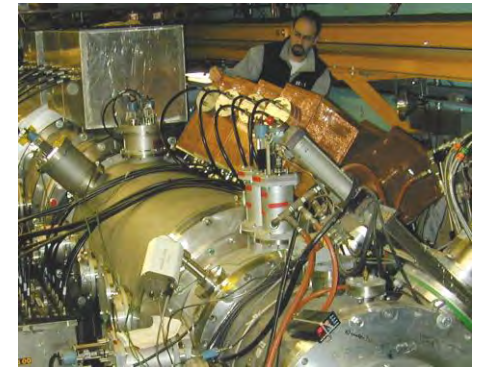


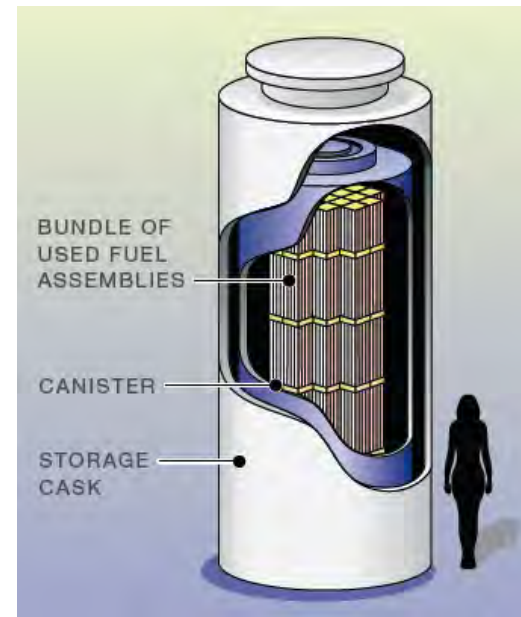
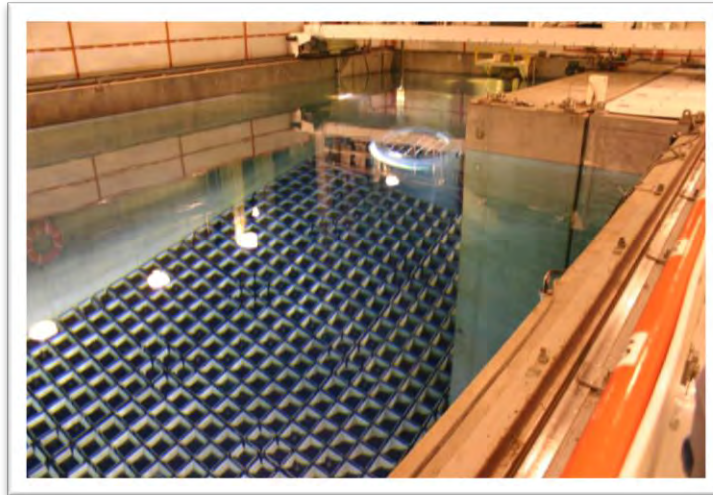
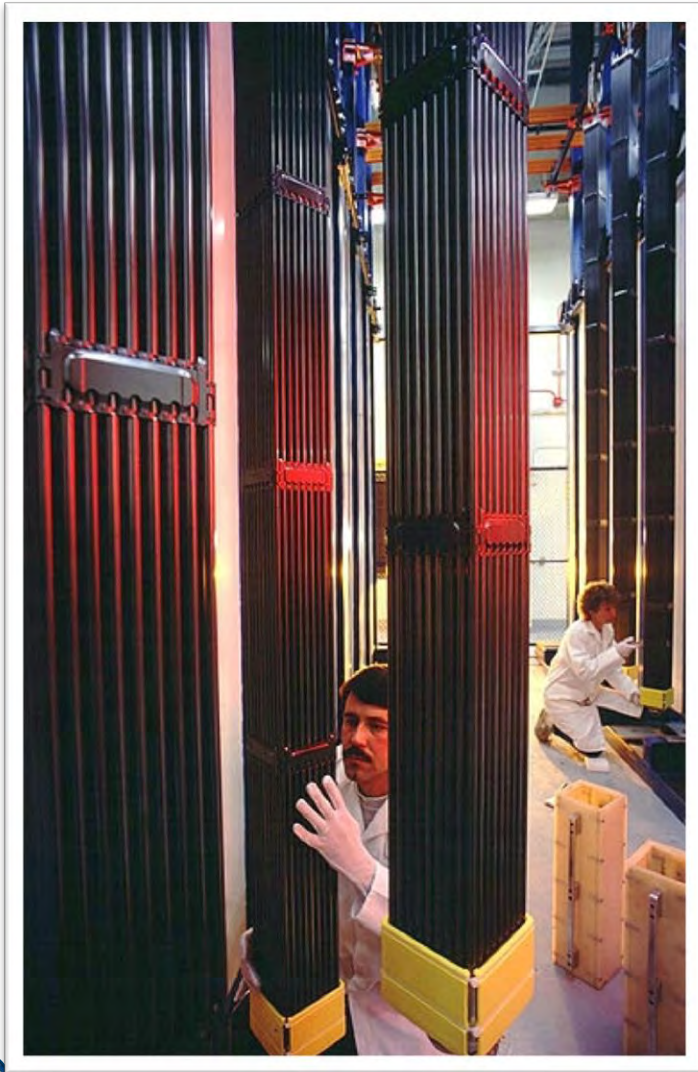
# Current Status for U.S. Nuclear Waste Policy

Per F. Peterson  
Professor  
Department of Nuclear Engineering  
University of California, Berkeley

Community Engagement Panel  
May 6, 2014



# Nuclear Fuel



# Recommendations from the Blue Ribbon Commission on America's Nuclear Future



# Blue Ribbon Commission

- The 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
- Delivered final report with recommendations to the Secretary of Energy on January 29, 2012



# Members

- **Lee Hamilton**, Co-Chair - Director of The Center on Congress at Indiana University, former Member of Congress (D-IN)
- **Brent Scowcroft**, Co-Chair - President, The Scowcroft Group, and former National Security Advisor to Presidents Gerald Ford and George H.W. Bush
- **Mark Ayers**, President, Building and Construction Trades Department, AFL-CIO
- **Vicky Bailey**, Former Commissioner, Federal Energy Regulatory Commission; Former Indiana PUC Commissioner; Former DOE Assistant Secretary for Policy and International Affairs
- **Albert Carnesale**, Chancellor Emeritus and Professor, UCLA
- **Pete V. Domenici**, Senior Fellow, Bipartisan Policy Center; former U.S. Senator (R-NM)
- **Susan Eisenhower**, President, Eisenhower Group, Inc.
- **Chuck Hagel**, Distinguished Professor at Georgetown University, Former U.S. Senator (R-NE)
- **Jonathan Lash**, President, World Resources Institute
- **Allison Macfarlane**, Assoc. Professor of Environmental Science and Policy, George Mason Univ.
- **Richard A. Meserve**, President, Carnegie Institution for Science, and former Chairman, U.S. NRC
- **Ernie Moniz**, Professor of Physics and Cecil & Ida Green Distinguished Professor, MIT
- **Per Peterson**, Professor and Chair, Dept. of Nuclear Engineering, Univ. of California - Berkeley
- **John Rowe**, Chairman and Chief Executive Officer, Exelon Corporation
- **Phil Sharp**, President, Resources for the Future; former Member of Congress (D-IN)



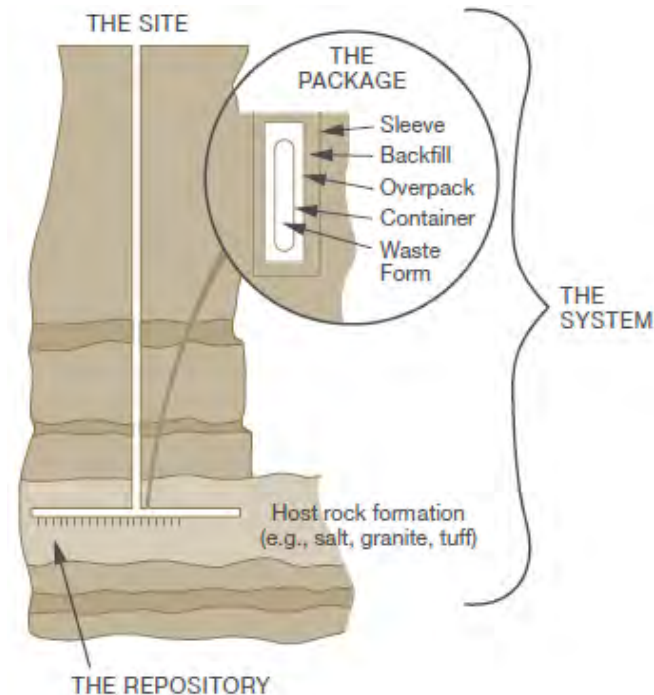
# Overview of 8 Key Recommendations

1. A new, consent-based approach to siting and development
2. A new organization dedicated solely to implementing the waste management program and empowered with the authority and resources to succeed



# Overview of 8 Key Recommendations

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



# 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

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





# Current Major Legal Actions

- **DC Court of Appeals: Lawsuits against DOE seeking payments for interim storage costs resulting from partial breach of contract**
  - Lawsuits ongoing, \$21 billion liability by 2020.
- **DC Court of Appeals: Lawsuit against DOE seeking suspension of the collection of the Nuclear Waste Fund Fee**
  - On Nov. 19, 2013, the court ordered DOE to suspend collection of the fee (DOE letter sent to Congress Jan. 3, 2014)
- **DC Court of Appeals: Lawsuit resulting in mandamus order to NRC to restart of Yucca Mountain License Review**
  - NRC now plans to publish the YM Safety Evaluation Report
  - NRC has asked DOE to complete the Environmental Impact Statement
- **NRC Nuclear Waste Confidence Rule**
  - Currently licensing of new reactors is suspended
  - NRC plans to publish Final Waste Confidence Rule Oct. 3, 2014



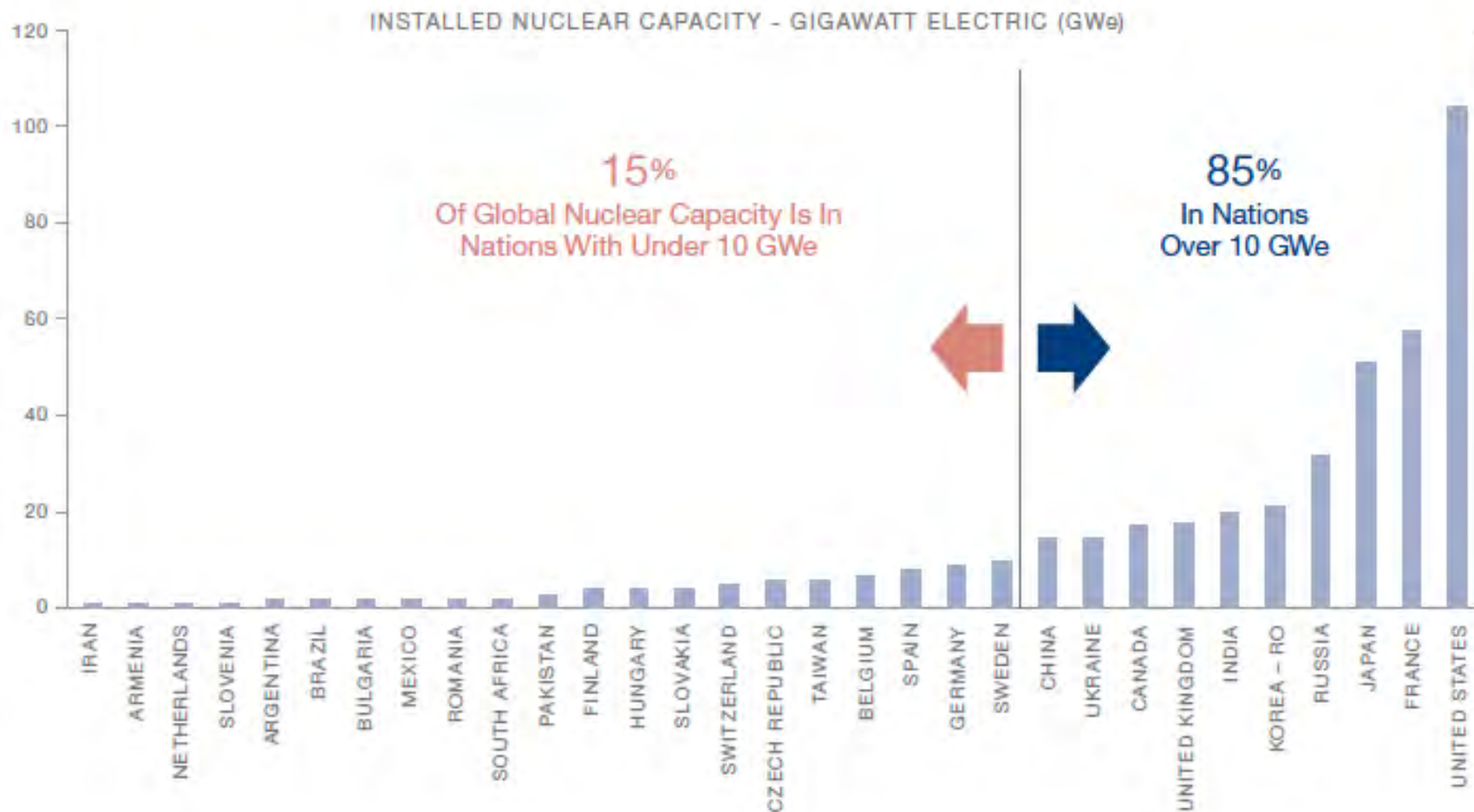
# Senators Wyden, Murkowski, Alexander and Feinstein released a discussion-draft bill in 2013

- This “Nuclear Waste Administration Act of 2013” would:
  - Create a new Nuclear Waste Administration agency
    - » Administrator serves for a 6-year term and can be reappointed
    - » Oversight by a Nuclear Waste Oversight Board
  - Authorize the agency to enter into consent agreements with state, local, and tribal governments, subject to ratification by Congress
  - Create an new Working Capital Fund to hold future Nuclear Waste Fund receipts
  - Direct the agency to initiate a consent based process to site new consolidated storage and geologic disposal facilities
  - Does not fund any additional work for Yucca Mountain (not an appropriations bill), but also did not preclude any future decision by Congress to restart the Yucca Mountain project



# Future spent-fuel safety and security issues may be dominated by the many nations with small amounts

FIGURE 20. WORLDWIDE DISTRIBUTION OF CIVIL NUCLEAR ENERGY GENERATION CAPACITY IN 2010<sup>28B</sup>



# Observations and Conclusions

- **Strong scientific consensus exists that deep geologic disposal in stable formations can provide safe, long-term isolation of high level waste and spent fuel**
  - Sweden and Finland have successfully developed and licensed geologic repositories
  - The U.S. nuclear waste program has collapsed and requires Congressional action to restart
  - Senator Feinstein has sponsored legislation that goes in the correct direction
- **California currently has spent fuel stored at 3 shut down reactors and one operating reactor**
  - The federal government is likely to prioritize shut down reactors for removal of spent fuel once the capability is developed
  - California should think about how it would prefer to prioritize transportation activities between SONGS, Rancho Seco, and Humbolt Bay

