

A decorative background consisting of several overlapping, flowing blue waves of varying shades, creating a sense of movement and depth.

# *The Blue Ribbon Commission Report – The Devil Is in the Details*

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# Discussion Outline

- Big Picture – Blue Ribbon Commission (BRC) Eight Elements
- The Devil Is in the Details (But So Is Salvation) \*
  - Transportation and storage
  - Intergenerational equity
  - New, improved siting
  - Repository safety and performance standards
  - Research and development
- Moving Past “Just Another Report”

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# Big Picture – The “Eight Elements”

1. New, consent-based siting
2. New waste management organization
3. Access to Nuclear Waste Fund
4. Geologic disposal facility
5. Consolidated storage facility
6. Prepare for transportation
7. Support for innovation (research and development)
8. United States leadership in nuclear technology

# The Devil Is in the Details – Transportation and Storage

- "... the safety record for past shipments of these types of materials is excellent."
- "The current system of standards and regulations governing the transport of spent fuel and other nuclear materials appears to have functioned well."
  - Well, not so fast!
- Current regulatory structure is
  - Arbitrary
  - Cumbersome
  - Inflexible
  - Not risk informed
- United States transportation and storage regulations in their present form will not support the large-scale transportation and storage activities required to carry out other elements of used fuel management, including consolidated storage and disposal in a geologic repository

# The Devil Is in the Details – Intergenerational Equity

- “The generation that created these wastes and benefitted from the activities that produced them have an obligation to ensure that the entire burden of providing for their disposal does not fall to future generations.”
- Implication – The country should act now to establish a working system for management of used fuel and high-level waste
- Problem
  - The federal government shut down its civilian radioactive waste management program in 2010
  - Some people and institutions are advocating a “wait and research” approach
  - The Nuclear Regulatory Commission (NRC) plans to assess the environmental effects of 300 years of storage
- Similar to Will Rogers’ observation on the weather, everybody talks about nuclear waste, but nobody is doing anything about it

# The Devil Is in the Details – New, Improved Siting

- The BRC proposes siting should be consent-based, transparent, phased, adaptive, standards- and science-based, governed by agreements
  - International experience in Finland, Sweden and Spain
- The elephant in the room – state opposition
  - Downfall of Yucca Mountain
  - Downfall of Private Fuel Storage
  - Source of long delay at WIPP
- “... the potential host community, tribe, and state would have had to consent to be considered for a waste site, with full knowledge of the relevant safety standards and siting criteria.”
  - Safety standards do not exist
  - Siting criteria do not exist
  - No apparent reason to expect state opposition to go away

# The Devil Is in the Details – Repository Safety and Performance Standards

- The current generic repository standards (40 CFR part 191) are generally acknowledged as outdated, inscrutable, inconsistent with international standards and current best practice and, therefore, unsuitable for application to future U.S. repositories
- Dual agency approach to standards in the U.S.
  - The Environmental Protection Agency (EPA) establishes standards
  - The NRC determines compliance with the standards
- The BRC wants to retain this approach for establishing new generic repository standards, but ...
  - The BRC wants the generic standards in place prior to siting a repository
  - It took 25 years to put standards in place for Yucca Mountain

# The Devil Is in the Details – Research and Development

- “The Commission believes the general direction of the current DOE research and development (R&D) program is appropriate ...”
- The BRC declined to endorse a particular fuel cycle option; instead, it calls for keeping options open by continuing research, development and demonstration (RD&D)
- Concerns with this approach
  - From comments on the BRC Draft Report - “Duke Energy does not believe that decades more of pure research and development are necessary or advisable. Instead, Duke Energy advocates a program that emphasizes the last “D” in RD&D, including a near-term domestic used fuel recycling demonstration project. Recognizing that the nuclear fuel cycle will evolve, it is important to keep the recycling option feasible and available in this country, and that cannot be done solely with more research and development.”



# Moving Past “Just Another Report”

- The Department of Energy (DOE) is the federal government institution charged with managing used nuclear fuel and high-level radioactive waste
  - DOE stopped all pertinent work in 2010
  - The 2013 Administration budget proposal contains \$60 million for post-BRC work
- There have been no substantive statements by President Obama or Secretary Chu on high-level waste since the BRC issued its report
- There is no clear path for legislation, which would be necessary to implement a number of the BRC recommendations
- Now is the time for government leadership on this issue – Who is the leader?