

# What are the alternatives to Yucca Mountain?

*The Board of County Commissioners for Clark County has passed resolutions opposing the Yucca Mountain Project since 1985.*

Yucca Mountain has not yet been approved for construction. The Department of Energy needs licenses from the U.S. Nuclear Regulatory Commission (NRC) to construct and operate the repository. The DOE is currently preparing its license application and plans to submit it to the NRC by June 30, 2008.

The nuclear industry plays a major role in the nation's energy mix. How and where to store spent nuclear fuel has been an ongoing national challenge for decades.

## **Will Yucca Mountain solve the waste disposal problem?**

Even if Yucca Mountain is approved and constructed, it would take decades before spent fuel inventories are depleted. If it were filled to the existing legal capacity of 70,000 metric tons, Yucca Mountain could not contain all the nuclear waste that will be generated by existing reactors. There are currently 65 operating reactor sites in 31 states. As long as nuclear reactors are operating, there will continue to be spent fuel stored. Right now, there are more than 56,000 tons of high-level nuclear waste stored around the country at about 70 locations (dry cask and pool storage), and increasing by more than 2,000 tons per year. This figure does not include any new reactors that are in the planning stage.

## **Are there other disposal methods?**

Some alternatives to geologic storage at Yucca Mountain have been suggested, including transmutation and reprocessing. Transmutation converts long-lived waste elements into material with a shorter half-life. Reprocessing recycles useable isotopes such as uranium and separates out other isotopes that can be more readily disposed of. Under the proposed Global Nuclear Energy Partnership plan, spent fuel would be reprocessed and selected isotopes used by advanced reactor technology.

These alternatives are as yet unproved and costly. Additionally, both transmutation and reprocessing produce liquid high-level waste as a byproduct. Although the overall volume of high-level waste would be reduced in these processes, the resulting liquid waste would still require treatment and disposal.

Dry cask storage is recognized as a reasonable alternative. The NRC has determined that spent nuclear fuel can be safely stored at reactor sites for decades into the future, allowing time for the development of other potential waste disposal technologies.



**CLARK COUNTY**  
Department of Comprehensive Planning  
Nuclear Waste Program  
[www.accessclarkcounty.com](http://www.accessclarkcounty.com)

