

NRC's Implementation of the ADVANCE Act

Mike King

Special Assistant for ADVANCE Act Implementation

Jamie Pelton

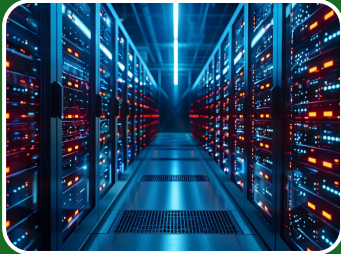
Deputy Director, Division of Operating Reactor Licensing, NRR

Phil McKenna

Deputy Director, Division of Reactor Oversight, NRR

April 3, 2025

The Landscape Has Changed



Growing demand to support advanced tech



Increased need for energy security



Improved public perception

Overview of the Act



Update mission statement and develop implementing guidance



Enhance initiatives for efficient, timely, and predictable license application reviews



Establish an expedited procedure for reviewing qualifying new reactor license applications



Implement changes regarding fee recovery, including a reduced rate for advanced reactor applicants and pre-applicants

Overview of the Act



Develop a regulatory framework for fusion technology



Assess the licensing review process for new nuclear facilities at former fossil-fuel power plant sites and brownfield sites



Implement new requirements relating to nuclear fuel



Remove certain limitations on foreign ownership of some types of licensed facilities

Overview of the Act



Continue to support international coordination on nuclear technologies and licensing activities



Develop strategies and guidance for microreactors



Establish a nuclear energy traineeship subprogram to meet critical mission and nuclear workforce needs



Take appropriate actions on new pay and hiring authorities

The Core Team



**Mike
King**
Special
Assistant



**Jessica
Bielecki**
Assistant
General Counsel



**John
Lubinski**
Director,
NMSS



**Owen
Barwell**
Chief Financial
Officer



**Jack
Giessner**
Administrator,
Region 3

The Support Team



**Aaron
McCraw**
Communications



**Annie
Ramirez**
Project Management



**Jessica
Hammock**
Project Management



**Luis
Betancourt**
Project Management

ADVANCE Act by the Numbers

36

Actions tasked related
to the ADVANCE Act
(9 completed as of March 26)



20

Agency project teams
formed to address actions



Over
30

Public meetings held to
engage interested parties on
ADVANCE Act topics



Over
30
Over
130

Submissions from the public
related to the ADVANCE Act

Ideas from the NRC staff
related to the ADVANCE Act

Section 501 – ADVANCE-ing the Mission

NRC Mission Statement

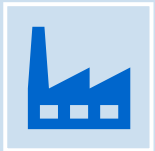
The NRC protects public health and safety and advances the nation's common defense and security by enabling the safe and secure use and deployment of civilian nuclear energy technologies and radioactive materials through efficient and reliable licensing, oversight, and regulation for the benefit of society and the environment.



Section 401 – Report on Advanced Methods of Manufacturing and Construction



Benefited from public input to explore alternatives beyond the traditional reliance on nuclear codes and standards



Identified development of additional guidance for emergent technologies as action to enhance efficiency in staff reviews and provide greater clarity to applicants



Examined accelerating the endorsement process to provide regulatory predictability for applicants using code-approved innovative manufacturing techniques and materials

ADVANCED METHODS OF MANUFACTURING AND CONSTRUCTION FOR NUCLEAR ENERGY PROJECTS

A Report for the
U.S. Senate Committee on Environment and Public Works and the
U.S. House of Representatives Committee on Energy and Commerce



U.S. Nuclear Regulatory Commission
January 2025

Section 506 – Modernization of Nuclear Reactor Environmental Reviews

MODERNIZATION OF NUCLEAR REACTOR ENVIRONMENTAL REVIEWS

A Report for the
U.S. Senate Committee on Environment and Public Works and the
U.S. House of Representatives Committee on Energy and Commerce



U.S. Nuclear Regulatory Commission
January 2025



Focused technical review level:
30% resource savings for subsequent license renewals



Enhanced resource analyses: 5500-hour model for reactor renewal environmental impact statements



Leveraging MOUs on over ½ of new reactor projects: 50% resource saving when other agencies lead consultations

Other Milestones of Interest



Signed Memorandum of Understanding with DOE on advanced nuclear fuels, as required by Section 404
December 12, 2024



Issued report on new hiring and pay authorities to Congress, as required by Section 502
December 17, 2024

Consistent with the Spirit of the Act

- Revised inspection manual chapter for light-water reactors
 - Provides clear expectations and best practices to monitor technical support between Headquarters and Regions
 - Helps ensure timely resolution of low-level safety issues
- Issued memo on expectations for reactor licensing efficiencies
 - Disciplined, safety-focused, risk-informed reviews
 - Enhanced pre-application engagements
- Establishing effective metrics to track the timely completion of licensing actions, inspections, resolution of low-level issues and differing professional views

Upcoming Actions of ACRS Interest

Section 505 - Nuclear Licensing Efficiencies

- Licensing Efficiencies and Processes (LEAP) teams
- Leveraging our licensing experience on power uprates requests
- Streamlining license renewal reviews
- Improving project management processes and techniques

Upcoming Actions of ACRS Interest

Section 507 - Improving Oversight and Inspection Programs

- Comprehensive review of the NRC's Reactor Oversight Process including security
 - All performance indicators (17 total)
 - All inspection procedures (42 total)
- Interim changes to reactor safety inspections frequency & scope based on industry performance
- Frequency, schedule, and content of security inspections
- Treatment of white findings
- Inspection preparation and documentation enhancements

Future Actions of ACRS Interest

Section
207

Combined license review procedure

Tasking due Sept 2025

Section
206

Brownfield sites

Final action due Jul 2027

Section
208

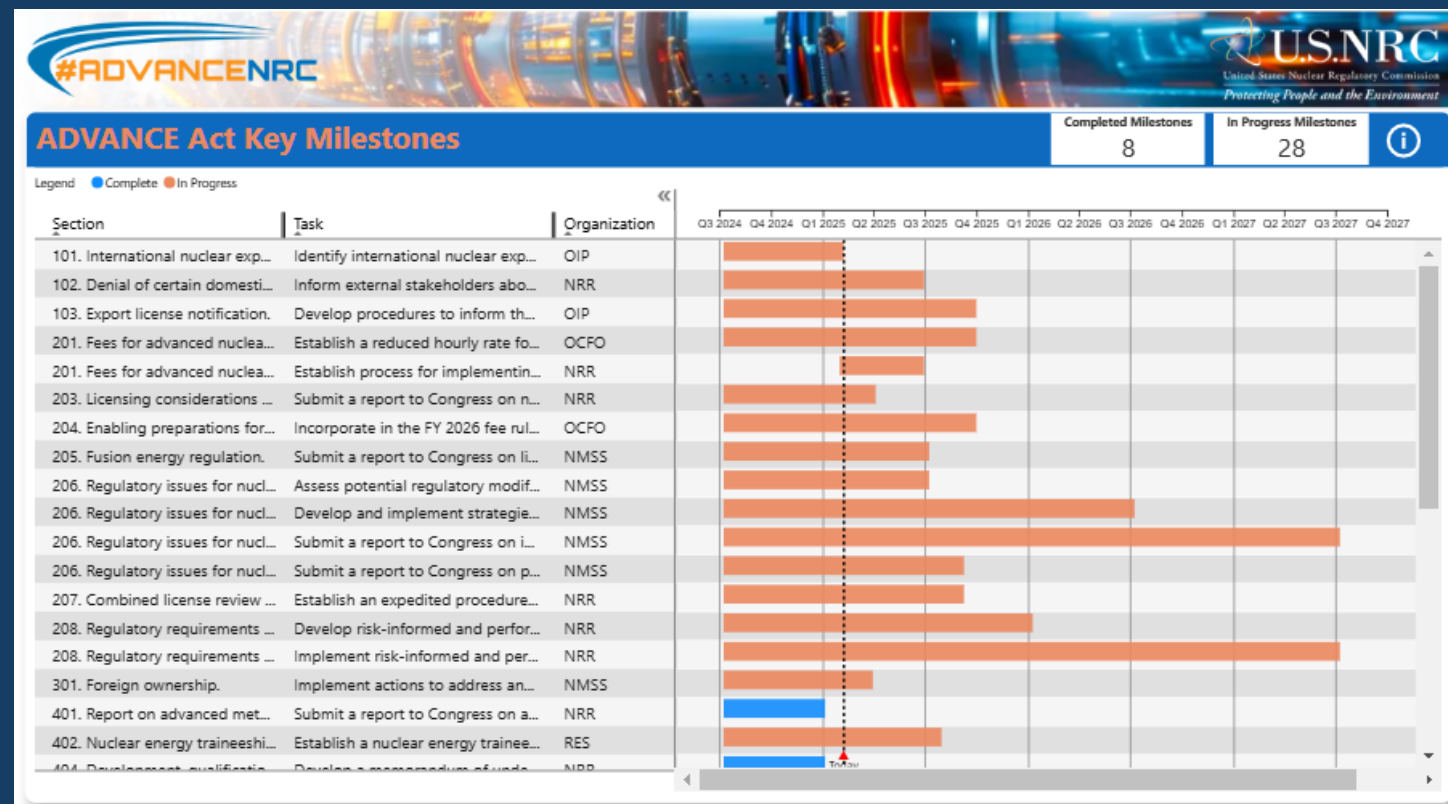
Micro-reactor framework

Final action due Jul 2027

How to Follow Our Progress



Follow NRC's ADVANCE Act implementation with this Dashboard



How to Stay Engaged



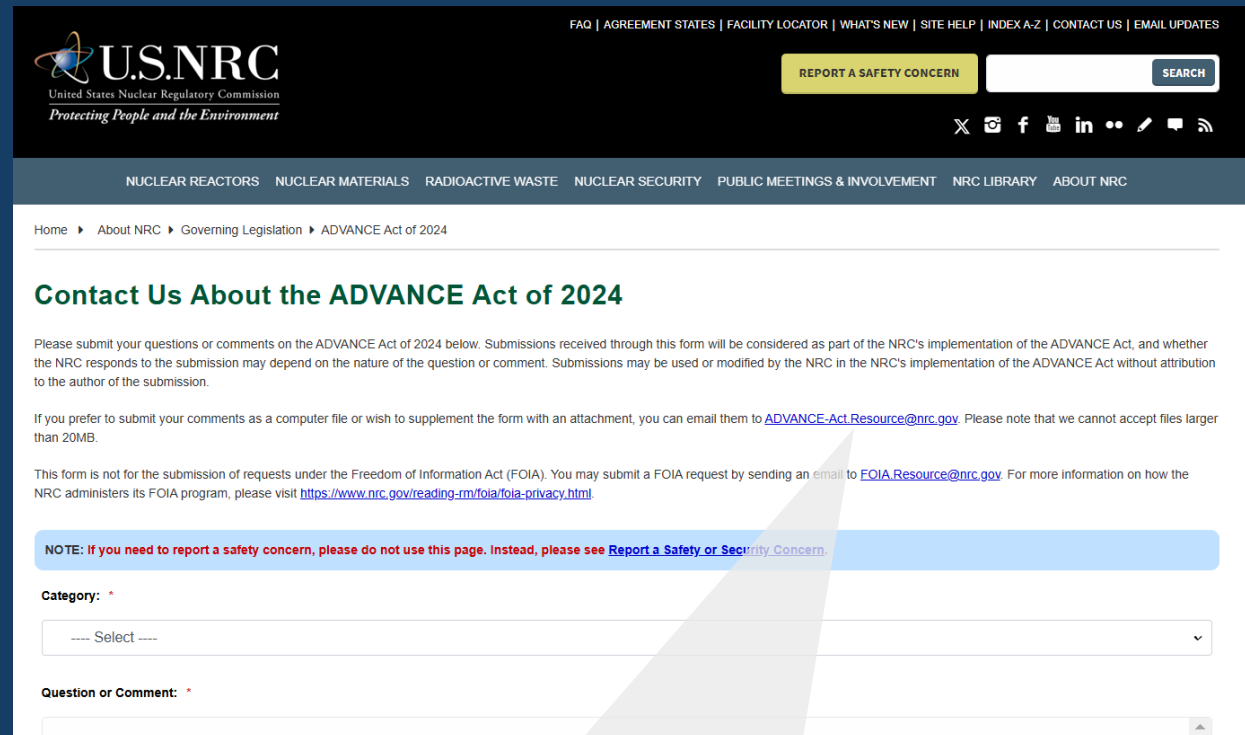
For NRC's public meeting
information on
ADVANCE Act activities

A screenshot of the U.S. Nuclear Regulatory Commission (NRC) website. The page is titled "ADVANCE Act (Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2024)". Below the title is a photograph of two NRC staff members wearing hard hats and safety vests, working on a construction site. At the bottom of the page, there are two columns: "Public Meetings" and "Questions, Comments, or Ideas". The "Public Meetings" column contains links for "Upcoming Meetings" and "Past Meetings". The "Questions, Comments, or Ideas" column contains a link for "Contact Us about the ADVANCE Act". A large orange arrow points from the "Upcoming Meetings" link towards the left side of the slide.

How to Ask Questions and Submit Ideas



Contact us with ADVANCE Act questions, comments, and ideas



FAQ | AGREEMENT STATES | FACILITY LOCATOR | WHAT'S NEW | SITE HELP | INDEX A-Z | CONTACT US | EMAIL UPDATES

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

REPORT A SAFETY CONCERN SEARCH

NUCLEAR REACTORS NUCLEAR MATERIALS RADIOACTIVE WASTE NUCLEAR SECURITY PUBLIC MEETINGS & INVOLVEMENT NRC LIBRARY ABOUT NRC

Home > About NRC > Governing Legislation > ADVANCE Act of 2024

Contact Us About the ADVANCE Act of 2024

Please submit your questions or comments on the ADVANCE Act of 2024 below. 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.

If you prefer to submit your comments as a computer file or wish to supplement the form with an attachment, you can email them to ADVANCE-Act.Resource@nrc.gov. Please note that we cannot accept files larger than 20MB.

This form is not for the submission of requests under the Freedom of Information Act (FOIA). You may submit a FOIA request by sending an email to FOIA.Resource@nrc.gov. For more information on how the NRC administers its FOIA program, please visit <https://www.nrc.gov/reading-rm/foia/foia-privacy.html>.

NOTE: If you need to report a safety concern, please do not use this page. Instead, please see [Report a Safety or Security Concern](#).

Category: *

---- Select ----

Question or Comment: *

ADVANCE-Act.Resource@nrc.gov

