



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

Strategy for the Management and Disposal of Used Nuclear Fuel and High-Level Radioactive Waste

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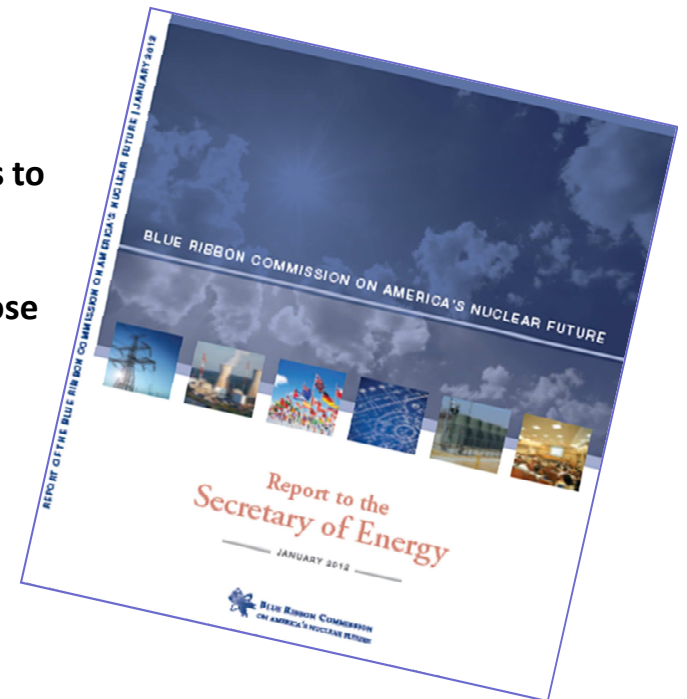
**Assistant Secretary for Nuclear Energy
U.S. Department of Energy**

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Blue Ribbon Commission Recommendations

1. A new, consent-based approach to siting future nuclear waste management facilities.
2. A new organization dedicated solely to implementing the waste management program and empowered with the authority and resources to succeed.
3. Access to the funds nuclear utility ratepayers are providing for the purpose of nuclear waste management.
4. Prompt efforts to develop one or more geologic disposal facilities.
5. Prompt efforts to develop one or more consolidated storage facilities.
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.
7. Support for continued U.S. innovation in nuclear energy technology and for workforce development.
8. Active U.S. leadership in international efforts to address safety, waste management, non-proliferation, and security concerns.



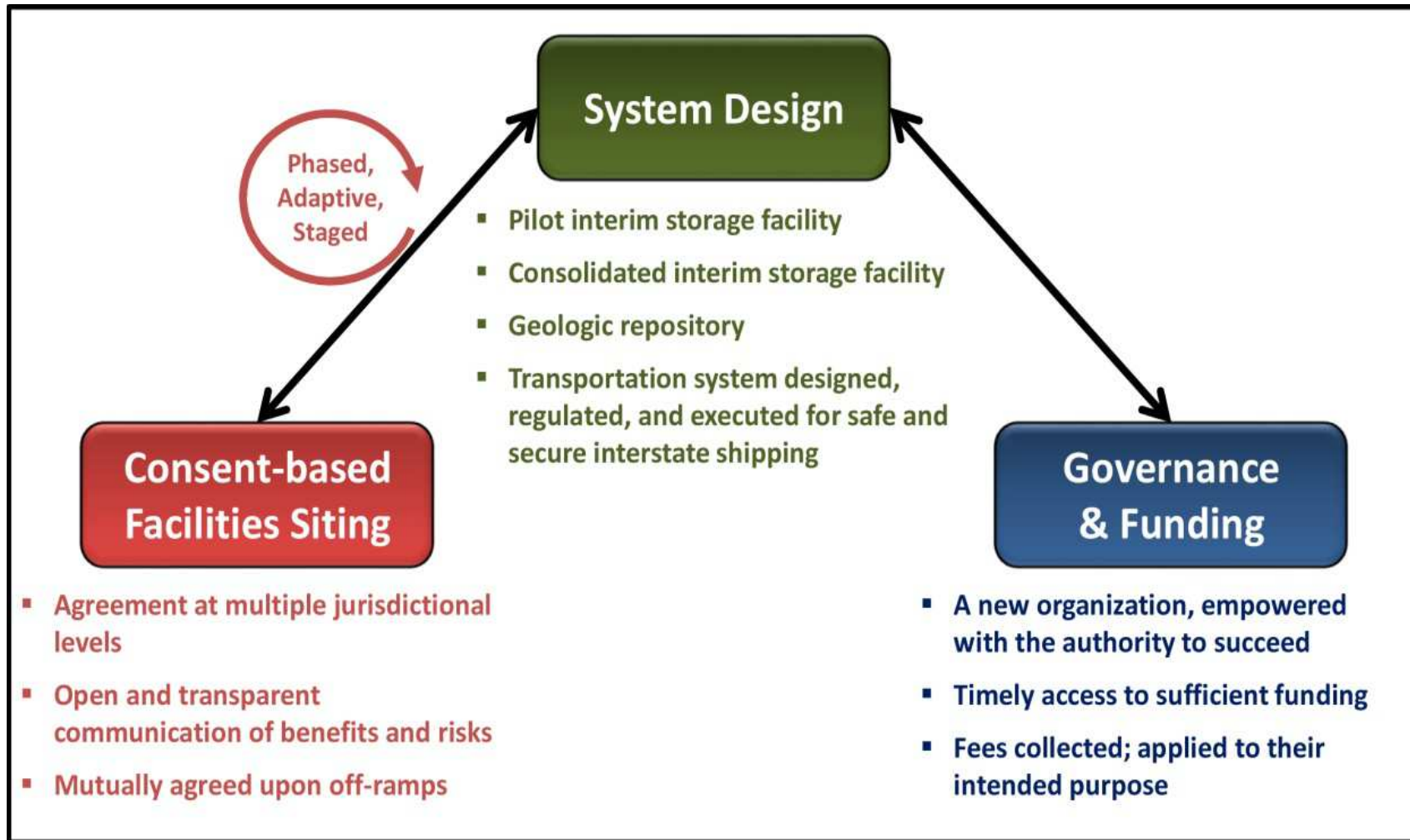


Summary of the Administration's UNF and HLW Strategy

- **Statement of Administration policy regarding the importance of addressing the disposition of used nuclear fuel and high-level radioactive waste**
- **Response to the final report and recommendations made by the *Blue Ribbon Commission on America's Nuclear Future***
- **Initial basis for discussions among the Administration, Congress and other stakeholders**
- **10-year program of work that:**
 - Sites, designs, licenses, constructs and begins operations of a pilot interim storage facility
 - Advances toward the siting and licensing of a larger interim storage facility
 - Makes demonstrable progress on the siting and characterization of geologic repository sites



Key Strategy Elements





Implementation: Geologic Disposal and Transportation

■ Geologic Repository

- Sited using consent-based process by 2026
- Designed and licensed by 2042
- Operational in 2048

■ Transportation

- Build on experience in industry and with WIPP
- Capability to service facilities safely and securely
- Ongoing planning activities provide foundation for implementation

■ One of each facility for now, possible additions based on consent-based process



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Conclusion: Legislation Needed for Implementation

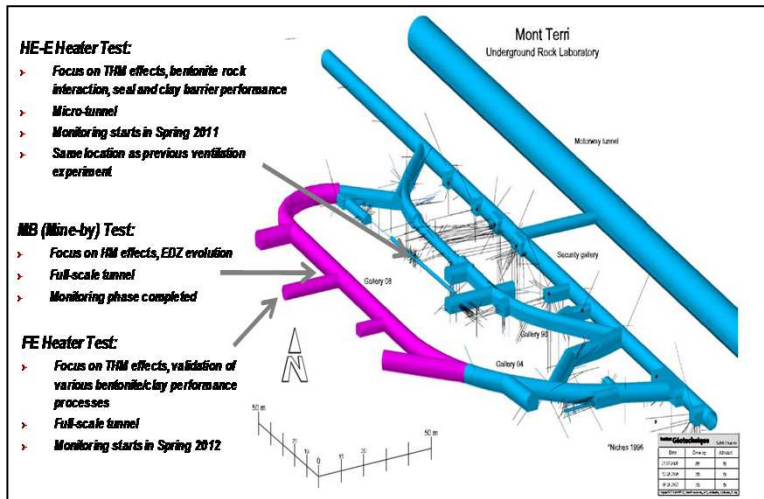
- **Active engagement in a broad, national, consent-based process to site storage and disposal facilities**
- **Siting, design, licensing, and commencement of operations at a pilot-scale storage facility**
- **Significant progress on siting and licensing of a larger consolidated interim storage facility**
- **Development of transportation capabilities to begin movement of fuel from shut-down reactors**
- **Reformation of the funding arrangements**
- **Establishment of a new organization to run this program**



Activities in Disposal – International Collaboration

Formal collaborative R&D arrangements with ongoing programs in Europe and Asia

Major current or soon-to-be started experiments



- Mont Terri: Underground research laboratory in clay (Switzerland)
- Grimsel: Colloid Formation and Migration Project in granite (Switzerland)
- DECOVALEX: (Development of Coupled Models and their Validation against Experiments)
- KAERI Underground Research Tunnel: Borehole Geophysics (South Korea)
- SKB: Task Forces on Groundwater Flow and Engineered Barriers at Aspo Hard Rock Laboratory (Sweden)
- BMWi: Data exchange for salt repositories at Gorleben and WIPP (Germany)
- ANDRA: Natural and Engineered Barriers in clay and shale (France)