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U.S. Panel Shifts Focus to Reusing Nuclear Fuel

By **MATTHEW L. WALD**

OXON HILL, Md. — With a federal plan to handle nuclear waste in deadlocked disarray, an advisory panel that has spent 20 years studying a proposed repository at [Yucca Mountain](#) turned Wednesday to discussing ways of reusing the fuel instead.

But the meeting of the panel, the Nuclear Waste Technical Review Board, made evident that such reuse was uncertain, along with the future of Yucca Mountain, in Nevada, about 100 miles from Las Vegas.

The board heard presentations from three major nuclear companies on strategies for sorting out the components of nuclear waste: burying some, recovering others for use as fuel and putting some in reactors to be transformed into materials that are easier to handle.

But developing such plans would take decades, experts said, and deciding which path to follow would depend in part on the kind of rock chosen for burial.

Yucca Mountain, a ridge of volcanic rock, has been the main focus of a federal program that has spent \$10.4 billion seeking a repository for nuclear waste.

Opposition to such a repository has been fierce in Nevada, and [President Obama](#) spoke out against the project during his campaign. In February, he released a proposed budget cutting off most of the money for Yucca Mountain and promised to appoint a commission to look into alternatives.

But even that has been delayed. B. John Garrick, the chairman of the Nuclear Waste Technical Review Board, established by Congress in 1987, said the White House had announced plans for a panel to review [NASA](#) about the same time it pledged to form the blue-ribbon commission on nuclear waste. The space flight board has already been appointed, done its work and announced its findings, he said.

“Anything nuclear is just very difficult, it seems,” Mr. Garrick said.

Some experts on the nuclear industry have speculated that elected officials might prefer a report that comes after the midterm elections in 2010, because the commission could recommend proceeding with Yucca Mountain.

Meanwhile, the government is continuing to pursue an operating license for Yucca, although the proposed financing for that work was slashed at the behest of the Senate majority leader, [Harry Reid](#) of Nevada, a strong opponent of the project. Mr. Reid wants limited financing for the federal fiscal year beginning on Oct. 1 and none at all for the year after that.

Apart from disagreement about how and where the nation’s nuclear waste should be disposed of, the basic financing for the program is now in question.

In the early 1980s, the federal government signed contracts with all the nuclear utilities, agreeing to have the Energy Department begin taking the waste in 1998 with the utilities paying a tenth of a cent per kilowatt-hour made in their nuclear reactors.

But without Yucca Mountain, the government is unlikely to start taking the waste for many years, and in July, some utilities told the government they wanted to stop paying. Some state utility regulators sided with the utilities.

The nuclear waste fund now amounts to about \$22 billion, and some nuclear companies want that money diverted to research on new technologies for processing waste.

Christopher Kouts, acting director of the Office of Civilian Radioactive [Waste Management](#) at the Energy Department, said the program had cut its staff by 2,000 people over 18 months and had 700 remaining, some of whom are now looking for more secure jobs.

While his office is continuing to seek a license for Yucca from the [Nuclear Regulatory Commission](#), he said, it may not have enough staff members to answer all the commission’s questions.

That leaves unclear whether the mountain’s suitability as a waste repository will ever be determined.

The Technical Review Board, which holds public meetings about three times a year, on Wednesday therefore focused on alternative strategies like building a new class of reactors that could accept the “spent” fuel from existing reactors, deriving some energy from the wastes and breaking down the most difficult, long-lived materials into elements that are easier to handle.

But the basic premise of reuse is open to question, said Ernest J. Moniz, a professor at the [Massachusetts Institute of Technology](#) and a former deputy secretary of energy.

He told the group that most of the thinking on reusing the fuel dated from decades ago, when uranium was thought to be scarce. But now, “roughly speaking, we’ve got uranium coming out of our ears, for a long, long time,” Professor Moniz said.

Rodney Ewing, a professor of geology at the [University of Michigan](#), said that the nuclear waste problem should be resolved promptly so the industry could play a role in fighting [global warming](#), but that the selection process should be scientific and not political like the decision on Yucca.

While Yucca Mountain is isolated and in a desert, experts say that chemical conditions there and water flows present major problems.

“We’ve now demonstrated that there’s no straightforward process by which these decisions will be made,” Professor Ewing said.

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