

# Office of Storage & Transportation Update

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U.S. DEPARTMENT OF  
**ENERGY**

Office of  
NUCLEAR ENERGY

SPENT FUEL & HIGH-LEVEL  
WASTE DISPOSITION



# Disclaimer

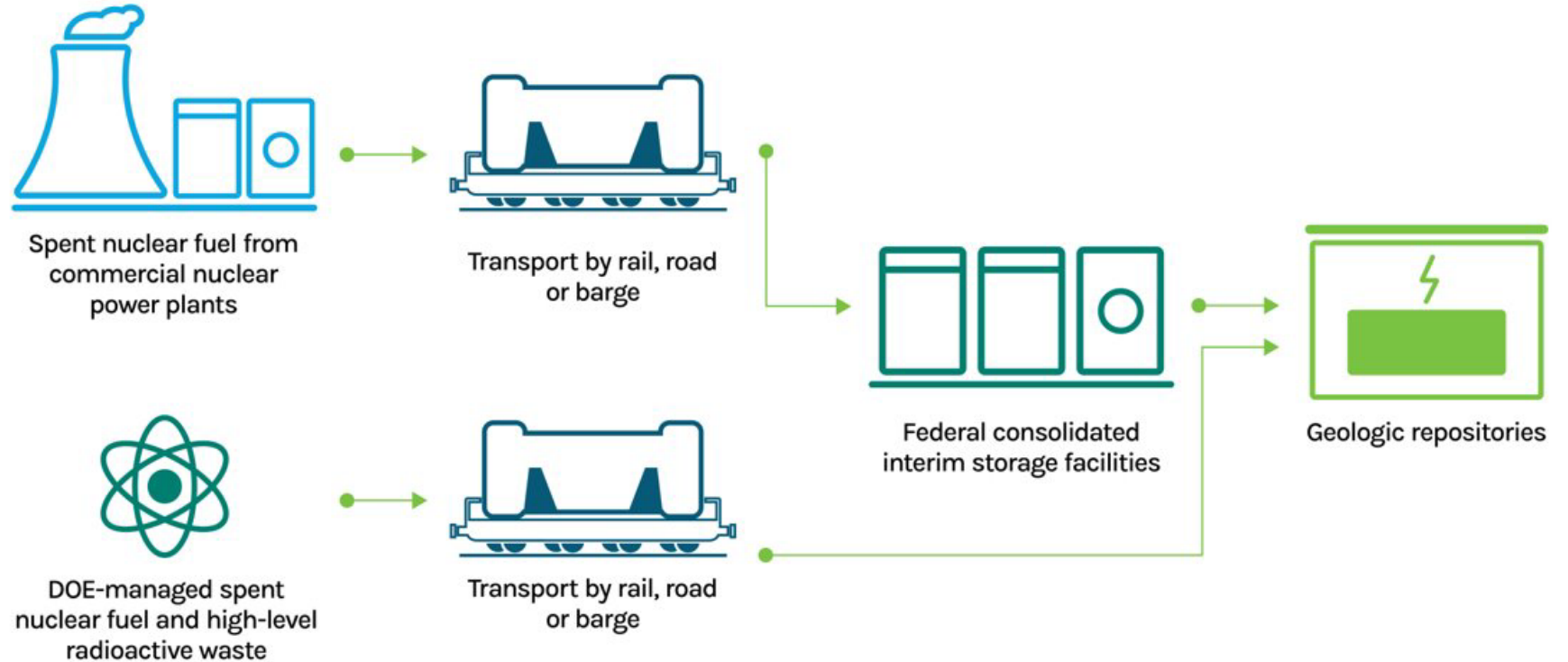
This is a technical presentation that does not take into account contractual limitations or obligations under the Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste (Standard Contract) (10 CFR Part 961).

To the extent discussions or recommendations in this presentation conflict with the provisions of the Standard Contract, the Standard Contract governs the obligations of the parties, and this presentation in no manner supersedes, overrides, or amends the Standard Contract.

This presentation reflects technical work which could support future decision making by the U.S. Department of Energy (DOE or Department). No inferences should be drawn from this presentation regarding future actions by DOE, which are limited both by the terms of the Standard Contract and Congressional appropriations for the Department to fulfill its obligations under the Nuclear Waste Policy Act including licensing and construction of a spent nuclear fuel repository.

# Integrated Waste Management System for SNF & HLW

- Storage facility(ies)
- Transportation capability
- Disposal facility(ies)
- Interfaces



# Spent Fuel & High-Level Waste Disposition Current Program Priorities

2024

Consent-Based Siting  
/Public Outreach



2025 Issue an Expression of Interest

Design of Consolidated Interim  
Storage Facility



2025 - 2031 Work toward CD-1, analysis of CISF design alternatives

2026 Establish the International Center of Excellence for the Research of Spent Nuclear Fuel and conduct spent fuel R&D

Transportation of  
Spent Nuclear Fuel

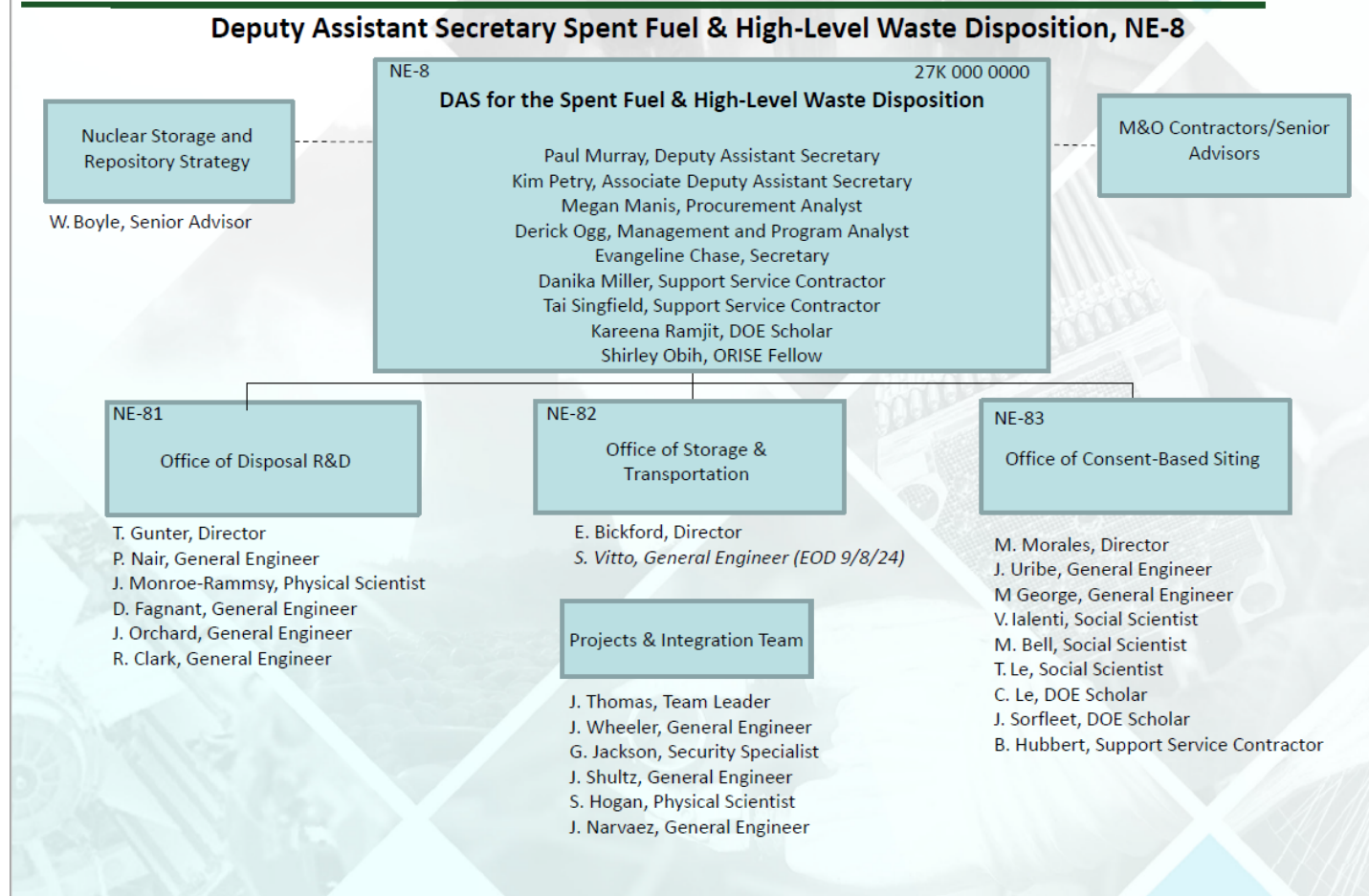


2040

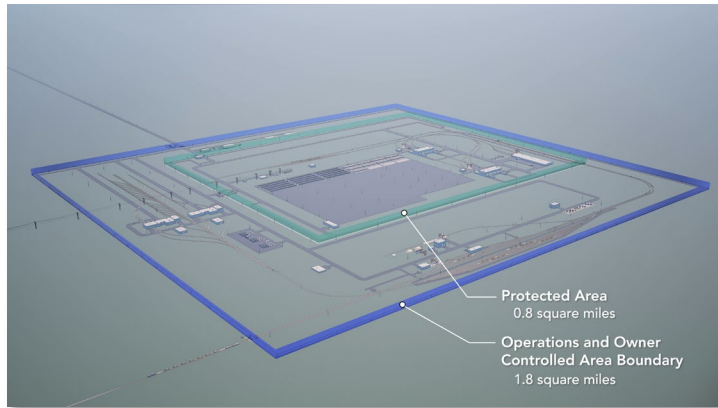
- 2027 Move high burnup cask to DOE Facility
- 2028 - 2031 Conduct Package Performance Demonstration (PPD)\*
- 2034 Build out transportation infrastructure for spent nuclear fuel
- 2038 - 2040 Begin transporting SNF to federal CISF

# April 2024 Reorganization

- Appointed Jay Thomas as Team Leader for Projects & Integration team
- Created the new Research and Innovation team
  - Transfers CISF storage related research to new team
  - Focuses on CISF operations support
- Research & Development (R&D) Projects – moving
  - High-burnup fuel assemblies – post irradiation examination
  - Road Ready Demonstration
  - Considerations for advanced reactor SNF



# Office of Storage & Transportation Priorities



Federal consolidated interim storage facility (CISF)/capital acquisition CD-1 and supporting activities



Package Performance Demonstration (PPD) *part of CISF project*



Shipping the high-burnup demo cask (HBUDC) and supporting activities

# FY24 – Key Accomplishments

- Consolidated Interim Storage Facility:
  - CD-0 (project approval)
  - Request for information (RFI) issued for engineering, project management and integration
- Package Performance Demonstration:
  - RFI issued to solicit feedback
- Transportation hardware:
  - Atlas railcar consist – Association of American Railroads (AAR) approval
  - Fortis – car body fabricated
- Transportation operations:
  - Site evaluation reports (February 2024)
- HBUDC shipment – Procured impact limiter fabrication



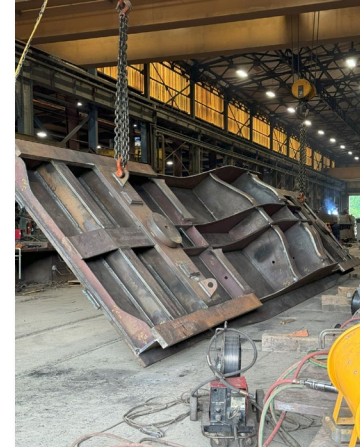
**DOE Seeks Input on Federal Consolidated Interim Storage Facility for Spent Nuclear Fuel**

**Request for Information Responses Due Sept. 5, 2024**

The U.S. Department of Energy (DOE) issued a request for information (RFI) to identify industry partners interested in contributing to the development of federal consolidated interim storage facilities for the management of spent nuclear fuel. DOE is also seeking information from parties interested in providing engineering design, project management, integration, and other services needed to build and manage consolidated interim storage facilities.

DOE is seeking input on the following key areas:

- Improvements to the draft performance work statement
- Technical assessment of the work scope and marketplace options



**WHAT ARE WE DOING?**

DOE is requesting responses to the RFI from sources capable of providing information, feedback, or services. The RFI is organized to gather input across multiple categories:

- Category A: Stakeholder Input and Feedback
- Category B: Cask Vendors
- Category C: Testing Facilities, Sites, and Services to Conduct Demonstrations
- Category D: Instrumentation, Data Collection, and/or High-Resolution Videography Services
- Category E: Miscellaneous Questions for Potential Vendors and Service Providers

**WHY ARE WE DOING IT?**

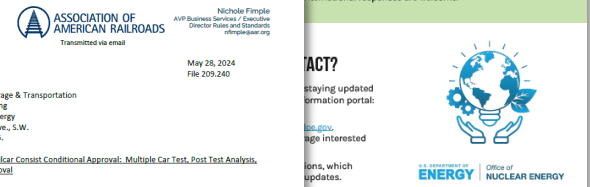
This RFI is intended to inform interested parties of DOE's preliminary plans for a PPD and gather feedback from stakeholders and potential suppliers. The responses will help the DOE assess interest and inform decisions regarding a potential PPD. Additionally, the feedback may identify parties and resources that might have interest in responding to a future Request for Proposal (RFP). This RFI is not a solicitation, but a way for the DOE to gauge interest, capacity, and capability in preparing for a potential PPD. DOE will ultimately decide how to proceed subject to the constraints of authorization, funding appropriations, and practical/technical feasibility.

**WHEN ARE WE DOING IT?**

**Submission Deadline:**  
Please submit your response by **5:00 PM MDT** on

**WHO SHOULD RESPOND?**

DOE welcomes responses to the RFI from a wide range of sources, including parties with an interest in SNF transportation who can provide feedback on what kind of demonstrations DOE should conduct and other related information. In addition, we invite input from potential suppliers that could provide products and/or services for a proposed PPD. This includes cask vendors, testing facilities/sites to conduct demonstrations, and potential vendors to provide instrumentation, data collection, and/or high-resolution videography services. International responses are welcome.



# FY25 Budget

- Used Nuclear Fuel Disposition R&D:

- Disposal R&D
- HBUDC shipment
- Research and Innovation team R&D



House Mark

\$47M

(\$27M / \$20M)

Senate Mark

\$47M

- Integrated Waste Management Systems:

- Consent-Based Siting
- Tribal & State Transportation Cooperative Agreements
- Consolidated Interim Storage Facility Project
- Package Performance Demonstration
- Systems Engineering and Analysis



House Mark

\$25M

Senate Mark

\$53M



# FY25 Key Activities – CISF and PPD

## CISF:

- Conceptual design (CD-1)
- Associated research & development for transportation and storage



## PPD:

- Review responses from the RFI
- Develop the Request for Proposal (RFP)



# FY25 Key Activities – HBUDC and Transportation Hardware

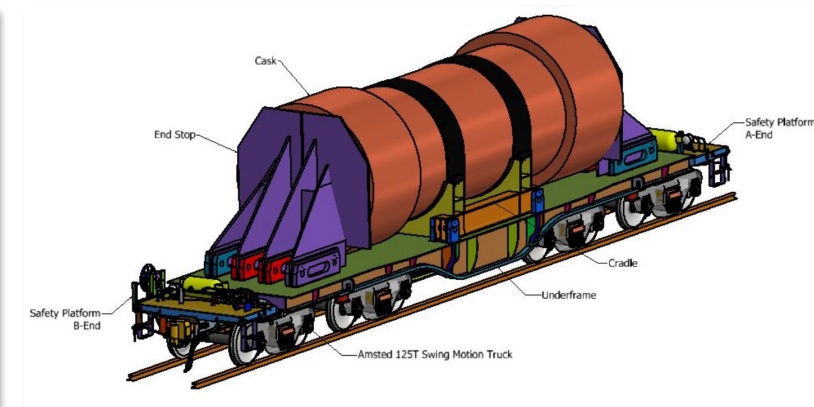
## HBUDC Shipment:

- NEPA documentation development
- Integrated Safety and Security Monitoring System (ISSMS)
- Impact limiter and cradle fabrication



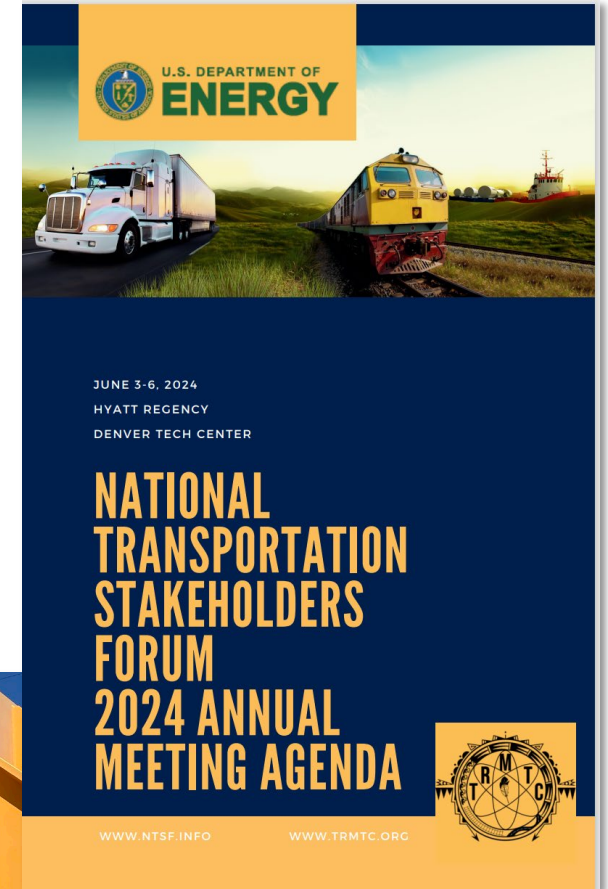
## Transportation Hardware:

- Atlas rail car supplemental testing
- Fortis rail car – bi-span bolster fabrication



# State & Tribal Engagement

- National Transportation Stakeholders Forum (NTSF) Ad Hoc Working Groups:
  - SNF Rail/Routing
  - Section 180(c)
  - SNF Management – Communications and Outreach AHWG
- Transportation Core Group
  - Washington DC March 19-20, 2024
  - Boston Sept 11-12, 2024
    - Hosted by CSG-ERC



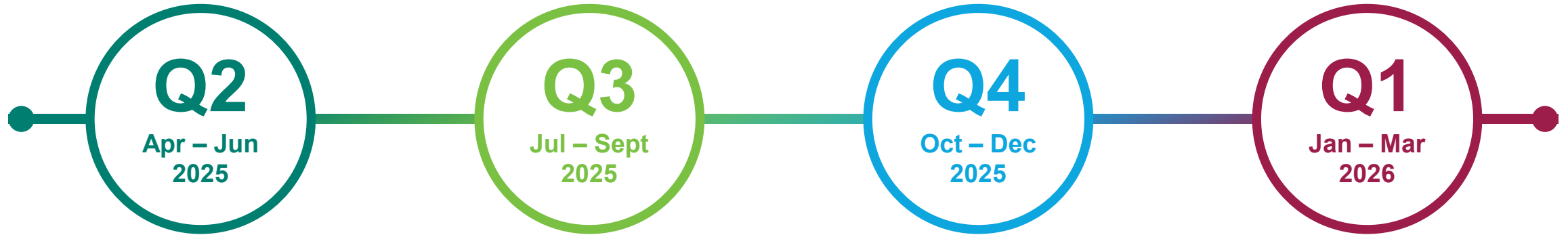
# Consent-based Siting Program

## Mission –

To implement interim storage for commercial spent nuclear fuel at a Federal consolidated interim storage facility following a consent-based siting process.



# Consent-Based Siting Near-Term Roadmap



## PUBLISH KEY DOCUMENTS

### Includes:

- Site Screening Criteria document
- Revised Consent-Based Siting process document
- Federal Register Notice for Expression of Interest (EOI)

## ISSUE EXPRESSION OF INTEREST

### Includes:

- EOI application requirements
- DOE evaluation criteria and technical assistance (TA)
- Process for 3<sup>rd</sup> party independent reviews

## ISSUE EQUITY FUNDING

### Includes:

- Promote equity funding to disadvantaged communities / Tribes
- Provide TA to complete EOI application

## REVIEW EOI APPLICATIONS

### Includes:

- Conduct 3<sup>rd</sup> party independent reviews
- Down-select qualified sites on a rolling basis
- Qualified communities receive TA to make Phase 3 determination

# THANK YOU



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# *Backup Slides*

# CONSENT-BASED SITING CONSORTIA METRICS UPDATE SEPT 2024

Consent-based siting consortia support DOE's efforts to facilitate inclusive community engagement and elicit public feedback on consent-based siting, management of spent nuclear fuel, and federal consolidated interim storage. The 12 awardees are comprised of various organizations to help reach communities across the country and remove barriers to participate in DOE's consent-based siting process. Awardees have made significant progress in carrying out community engagement activities and providing direct grants to communities wanting to learn more.



## Progress: DOE's Consent-Based Siting Process General Timeline



## Progress: Consent-Based Siting Consortia Timeline



Updates reflect activities from September 2023 up to September 2024.



To learn more about consent-based siting, please visit [energy.gov/consentbasedsiting](https://energy.gov/consentbasedsiting) or send an email to [consentbasedsiting@hq.doe.gov](mailto:consentbasedsiting@hq.doe.gov)