Overview of the Final Report of the Blue Ribbon Commission on America's Nuclear Future

Presentation to George Mason University

May 2, 2012

BLUE RIBBON COMMISSION ON AMERICA'S NUCLEAR FUTURE

Origins and Purpose

- Blue Ribbon Commission on America's Nuclear Future established by the President's Memorandum for the Secretary of Energy on January 29, 2010

- Charge to the Commission: Conduct a comprehensive review of policies for managing the back end of the nuclear fuel cycle and recommend a new strategy

- Deliver recommendations to the Secretary of Energy by January 29, 2012

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Commission Members

- **Lee Hamilton**, Co-Chair – Director of the Center on Congress at Indiana State University, former Member of House of Representatives (D-IN)
- **Brent Scowcroft**, Co-Chair – President, The Scowcroft Group, and former National Security Advisor to Presidents Ford and George H.W. Bush
- **Mark Ayers**, President, Building and Construction Trades Department, AFL-CIO
- **Vicky Bailey**, Former Commissioner, Federal Regulatory Commission; former Indiana Public Utility Commissioner; former DOE Assistant Secretary for Policy and International Affairs
- **Dr. Albert Carnesale**, Chancellor Emeritus and Professor, UCLA
- **Pete V. Domenici**, Senior Fellow, Bipartisan Policy Center; former U.S. Senator (R-N.M.)
- **Susan Eisenhower**, President, Eisenhower Group, Inc.
- **Chuck Hagel**, Distinguished Professor at Georgetown University; former U.S. Senator (R-NE)

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Commission Members

- **Jonathan Lash**, President, Hampshire College; former President, World Resources Institute
- **Dr. Allison Macfarlane**, Associate Professor of Environmental Science, George Mason University
- **Dr. Richard Meserve**, President, Carnegie Institution for Science and Senior Counsel, Covington & Burling LLP; former Chairman, U.S. Nuclear Regulatory Commission
- **Dr. Ernest Moniz**, Professor of Physics and Cecil & Ida Green Distinguished Professor, MIT
- **Dr. Per Peterson**, Professor and Chair, Department of Nuclear Engineering, University of California-Berkeley
- **John Rowe**, Chairman and CEO, Exelon Corporation
- **Dr. Phil Sharp**, President, Resources for the Future, former Member of the House of Representatives (D-IN)

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Nuclear Waste: What's the Problem?

- America has been trying to figure out what to do with spent nuclear fuel and high-level waste for 50+ years
- Under current law, the federal gov't was supposed to start taking spent fuel by 1998
- Utility ratepayers have been paying for a solution that hasn't materialized while taxpayers face growing, open-ended liabilities
- The waste isn't going anywhere because we simply have no place to put it—and trust in the federal government's competence to manage this problem is all but gone

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Congress and the Administration must act to move beyond the current impasse

The waste exists.

We have an ethical, legal, and financial responsibility to manage and dispose of it safely, at a reasonable cost, and in a reasonable timeframe.

This was the driving impetus for the Commission. It is the basis for our shared sense of urgency about seeing our recommendations implemented.

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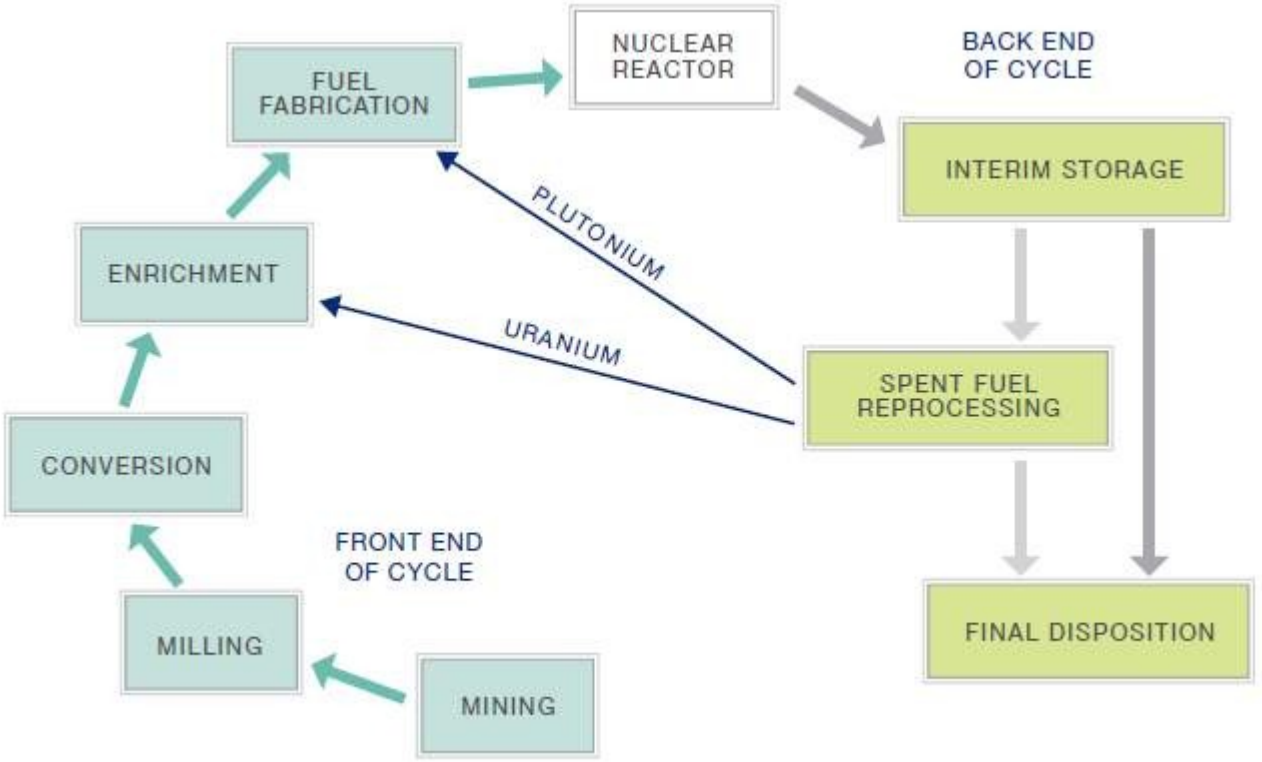
Nuclear Fuel Cycle



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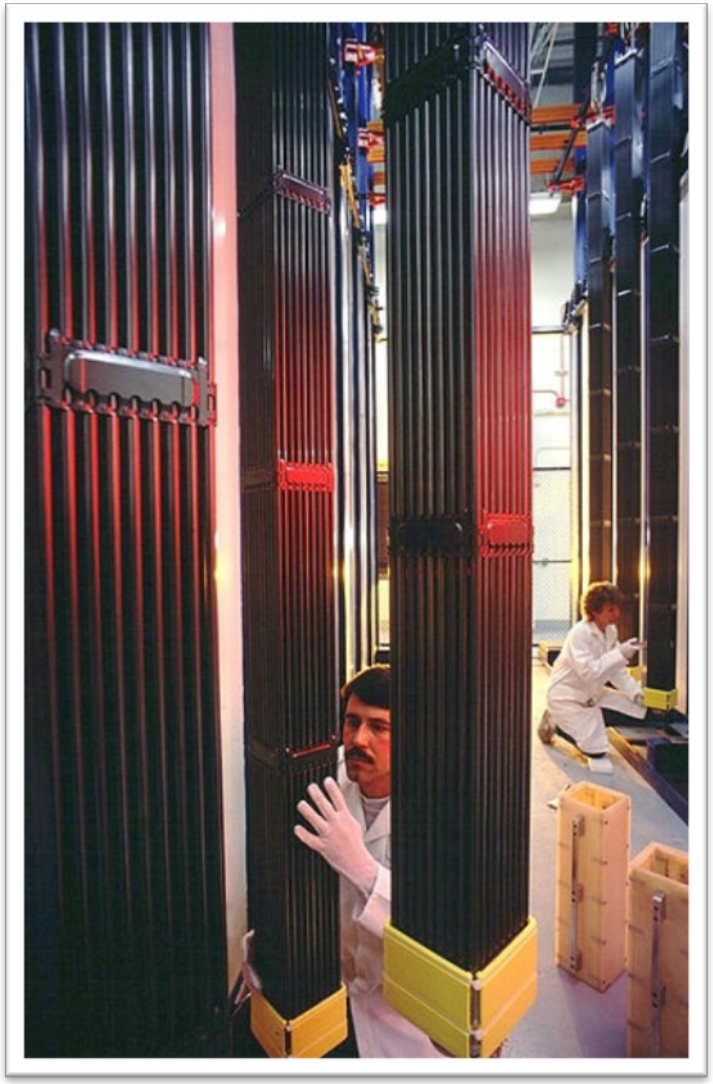
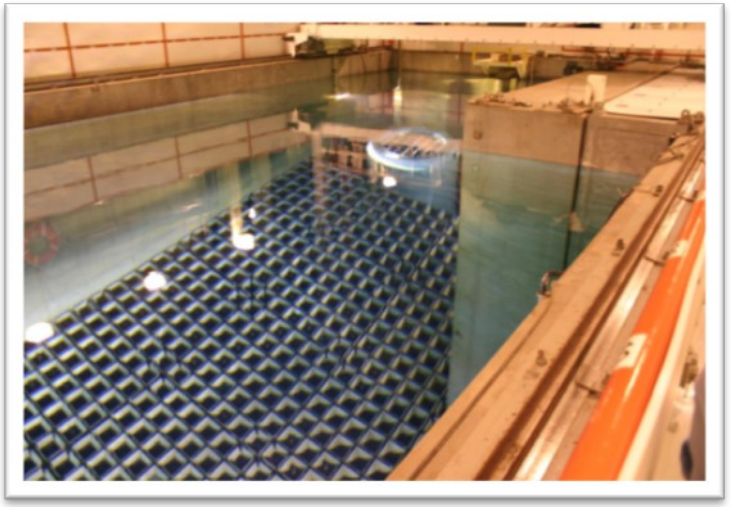
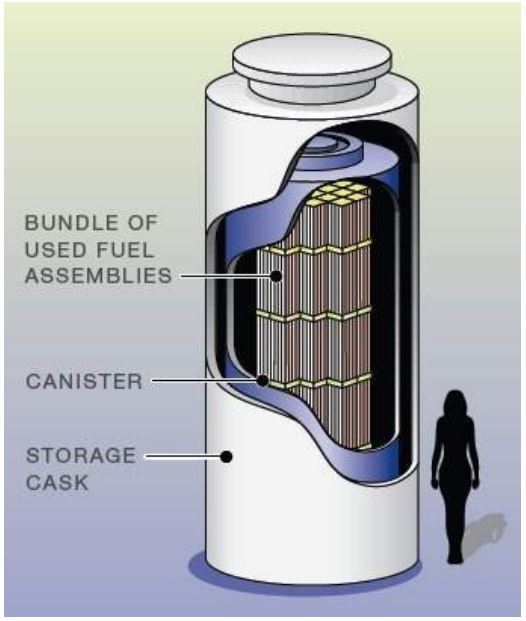
Nuclear Fuel







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Commercial nuclear reactors

Years of Commercial Operation	Number of Reactors
△ 0-9	0
▲ 10-19	10
▲ 20-29	42
▲ 30-39	52
× shutdown	11

Source: U.S. Nuclear Regulatory Commission

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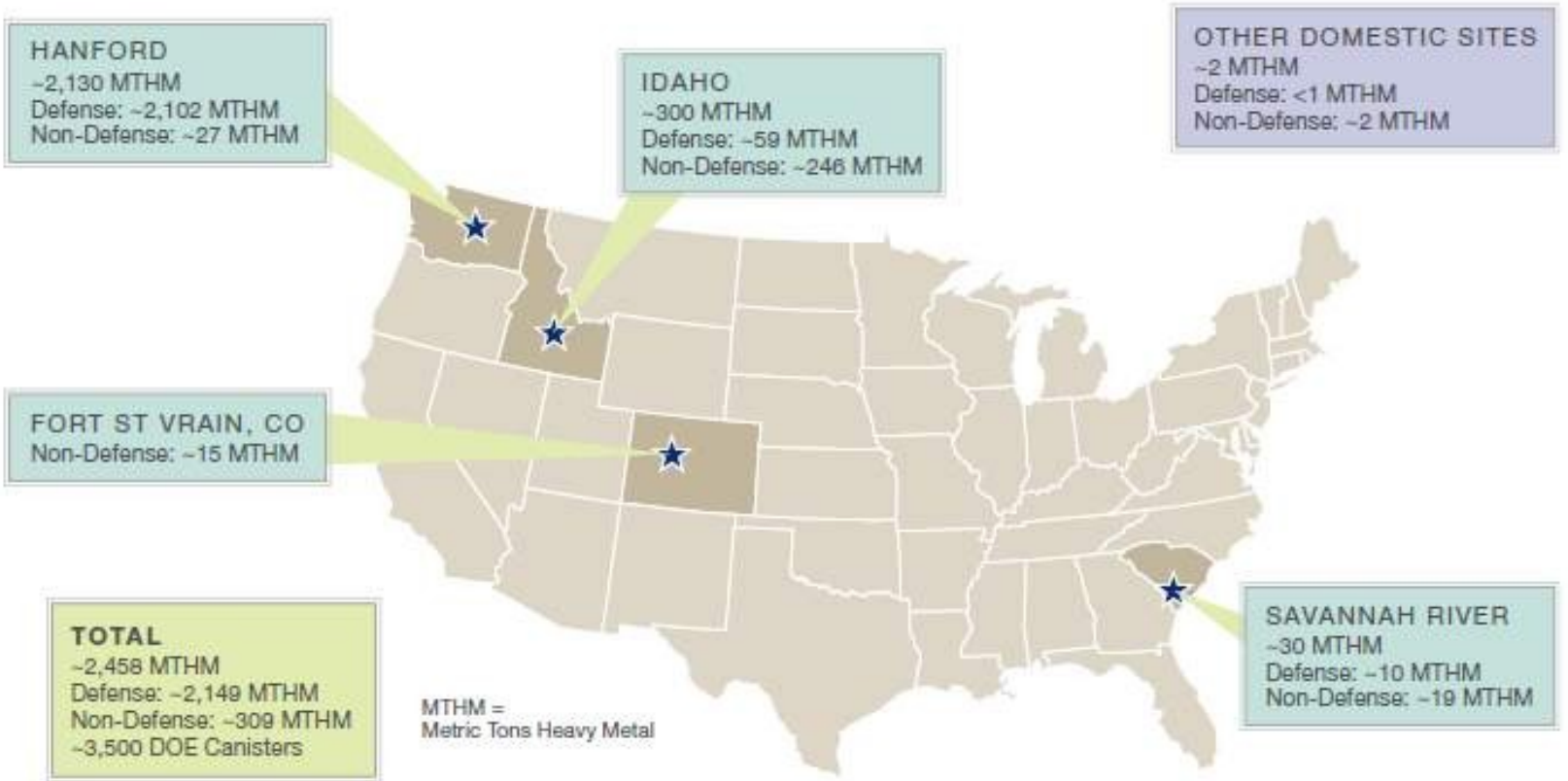
Current DOE SNF inventory



Source: BRC staff using information from DOE and other sources.

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U.S. High-level Wastes

Source: BRC staff using information from DOE and other sources.

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High-level Wastes

Source: UK Nuclear Decommissioning Authority website – see http://www.nda.gov.uk/ukinventory/waste/waste-now-hlw.cfm

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Commission Activities

- **Full Commission meetings/site visits - 2010:**
  - March – Where are we and how did we get here?
  - May – Getting the issues on the table; three subcommittees formed -- Reactor & Fuel Cycle Technology; Transportation & Storage, Disposal
  - July – Hanford Visit: a community's perspective
  - August – Maine Yankee site visit
  - September – Crosscutting issues: governance, siting, international implications, ethical & societal foundations
  - October – Visits to Sweden and Finland
  - November – International perspectives, working with the states, experts advice

Commission Activities

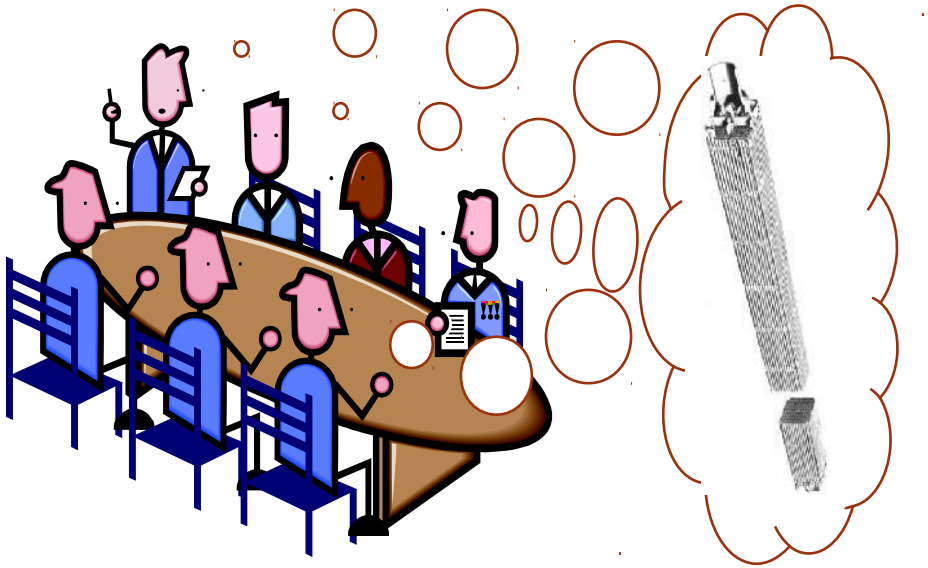
- **2011:**
  - January – Visits to SC/GA (Savannah River) and NM (WIPP)
  - February – Visits to Japan, Russia and France; meeting on crosscutting issues; organizational form and scope, siting, financial considerations
  - March – Issued staff-developed report on "What We've Heard"
  - May - NRC/DOE reviews post-Fukushima; discussion of draft subcommittee recommendations to the full Commission
  - June – Visits to UK, France; draft subcommittee reports issued
  - July – Draft report submitted to Secretary of Energy
  - September-October – regional public comment meetings
  - October-November – established *ad hoc* subcommittee to address commingling of defense and civilian wastes
  - December – Meeting to discuss responses to public comment

Overview of 8 Key Recommendations

1. A new, consent-based approach to siting and development

Overview of 8 Key Recommendations

2. A new organization dedicated solely to implementing the waste management program and empowered with the authority and resources to succeed



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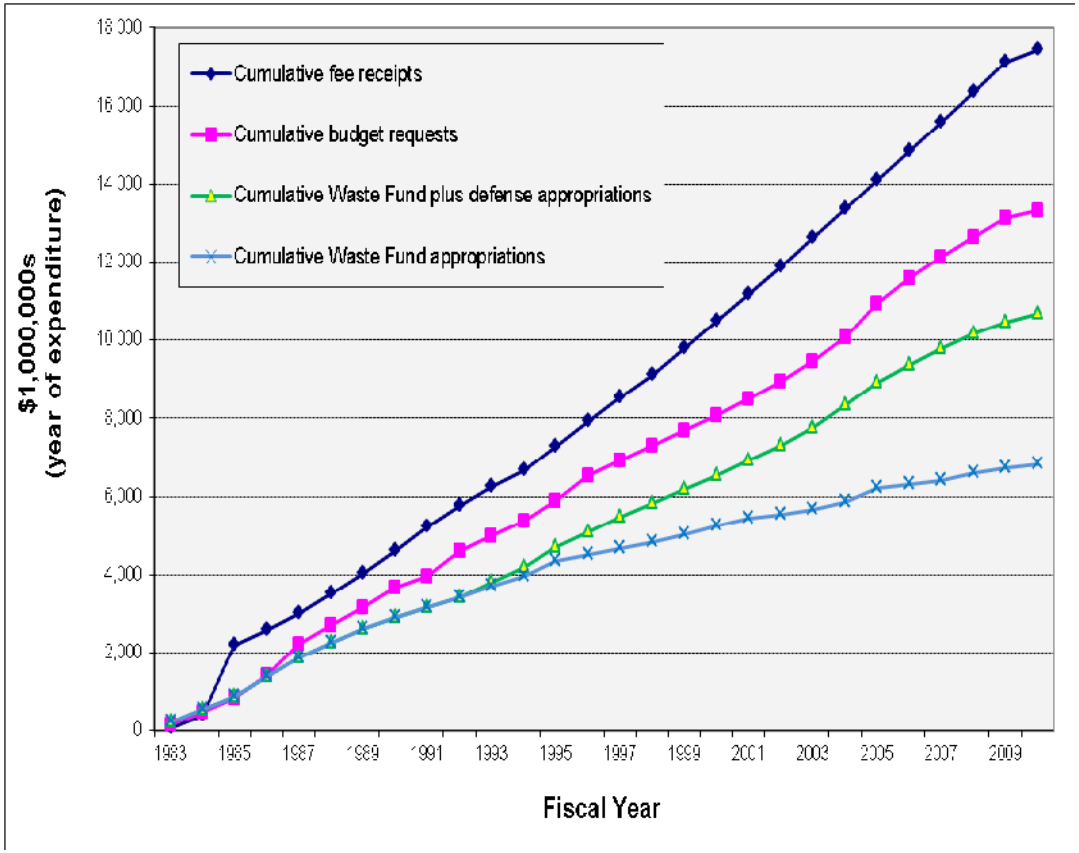
Overview of 8 Key Recommendations

3. Access to the funds nuclear utility ratepayers are providing for the purpose of nuclear waste management



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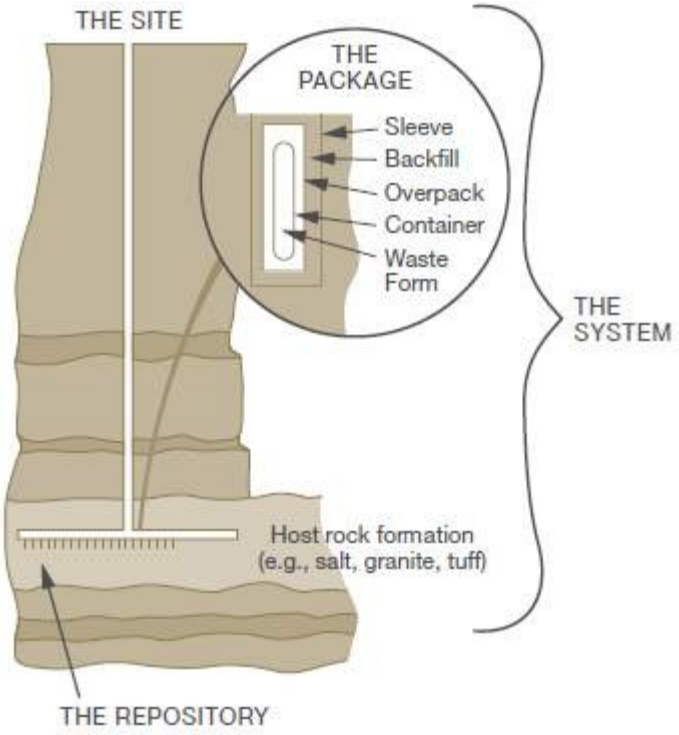
Overview of 8 Key Recommendations

4. Prompt efforts to develop one or more geologic disposal facilities



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Overview of 8 Key Recommendations

5. Prompt efforts to develop one or more consolidated storage facilities

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Overview of 8 Key Recommendations

6. Prompt efforts to prepare for the eventual large-scale transport of spent nuclear fuel and high-level waste to consolidated storage and disposal facilities when such facilities become available

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Overview of 8 Key Recommendations

7. Support for continued U.S. innovation in nuclear energy technology and for workforce development

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Overview of 8 Key Recommendations

8. Active U.S. leadership in international efforts to address safety, waste management, non-proliferation, and security concerns

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Proposed Legislative Changes

Fully implementing these recommendations will require changes to the NWPA or other legislation to:

- Establish a new facility siting process
- Authorize consolidated interim storage facilities
- Broaden support to jurisdictions affected by transportation
- Establish a new waste management organization
- Ensure access to dedicated funding
- Promote international engagement to support safe and secure waste management

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Empowering a New Waste Management Organization to Succeed

- Organizational form: several options; Commission recommends federally-chartered corporation
- Scope of mission: to site, license, build and operate facilities for the safe consolidated storage and final disposal of SNF and HLW and conduct related R&D
- Resources and authorities: substantial implementing authority and assured access to funds coupled with *rigorous technical, financial and regulatory oversight*
- Governance: board of directors nominated by the President, confirmed by Senate

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Siting New Facilities: Getting Started

The United States should begin siting new nuclear waste management facilities by:

- Developing a generic standard and supporting regulatory requirements EARLY in the process
- Developing a set of basic initial criteria
- Encouraging expressions of interest from a large variety of communities
- Establishing initial program milestones

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Getting to Consent: Navigating the Federal/State/Tribal/Local Rights Dilemma

- Participation in the siting process on a voluntary basis
- Roles and authorities of host states, tribes, and communities defined through a process of negotiation
  - Implementing organization has authority to enter into legally binding agreements
- Implementing organization provides financial and technical support for participation
- Substantial incentives are made available
- Meaningful consultation in all aspects of facility siting, development, and operation

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Conclusion

- The overall record of the U.S. nuclear waste program has been one of broken promises and unmet commitments
- The Commission finds reasons for confidence that we can turn this record around
- We know what we have to do, we know we have to do it, and we even know how to do it
- We urge the Administration and Congress to act on our recommendations, without further delay

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