for participation in VCS development and aligns NRC's practices with NTTAA and OMB Circular A-119.
- Guides staff engagement and endorsement of VCS.



NRC CODES AND STANDARDS PROGRAM: OVERVIEW

Active Participation

NRC staff serve on key consensus standards committees (e.g., ASME, IEEE, ANSI, ASTM, ASCE, ACI, CSA).

Coordination

Engage with 36 government agencies, 12 standards development organizations, and industry organizations (EPRI, ARCSC). Collaborates with national labs (e.g., INL, ORNL, ANL).

Review and Endorsement

NRC evaluates and endorses new and revised standards through rulemaking and regulatory guides. Issued 380+ regulatory guides endorsing codes and standards.

Focus Areas

Advanced reactor materials, digital instrumentation & control, risk-informed methods, and quality assurance.



<https://usnrc.sharepoint.com/teams/RES-Standards-Development>

ENHANCING CODES AND STANDARDS FOR NEW AND ADVANCED REACTORS

- Tasked with improving our codes and standards program:

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- Enhanced involvement in SDO Committees (1.1, 1.2, 3.1, & 3.2)
- Promote Risk Informed Performance Based Standards (1.3 & 3.6)
- Better engage with the public, especially to identify priority standards (1.4, 1.5 & 3.1)
- Enhance C & S endorsement process for advanced reactors (2.2, 2.3 & 2.4)
- Engage in commercial/non-nuclear standards (3.1 & 3.2)
- Explore endorsement for non-nuclear codes (3.4 & 3.5)



NRC CODES AND STANDARDS PARTICIPATION DATABASE

Filters for projects

Select project for staff POC

SDO Sub-Section	Project ID	Standard Project Title	NRC Priority	Non-nuclear?	Has NRC Representative
All	All	All	All	All	All

SDO	Project ID	Standard Project Title	Priority	Non-nuclear Standard	Has NRC Representative
IEC	IEC 63423	Nuclear Power Plants - Instrumentation and control systems important to safety - Cable assemblies for harsh environment purposes	Medium	No	Yes
IEC	IEC 60988	Nuclear power plants - Instrumentation important to safety - Acoustic monitoring systems for detection of loose parts: characteristics, design criteria and operational procedures	Medium	No	Yes
IEC	IEC 62887	Nuclear power plants - Instrumentation systems important to safety - Pressure transmitters: Characteristics and test methods	Medium	No	Yes
ANS	ANS 20.1	Nuclear Safety Design Criteria for Fluoride Salt-Cooled High-Temperature Reactor NPPs	Medium	No	Yes
ASME	R 21-949	[Errata] Incorrect Term in General Notes (a)(3) of Figure NB-3339.4-1	Low	No	Yes
ASME	N-940	25-1351: Alternate Rules for Nondestructive Exam and Testing of Items Commensurate With Their Contribution to Safety or Risk	High	No	Yes
ASME	R 25-1024	Acceptance Criteria for ECT section for N-720 in discussion with High Strength Nickel	High	No	Yes

Staff Name	Email	Position	Committee
Wise, John	John.Wise@nrc.gov	Alternate	Subgroup Materials Fabrication, and Examination
Bass, Joseph	Joseph.Bass@nrc.gov	Alternate	Subgroup Division 5 on High Temperature Reactors
Hiser, Matthew	Matthew.Hiser@nrc.gov	Member	Subgroup Division 5 on High Temperature Reactors
Levitus, Steven	Steven.Levitus@nrc.gov	Member	Subgroup Materials Fabrication, and Examination
Sham, Ting-Leung	Ting-LeungSham@nrc.gov	Contributing Member	Subgroup Division 5 on High Temperature Reactors

SDO Rep Name	Email	Committee
Manoly, Kamal	Kamal.Manoly@nrc.gov	Section III - BPV Committee on Construction of Nuclear Facility Components

- Inform the public of our involvement and priority
- NRC Codes and Standards Development Involvement





SUMMARY

- Significant progress has been made on the Action Plan milestones.
 - Details of the activities will be discussed in the November meeting.
- The C&S Participation Database is live and open for feedback.
- The NRC is collaborating with INL on C&S.
- C&S remains one of the vital tools the NRC uses to accomplish its mission.
- The NRC is committed to continuing NRC Staff interactions with C&S.

