

Highlights of Report on Blue Ribbon Commission on America's Nuclear Future

Jeff Miller

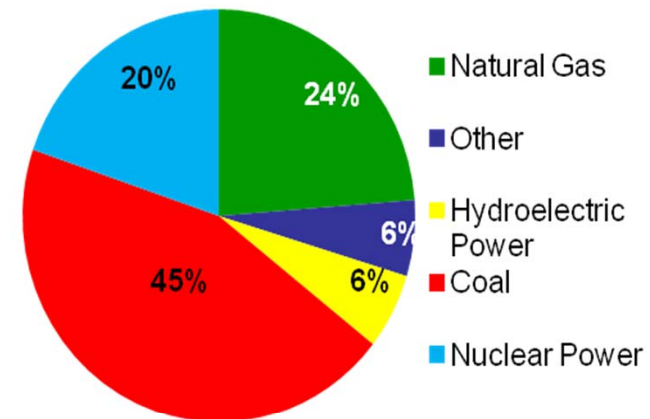
Director, DOE Japan Office

March 13, 2012

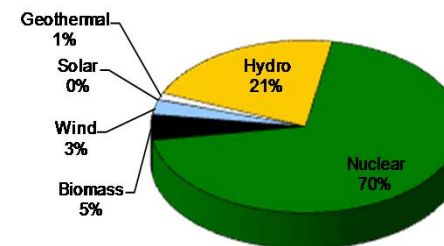
Nuclear Power in the United States

- 104 operating commercial nuclear power reactors
- 20 percent of total electricity generation
- 70 percent of our carbon free energy

Power Generation by Source,
2010



Net Non-emitting (CO₂)
Sources of Electricity



Source: Energy Information Administration

Current Nuclear Waste Landscape

- Fleet generates between 2,000 and 2,400 metric tons of SNF annually
- Virtually all SNF stored on site in pools or casks
- ~65,000 metric tons of commercial waste (and growing)

Current Nuclear Waste Environment

- Nuclear Waste Policy Act
- NIMBYism
- Industry is frustrated

Bottom Line: No interim or permanent disposal path

Nuclear Waste Policy Act Highlights

- Quid Pro Quo (Nuclear Waste Fund)
 - “Polluter pays” provision—no taxpayer impact
 - Government commitment to accept waste
- Approximately USD \$750 million in annual revenues
- Approximately USD \$27 billion total

The BRC notes that fund is inaccessible to DOE as fees are treated like tax revenue by Congress and use to off-set the deficit. Waste management programs are funded through normal appropriations.

Nuclear Waste Policy Act Highlights

- Calls for two repository sites with the first limited to 70,000 metric tons until the second is open
- Allows for consolidated interim storage facility after a repository has been licensed
- NRC responsible for licensing construction and operation; EPA responsible for environmental standards
- Amendments in 1987 designated Yucca Mountain as the sole site despite Nevada's opposition

Blue Ribbon Commission Task

- Bipartisan composition
- Review policies for back end of the nuclear fuel cycle and recommend new ideas
- Recommend new strategies

Directed by President Obama in January 2010; Final Report to DOE Secretary Chu in January 2012

Systemic Change Required

- Responsibility to current generation



**Links to nuclear
safety, security
and disarmament**

- Responsibility to future generations



**Links to
environmental
protection**

Energy Security is Key Consideration

Key Recommendations

- Consent-based approach to siting
- A new organization dedicated to waste management
- Prompt efforts to develop one or more geologic disposal and consolidated interim storage facilities
- Support for continued U.S. innovation in nuclear energy technology and for workforce development
- Active U.S. leadership in international efforts to address safety, waste management, non-proliferation, and security concerns

Consent-Based Approach to Siting

- WIPP is a good model (supportive government and community)
- Consent-based
- Transparent
- Phased
- Adaptive
- Generic standards and science-based



New Waste Management Organization

- Federal corporation chartered by Congress for a single purpose
- Site, license, construct and operate facilities for disposition of civilian and defense HLW and SNF
- Responsibility for transport
- Responsibility for research and development

Interim Consolidated Storage

- Timely development of one or more facilities
- Monitored retrievable storage can be sited and designed under NPWA
- Amendment to NPWA required to allow for construction before licensing of a repository
- Supports lessons learned on Fukushima
- Supports nuclear security
- Supports repository program

Noteworthy Items

- No position on recycling
- No position on suitability of Yucca Mountain as a geologic repository
- No specific proposals for repository sites
- No position on nuclear in US future energy mix

Conclusion

- Systemic changes recommended
- Recommendations are being studied
- Timeline for implementation unclear