

NRC Risk Informed Showcase – Industry Perspectives

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Reform of NRC — Executive Order 14300 (May 23, 2025)

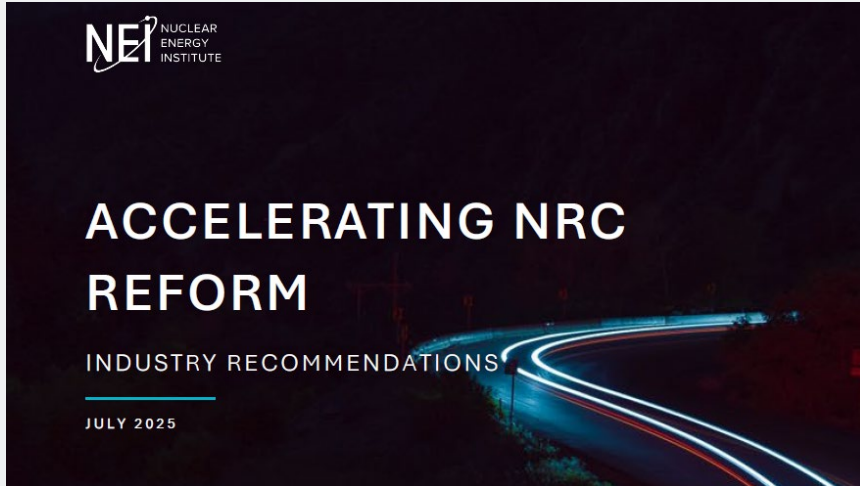
- Reduce dependence on foreign technologies, decrease regulatory barriers, and support domestic nuclear by:
 - Reforming the NRC’s Culture
 - Reforming the NRC’s Structure
 - 18 month “Wholesale Revision” of the NRC’s Regulations including:
 - Fixed licensing deadlines
 - Science-based radiation limits
 - Reform NRC’s NEPA approach
 - Expedited acceptance of DOE/DOD licenses
 - High volume licensing process
 - Limit changes during construction
 - Limits on credible risk
 - Reconsider license durations
 - Streamline hearing processes

ADVANCE Act

May 8, 2024 (House approved 393-13, Senate approved 88-2)

- **Reorienting the NRC's mission** toward efficiency and minimizing unnecessary limitations;
- **Expediting and modernizing licensing processes** for advanced nuclear technologies, microreactors, and brownfield sites;
- **Reducing regulatory costs** and creating financial incentives;
- **Strengthening organizational capacity** and inspection/oversight practices; and
- **Enhancing international regulatory coordination** and reporting transparency to Congress.

NEI Recommendations



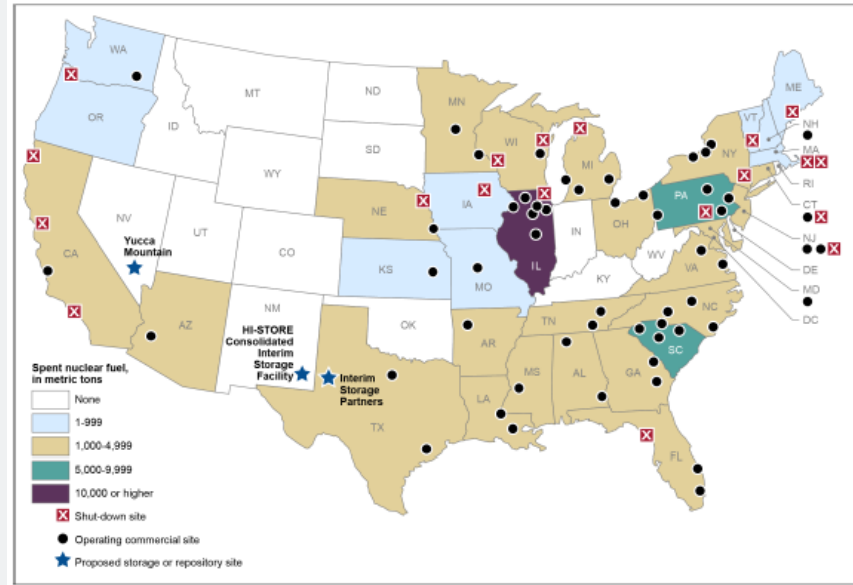
Industry Goals

- Maintain safety
- Build upon on-going reforms stemming from ADVANCE Act
- Leverage strong industry performance and programs
- Accelerate deployment of new nuclear capacity
- Eliminate unnecessary burden
- Expedite implementation without unduly disrupting ongoing regulatory reviews/actions

Used Nuclear Fuel Management in the US

- Used fuel inventory*
 - ~Approximately 97,000 MTU
 - Increases 2 - 2.4k MTU annually
- ISFSI** storage
 - 198,671 assemblies
 - ~57,000 MTU (59%)
 - 4,304 casks/modules loaded
 - 75 Operating dry storage ISFSIs
 - 21 sites where reactor operations have ceased
 - Dry storage systems are also transportable
- Long-term commitment
 - First Casks Loaded in 1986
 - Licenses being extended to 60 years
 - Licenses extensions approved at 67 sites
 - Licenses renewable for additional 40 yr. periods
 - NRC determined casks safe for “at least” 100 yrs

Figure 1: Stored Commercial Spent Nuclear Fuel Amounts, through 2019, and Locations, as of June 2021



*As of December 2025

** ISFSI = Independent Spent Fuel Storage Installation

NRC Wholesale Regulatory Review

- 28 rulemakings under the NRC's wholesale review of regulations in response to Executive Order 14300
 - 17 Proposed Rules
 - 5 Direct Final Rules
 - 6 Final Rules
- Most significant review effort associated with the proposed rulemakings
 - NEI developed individual Sharepoint pages to enable real-time member collaboration

NEI Response

- Member website maintained up-to-date for real time tracking
- NEI promptly generates and makes available a summary of each rulemaking
- NEI teams actively engage with our members on each of these rulemakings to meet the moment
 - Assist NEI members in understanding how NEI intends to organize its regulatory reviews
 - Provide avenues for our members to outreach and get connected into these activities

Rulemakings of Interest with respect to Used Nuclear Fuel Management

- Modernizing Materials Licensing
- Modernizing Package Certification Requirements
- Integrated Low-Level Radioactive Waste Disposal
- Modernizing Security Requirements
- National Environmental Policy Act Requirements
- Reforming and Modernizing the NRC's Radiation Protection Framework
- Regulatory Enhancements for Reactor Licensing, Decommissioning, and Operational Oversight



All are/will be proposed rules

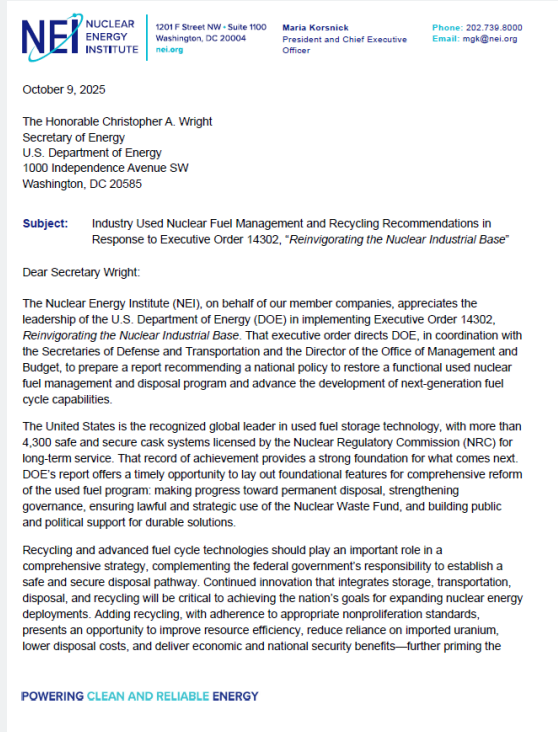
Executive Order on Reinvigorating the Nuclear Industrial Base — Executive Order 14302 (May 23, 2025)

- US Secretary of Energy Directed to:
 - Recommend National Policy for Used Fuel
 - Including legislative changes
 - Evaluate Reprocessing and Recycling
 - Analyze legal, budget, and policy factors
 - Recommend uses for recovered materials
 - Review existing facilities
 - Develop Transportation Capability

Focus on Recycling will affect all aspects of waste management

NEI response

- Industry outlined policy vision to Secretary of Energy in October 9, 2025 letter
- Position guided by Policy Principles approved at highest level of industry management
- NEI, EPRI, and all three US Used Fuel Technology Vendors are engaged in NEA project WISARD (Waste Integration for Small and Advanced Reactor Designs)



DOE Nuclear Lifecycle Innovation Campuses

Request for Information Issued on January 28 (answers EO 14302 Sec. 3)

- Campuses must support functions such as fuel fabrication, enrichment, reprocessing, and waste disposition
 - Opportunity for integrated approach including repository
 - Could evolve into limited recycling focused strategy
 - Front-end enticements redundant to, and potentially in conflict with, things already in flight
- Campuses could additionally support functions such as advanced reactors, power generation, advanced manufacturing, data centers, and much more
- Leaves to States to define makeup and propose locations
 - States have until April 1st to respond
 - DOE envisions 2027 deployment with preference given to States w/ambitious timelines
 - States must answer 23 questions including identification of legislative needs
 - DOE envisions State/Private sector funding
 - Hints at *potential* federal funding opportunities (including nuclear waste fund)
- NEI and member companies engaging with States toward positive outcomes

