



# Section 205 of the ADVANCE Act: Fusion Energy Regulation

NRC Public Meeting  
October 23, 2024

# Meeting Agenda

Time	Topic	Speaker
1:00 pm	Welcome & Meeting Logistics	Edward Harvey, NRC
1:05 pm	Opening Remarks	Kevin Williams, NRC
1:10 pm	NRC Presentation: Goals and scope of study under Section 205 of the ADVANCE Act	Edward Harvey, NRC
1:30 pm	Question & Answer Session	All
1:50 pm	Closing Remarks & Adjourn	Edward Harvey, NRC

*Topic times are estimated and, depending on the participation level, the meeting could adjourn earlier than scheduled. If there are concerns with a potential early meeting adjournment, please inform the point of contact for this meeting.*





# Opening Remarks

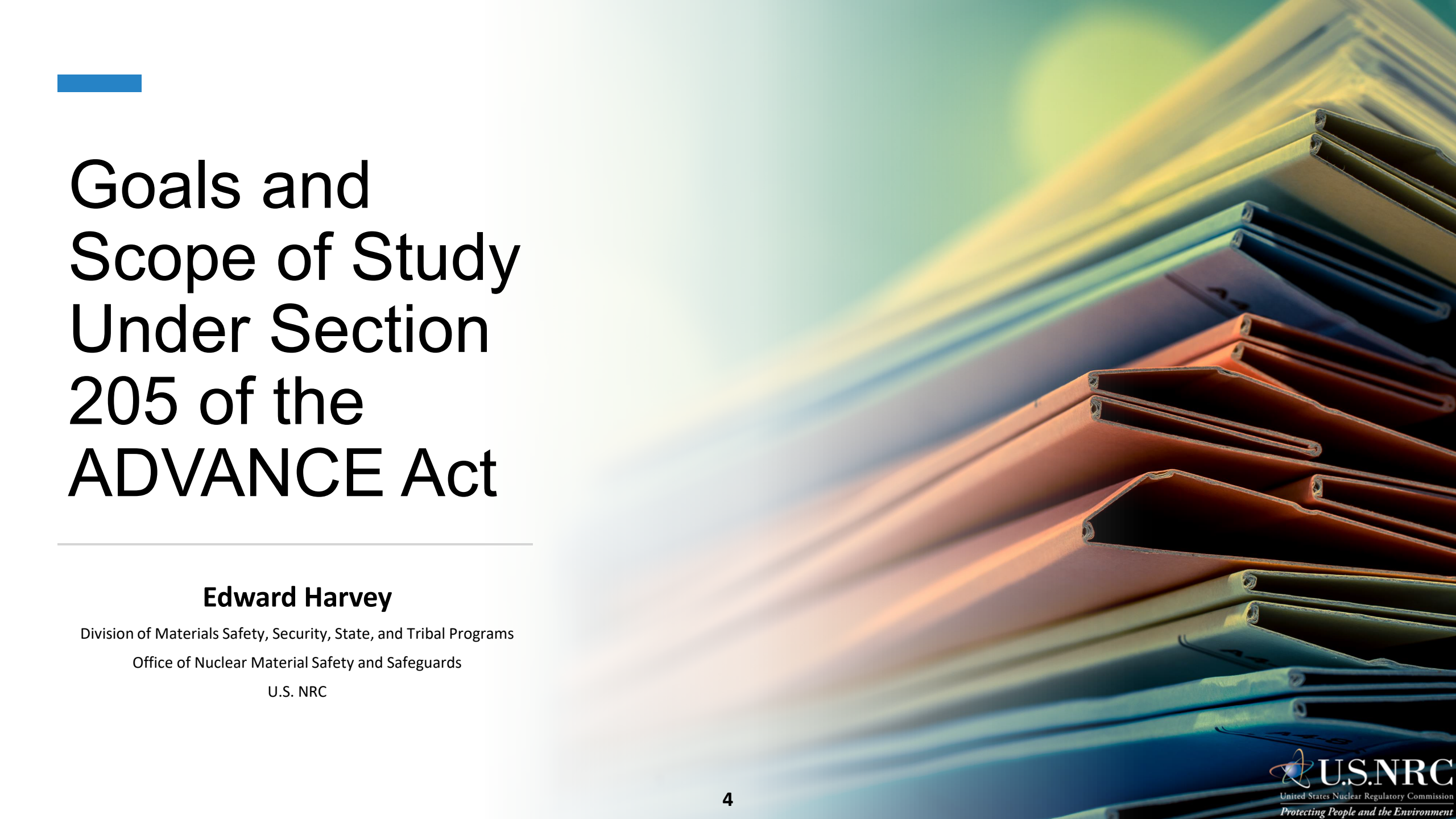
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**Kevin Williams**, Director

Division of Materials Safety, Security, State, and Tribal Programs

Office of Nuclear Material Safety and Safeguards

U.S. NRC



# Goals and Scope of Study Under Section 205 of the ADVANCE Act

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**Edward Harvey**

Division of Materials Safety, Security, State, and Tribal Programs

Office of Nuclear Material Safety and Safeguards

U.S. NRC



# Section 205 of the ADVANCE Act

The Accelerating Deployment of Versatile, Advance Nuclear for Clean Energy (ADVANCE) Act was signed into law on July 9, 2024

Adds a new definition of “fusion machine” to the Atomic Energy Act of 1954, as amended (AEA)

Incorporates “fusion machine” into the definition of “byproduct material” in Section 11e(3)(B) of the AEA

Made conforming changes to the Nuclear Energy Innovation and Modernization Act (NEIMA) to replace the term “fusion reactor” with “fusion machine”

Tasked the NRC with performing a study on mass-production of fusion machines and submitting a report to Congress on the results

# Objective

To develop recommendations for guidance or a regulatory framework regarding the licensing of mass-manufactured fusion machines and to establish an estimated timeframe for issuance



- Develop recommendations for guidance or the regulatory framework for the standardized review of commercial fusion machine designs:
  - Conduct an internal review of current NRC and Agreement State regulatory processes
  - Meet with other Federal agencies to discuss relevant risk- and performance-based evaluation processes for design, manufacturing, and operations certification
  - Identify other commercial certification processes that may inform this study
  - Consider public and industry feedback

# Scope of Study

# Engagement and Deliverables

- Develop a draft report to Congress that includes:
  - The summary of the study and consolidated recommendations for standardized licensing of fusion machine designs
  - Evaluation of industry readiness for needing guidance and regulations for licensing mass-manufactured fusion machines
- Develop *Federal Register* Notice that includes questions for industry and Agreement States to solicit feedback on the recommendations for the standardized review process for commercial fusion machines
- Schedule at least one additional public meeting to discuss preliminary findings with stakeholders
- Final Report to Congress

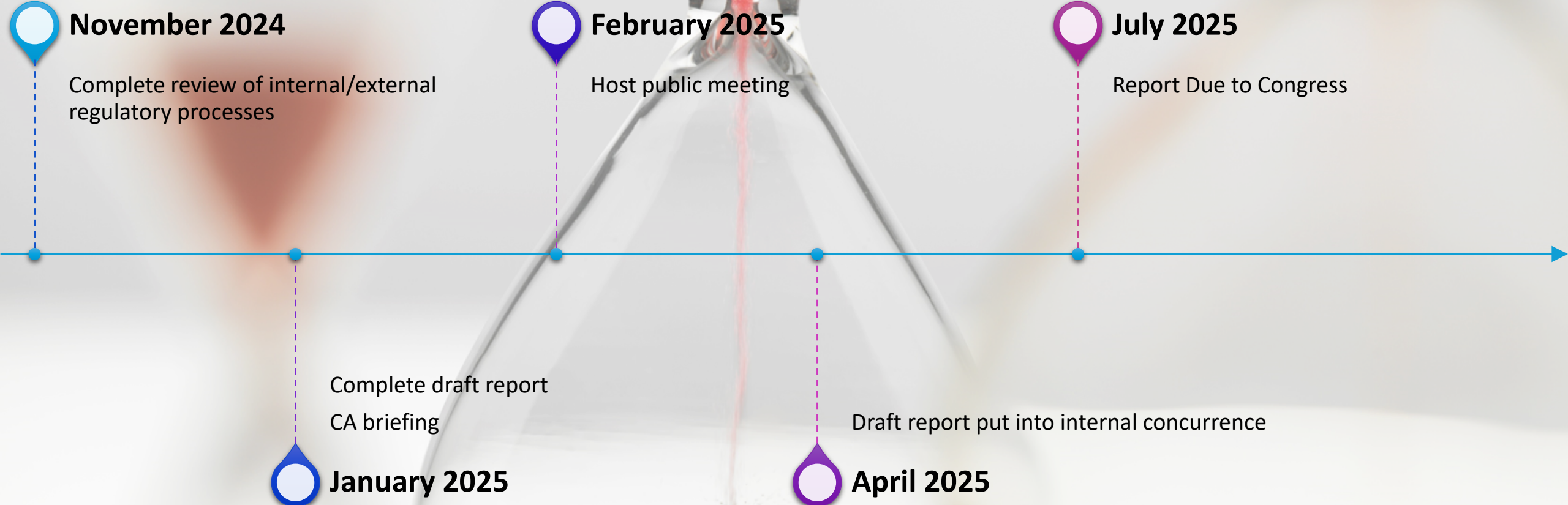
# Indicators for Industry Readiness

- The NRC will identify indicators to inform the process: for example:
  - Technical achievements
  - Full-scale demonstration of novel components
  - Mass-manufacturing of fusion machine parts
  - Supply chain management
  - Access to non-fusion specific government programs
  - Funding certainty
  - Economic viability





# Major Milestones





# Contact Us About the ADVANCE Act

- The public may submit your questions or comments on the ADVANCE Act by visiting:

<https://www.nrc.gov/about-nrc/governing-laws/advance-act/contactus.html>

- 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.

# Question & Answer Session

*We welcome questions from all stakeholders during this meeting regarding the scope of the study under Section 205 of the ADVANCE Act. We are not officially accepting comments today and will not provide any formal responses to any feedback provided during this meeting.*





# Thank You!

## Contacts

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