

Securing Our Future: Protecting the Environment from Nuclear Waste and Power



YUCCA MOUNTAIN

Yucca Mountain in Nevada is the only site under consideration for disposal of the nation's high-level nuclear waste. Congressional politics singled out Yucca Mountain in the 1987 amendments to the Nuclear Waste Policy Act. More than 25 years of scientific analysis has revealed significant problems with the Yucca Mountain site located just 65 miles from Las Vegas.

In mid-2008, the U.S. Department of Energy (DOE) applied to the Nuclear Regulatory Commission (NRC) for a construction and operating permit for Yucca Mountain. The largest ever NRC licensing proceeding would last three to four years. In late 2008, the Environmental Protection Agency (EPA) finalized its radiation release regulations. The latest in a long string of Yucca "double standard standards," the EPA regulations would allow a six-fold increase in "permissible" radiation doses to distant future generations as compared to current generations, and do so during the expected peak dose period. This violation of inter-generational equity is being challenged in federal court by the State of Nevada, which also has over 200 technical contentions against the proposal.

In recent years, Congress has limited funding for Yucca Mountain. President Obama's FY 2010 budget proposal largely eliminates funding for the dump, and the administration has said that Yucca Mountain will not proceed.

Energy Secretary Steven Chu is currently establishing a blue ribbon commission to re-evaluate radioactive waste management policy in light of Yucca's demise. The nuclear industry will advocate for reprocessing spent nuclear fuel and for "centralized interim storage" as alternatives to Yucca. But reprocessing risks nuclear weapons proliferation and environmental devastation, as well as astronomical costs to taxpayers. It would also risk severe accidents or attacks upon transports, as would "centralized interim storage," likely at DOE sites or Native American reservations. These concentrated "parking lot dumps" for indefinite surface storage would also be vulnerable to terrorism.

Recommendations

- Terminate the Yucca Mountain Project.
- Oppose radioactive waste reprocessing and unnecessary centralized interim storage proposals.
- Institute hardened on-site storage for spent nuclear fuel.
- Stop the nuclear industry bailout for new reactors, including federal loan guarantees, and other subsidies such as from the proposed "Clean Energy Bank".
- Support phase-in of an efficient non-polluting renewable-powered energy system.

NEW REACTORS COSTS KEEP RISING

The last completed order for a commercial reactor in the U.S. was placed in 1973. But the Bush Administration made the nuclear industry's coveted "nuclear renaissance" a top priority. The 2005 Energy Policy Act contained \$13 billion in subsidies, tax incentives, and other public support for new reactors. An additional \$18.5 billion for new reactors, and \$2 billion for new uranium enrichment facilities, in the form of federal loan guarantees (making taxpayers the co-signers on these financially risky projects), was approved in 2007. In late 2008, the nuclear industry requested more than \$100 billion of additional loan guarantees, for over 20 new reactors. It has lobbied Congress for between \$50-500 billion, enough to finance the more than 33 new reactors currently on nuclear utility drawing boards.

New nuclear power facilities threaten to gobble up the lion's share of taxpayer funding from the newly proposed federal "Clean Energy Bank," leaving only the crumbs for cheaper, faster, cleaner and safer climate solutions like efficiency and renewables.



A vital tool for opposing a taxpayer-subsidized "nuclear renaissance" is Dr. Arjun Makhijani's *Carbon-Free and Nuclear-Free: A Roadmap for U.S. Energy Policy* (Institute for Energy and Environmental Research, 2007). The book proves that it is economically and technically feasible to phase out not only nuclear power but also fossil fuels by mid-century. In order to meet vital climate protection goals, increased energy-use efficiency and various forms of renewable power can take their place.

HARDENED ON-SITE STORAGE

Given Yucca Mountain's unsuitability plus the risks of centralized interim storage and reprocessing, the question remains as to what can be done with the approximately 60,000 metric tons of irradiated nuclear fuel stored at commercial reactors.

Hardened On-site Storage (HOSS) is one good alternative. HOSS recognizes that irradiated nuclear fuel stored in densely packed pools risks catastrophic radioactivity releases, if the cooling water is drained away due to accident or attack. But it also acknowledges that current outdoor dry cask storage is itself not designed to withstand attack. Thus, HOSS calls for pools to be thinned out and wastes transferred to camouflaged and fortified dry cask storage as soon as possible. HOSS would be an interim measure reducing vulnerabilities for the next several decades. During that period wastes would inevitably remain at reactor sites regardless of which direction management policy goes since it would take decades to transport wastes to an offsite facility. More than 150 environmental groups have signed onto the Statement of Principles for Safeguarding Nuclear Waste at Reactors, endorsing HOSS.