U.S. DEPARTMENT OF ENERGY | Office of NUCLEAR ENERGY

Consent-Based Siting

for a federal consolidated interim storage facility

G2G Meeting with Nuclear Regulatory Commission
4/25/2022

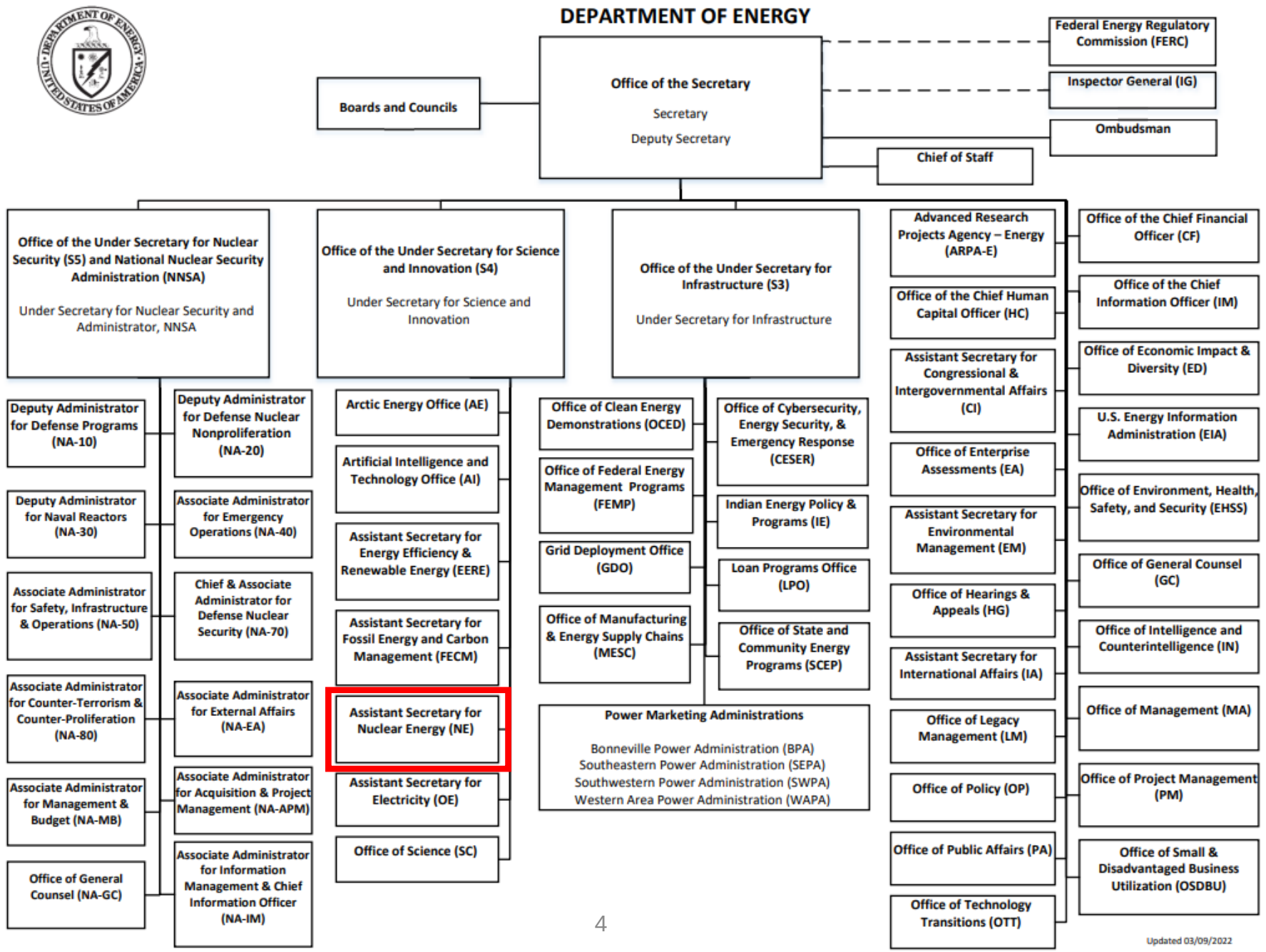
Disclaimer

- 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). For example, under the provisions of the Standard Contract, spent nuclear fuel in multi-assembly canisters is not an acceptable waste form, absent a mutually agreed to contract amendment.
- 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.

Agenda

- Context Setting for US Department of Energy
  - Brief history of nuclear waste issue
- Integrated Waste Management System & Consent-based Siting
- Next Steps/Stay connected
- DOE Plans for Transporting Spent Nuclear Fuel
- Questions/Answers

DOE Organization Chart



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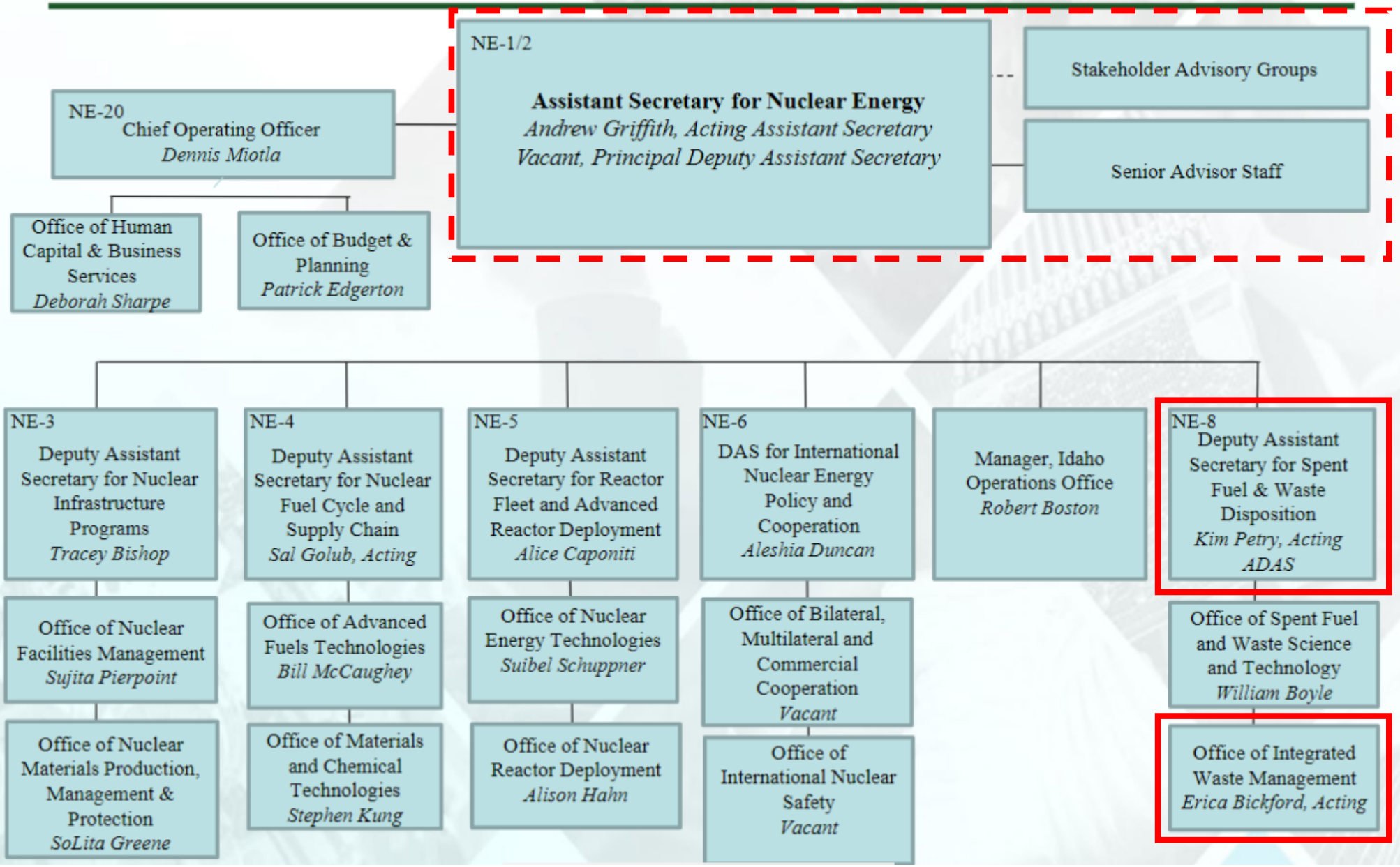
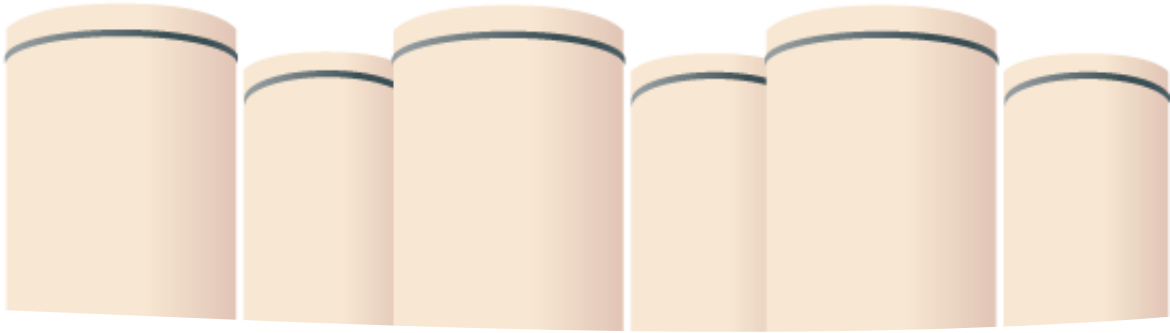
April 2022





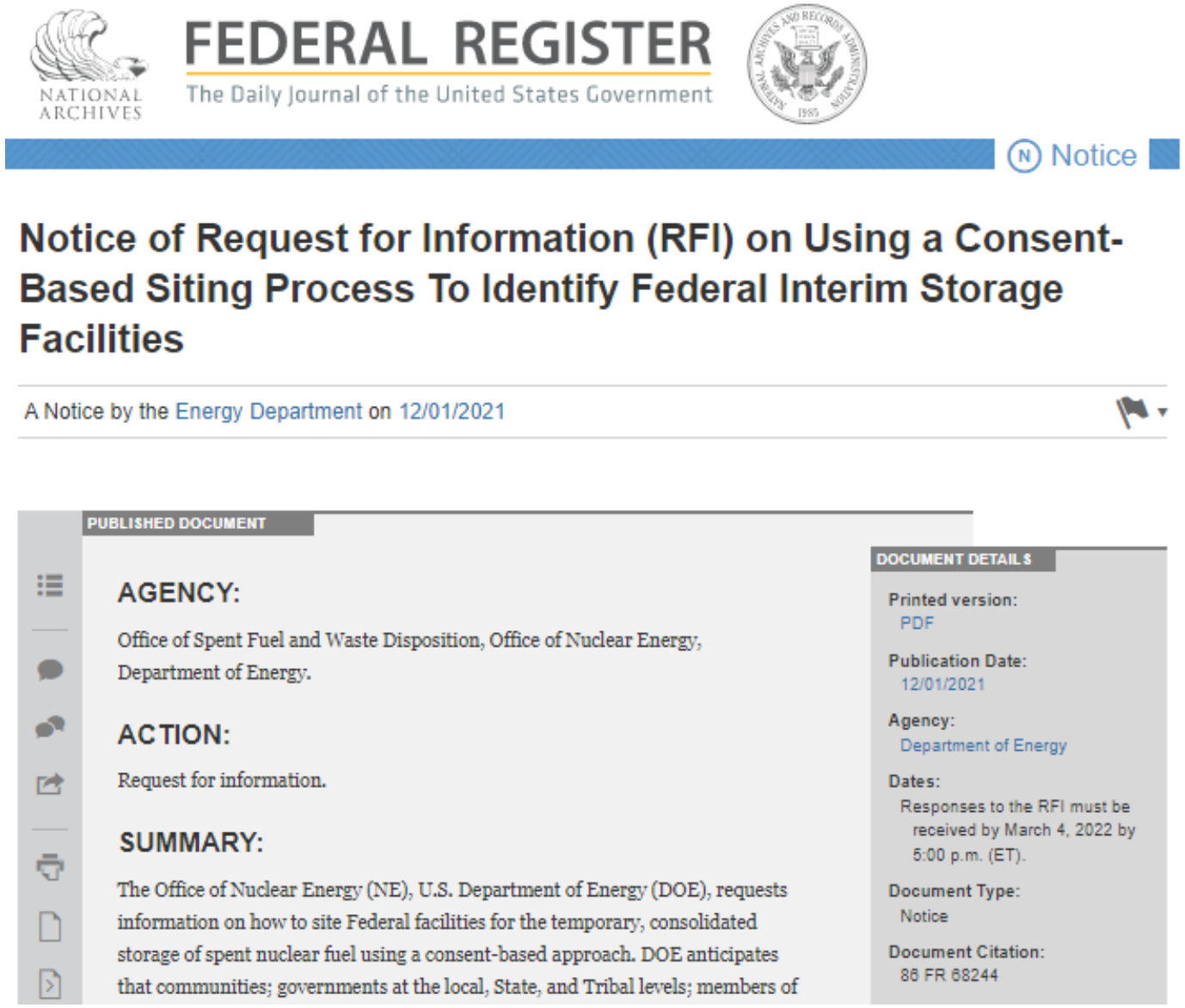
Integrated Waste Management

- As we continue to deploy nuclear energy as a solution for decarbonization, increasing access to energy, and tackling climate change, **we need to make progress on the back end of the fuel cycle**.
- While **spent nuclear fuel is stored safely** all over the country, the communities that have the spent nuclear fuel never agreed to host the material long term.
- The Department of Energy is responsible for managing the nation's spent nuclear fuel and high-level radioactive waste, including **finding sites to store and dispose of the spent nuclear fuel**.

Consent-Based Siting

- Consent-based siting is an approach to siting facilities that focuses on the needs and concerns of people and communities.
- By prioritizing communities and people, we believe we can find a solution to the decades-long stalemate on managing the nation's spent nuclear.
- A consent-based approach, driven by community well-being and community needs, is both the right thing to do and our best chance for success.

Request for Information



NATIONAL ARCHIVES

FEDERAL REGISTER

The Daily Journal of the United States Government

Notice

Notice of Request for Information (RFI) on Using a Consent-Based Siting Process To Identify Federal Interim Storage Facilities

A Notice by the Energy Department on 12/01/2021

PUBLISHED DOCUMENT

AGENCY:

Office of Spent Fuel and Waste Disposition, Office of Nuclear Energy, Department of Energy.

ACTION:

Request for information.

SUMMARY:

The Office of Nuclear Energy (NE), U.S. Department of Energy (DOE), requests information on how to site Federal facilities for the temporary, consolidated storage of spent nuclear fuel using a consent-based approach. DOE anticipates that communities; governments at the local, State, and Tribal levels; members of

DOCUMENT DETAILS

Printed version:
PDF

Publication Date:
12/01/2021

Agency:
Department of Energy

Dates:
Responses to the RFI must be received by March 4, 2022 by 5:00 p.m. (ET).

Document Type:
Notice

Document Citation:
86 FR 68244

Consent-based Siting - Next Steps

1. Analyzing responses to RFI
2. Further developing consent-based siting process
3. Clarifying our broader strategy for an integrated waste management system
4. Issuing a funding opportunity for interested groups and communities later this year

Website:
energy.gov/consentbasedsiting

Email:
consentbasedsiting@doe.hq.gov

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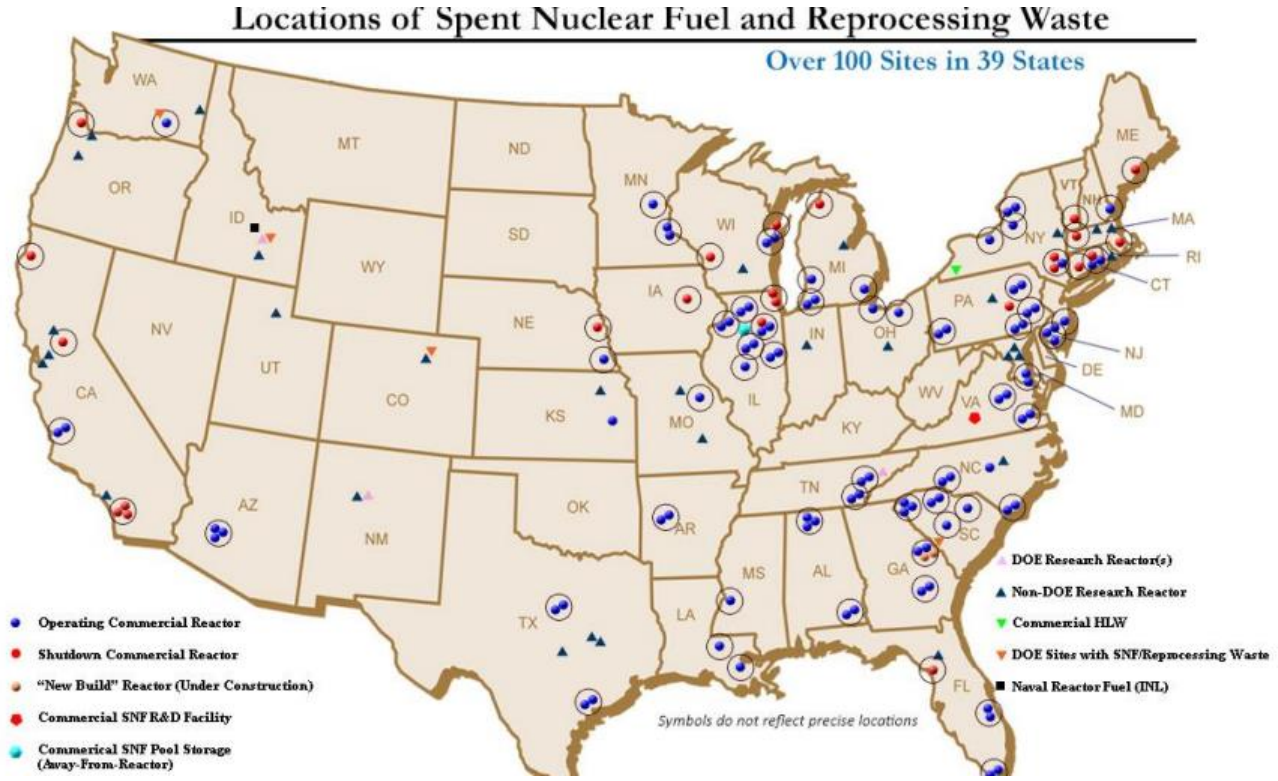
DOE Plans for Transporting Spent Nuclear Fuel



- Nearly all existing commercial spent nuclear fuel (SNF) is stored at the reactor sites where it was generated
- Of the 74 commercial reactor sites, 18 sites have ceased reactor operations
- Large-scale SNF transportation capabilities will be required to move commercial SNF from reactor sites to federal interim storage site(s)

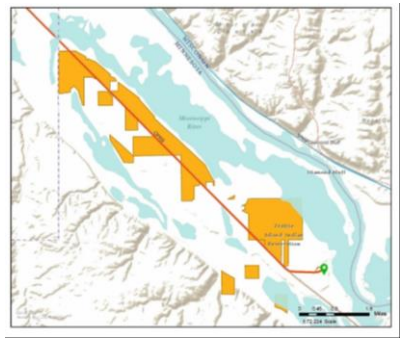
DOE Transportation Activities

- Railcar development
- Analysis tools
- Intergovernmental engagement
- Documenting site-specific history and conditions through site evaluations

Railcar Development

DOE is developing railcars to comply with the Association of American Railroads (AAR) Standard S-2043

- Atlas 12-axle cask carrying railcar is undergoing testing – expected to be approved for use in 2023.
- Fortis 8-axle cask carrying railcar has an AAR-approved design. DOE will place contract for fabrication and testing in 2022.
- Rail Escort Vehicle (REV) – carry security personal as well as safety and security monitoring equipment.



START

Stakeholder Tool for Assessing Radioactive Transportation (START)

- DOE continues to develop the Stakeholder Tool for Assessing Radioactive Transportation (START)
- Web-based GIS application capable of generating and analyzing route options for transporting radioactive materials by any surface or water mode
- Produces route performance measures and maps to support analysis and communication
- Provides input to DOE systems and logistics models
- Capable of producing data for transportation-related environmental assessments

Intergovernmental Engagement

- Cooperative Agreements with State Regional Groups and Tribes
- Federal agency coordination
- DOE's National Transportation Stakeholders Forum (NTSF)
  - State and Tribal governments
  - DOE program offices with current/planned radioactive material transport
  - Other Federal agencies (US DOT, US NRC)
  - Annual Meeting (Philadelphia, June 7 – 9th, 2022)
  - NTSF ad hoc working groups
    - Communications
    - Emergency Response Training
    - Spent Fuel Rail/Routing and Rail Inspections

Nuclear Power Plant Infrastructure Evaluations

- **Purpose:** To support planning for future removal of spent nuclear fuel
- Identify options and considerations for removing fuel from sites
- 16 in-person evaluations
- Participation from States, Tribes, US DOT-FRA, USCG, USACE
- Findings published in a public report: https://www.energy.gov/ne/articles/nuclear-power-plant-infrastructure-evaluations-removal-spent-nuclear-fuel

Questions?

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