

## NUCLEAR POWER

## DOE Asked to Fill in the Blanks on Fuel Recycling Research Plan

The Bush Administration's plans for a grand research program aimed at eventually recycling nuclear waste aren't ready for prime time, legislators said at a pair of hearings last week. But they seem willing to support at least most of the \$250 million price tag for next year.

Dubbed the Global Nuclear Energy Partnership (GNEP), the program was launched in February as a high-tech effort to expand nuclear power globally. At its technical core is a move to reprocess nuclear waste to extract fuel to be burned in so-called fast reactors. But although scientists are hashing out the particulars—researchers from nine Department of Energy (DOE) national laboratories met last week in Salt Lake City, Utah, to put together a research plan—the lack of detail is frustrating lawmakers.

“Why doesn't Congress know more about [GNEP]?” asked Michael Simpson (R-ID) at a 5 April meeting of the House Appropriations Energy and Water subcommittee, which funds



**Hurry up and waste.** The Energy Department's new research program is affected by prolonged delays in the Yucca Mountain repository.

DOE's civilian research programs. (The next day, a panel of the House Science Committee held another hearing on the project.) Simpson supports GNEP, but he's unhappy that DOE Assistant Secretary for Nuclear Energy Dennis Spurgeon couldn't provide a road map for the project that includes estimates of foreign contri-

butions and full costs. Outside scientists are flummoxed as policymakers. “I'm not sure anybody really knows what GNEP is,” says nuclear engineer and longtime DOE grantee Denis Beller of the University of Nevada, Las Vegas.

Part of the rationale for GNEP is to reduce the volume of waste that will require long-term storage. The government is responsible for disposal of some 55,000 metric tons of spent fuel rods at U.S. sites, but its designated repository—at Yucca Mountain in Nevada—isn't expected to open before 2020 and is expected to reach its legal capacity by then.

Subcommittee Chair David Hobson (R-OH) added nonbinding language to a spending bill last year instructing DOE to develop chemical reprocessing facilities that would extract fuel to be used in current U.S. reactors—a move DOE says would reduce the volume of wastes destined for Yucca by an estimated 10%. Now Hobson wants any reprocessing facilities DOE builds to offer storage for spent fuel rods. But DOE says it cannot legally hold the waste in such facilities. And DOE officials argue that burning recycled fuel in fast reactors would increase Yucca's capacity by at least sixfold.

GNEP's opponents, such as Tom Cochran of the Natural Resources Defense Council in Washington, D.C., say the dismal record of fast reactors abroad—the Monju reactor in Japan ▶

## PEER REVIEW

## Australia's Proposed U.K.-Style Merit Ranking Stirs Debate

**MELBOURNE**—Australia is considering a radical overhaul of the way it allocates funds to universities and research institutions. But some academics worry that the changes, proposed in March by an expert panel, could be costly without significantly improving basic research.

The so-called Research Quality Framework (RQF) would rate all publicly funded research institutions and award block grants based on a new formula. Critics note that the United Kingdom, which pioneered a similar system, is now debating whether to scrap it because it is seen as unduly complex (*Science*, 31 March, p. 1848). The new Australian system could go into effect as early as 2008.

There's no doubt that RQF would have “dramatic effects” on universities, says Bradley Smith, a spokesperson for the Federation of Australian Scientific and Technological Societies (FASTS), which supports the concept of the framework but worries that its methods may be flawed. “It will drive the stronger groups and destroy the weak ones,” says Smith. Adds Judith Whitworth, director

of the John Curtin School of Medical Research in Canberra: “We all agree that scarce resources need to be focused and that quality needs to be measured,” but “the devil lies in the detail.”

Some \$614 million of the Australian government's current \$4.4 billion investment on research comes in the form of block grants to 38 universities and research institutes. In 2004, then-Education Minister Brendan Nelson said it was time to develop a better rationale for allocating the money, which critics say is spread too thin. Physicist Gareth Roberts, president of Wolfson College at the University of Oxford and architect of the U.K.'s Research Assessment Exercise, led an advisory group that produced the RQF.

Government block grants are now awarded based on measures of productivity such as the number of publications and Ph.D. students completing degrees at an institution. The proposed RQF would use a system of peer review to assess research quality and add another parameter: “impact,” which would take account

of social, environmental, and economic dividends. But some scientists worry that too much emphasis on impact could favor applied research at the expense of academic research.

There is also concern that the framework plan will impose a corporate, target-oriented culture onto the academic research sector. “We cannot set targets. We cannot say that next year we are going to produce 10 papers, and we are going to get  $x$  amount of funding from the outside,” says Patricia Vickers-Rich of Monash University's School of Geosciences. Virginia Walsh, executive director of the Group of Eight Universities (Australia's major universities), says, “There's no way we'd do justice to all the disciplines” if the government were to adopt the panel's proposal to have a dozen peer-review committees when the U.K. system used 67.

An advisory group headed by Australia's chief scientist Jim Peacock is expected to report by June on the weighting factors and other issues.

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