

## NUCLEAR ENERGY

# Battle of Yucca Mountain rages on

*Proposed interim storage unlikely to settle US debate.*

BY JEFF TOLLEFSON

Staff have been cut, contractors laid off, offices closed and even furniture disposed of. But despite all its efforts to back away from plans to store spent nuclear fuel deep under Yucca Mountain, Nevada, the administration of US President Barack Obama just can't seem to bury the idea.

An expert commission appointed by the administration is looking for an alternative solution. On 13 May, at a public meeting in Washington DC, commissioners discussed some preliminary recommendations: create one or more centralized facilities at which waste would be temporarily stored in dry casks, while engaging with the public in a new process to identify a permanent repository for the piles of spent nuclear fuel accumulating at US reactors. But given the history of doubts about the site's geology and the state-wide opposition that has plagued Yucca Mountain since it was singled out by the US Congress nearly a quarter of a century ago, many are sceptical that a more palatable answer will emerge.

"It is important that there will be a consensus recommendation, but it is our view that most of the issues associated with used nuclear fuel have been considered for a long time," says Alex Flint, senior vice-president for governmental affairs at the Nuclear Energy Institute in Washington DC. The ongoing nuclear disaster in Japan is adding some urgency to the question, Flint says, but "it hasn't made reaching agreement any easier".

Meanwhile, an 8 April report from the Government Accountability Office (GAO), an independent arm of Congress, says the Department of Energy should "develop a preliminary plan to restart the project" at Yucca Mountain, anticipating that future policy shifts — and a pair of legal challenges from states that want to get rid of the waste piling up within

their borders — may force it to do just that.

Even after decades' worth of research on the site, costing more than US\$15 billion, doubts remain over the technical suitability of Yucca Mountain, given factors such as seismic activity and water infiltration. But the politics were crystal clear when Obama promised to shut it down during his 2008 election campaign. In keeping with that promise, last year the energy department filed a motion to withdraw its application to store nuclear waste at Yucca Mountain — offering no technical or scientific reasons for the reversal, except to say that the project was "not a workable option".

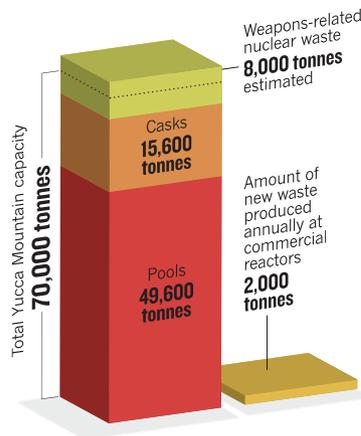
By then, however, the Nuclear Regulatory Commission (NRC) was in the midst of a regulatory assessment that — barring the inevitable lawsuits — could have cleared the way for waste shipments to Yucca Mountain, as directed under a federal law signed by President George W. Bush in 2002. Now the department's decision to withdraw is being challenged within the NRC, in federal courts and on Capitol Hill.

"Now that this administration has decided to ignore the law, our nation has no long-term storage plans for radioactive wastes," lamented Republican (Georgia) representative Paul Broun, chairman of the House Science Subcommittee on Investigations and Oversight, during a congressional hearing last week. He and other Republicans on the science panel, together with two other House committees, are challenging the administration's decision and demanding documentation.

Their complaints have new resonance in the wake of Japan's Fukushima Daiichi power plant disaster, in which radioactivity from nuclear waste stored at the plant apparently escaped into the environment. In the United States, more than 65,000 tonnes of spent nuclear fuel from commercial reactors currently sit in temporary storage, with around 2,000 more

## A GROWING DILEMMA

Nuclear waste in temporary storage in the United States already exceeds the limit set for Yucca Mountain.



tonnes accumulating every year (see 'A growing dilemma'). Combined with waste from weapons programmes, the amount surpasses what has been set as Yucca Mountain's statutory limit, although there is room to expand should the site find itself back in business. Much of the waste resides in storage pools at reactor sites, like those at Fukushima.

Additional pressure is coming from states that want their spent nuclear fuel moved out. Washington and South Carolina are leading challenges to the Department of Energy's decision to withdraw from Yucca Mountain, both at the NRC and in the District of Columbia Federal Appeals Court. "Our reading of the law is that the issue needs to be concluded on the basis of its technical merits," says Mary Sue Wilson, a lawyer working on the case for the Washington State Attorney General.

Within the NRC itself, the Atomic Safety and Licensing Board ruled last year that the energy department does not have the legal authority to withdraw its application. A final decision on that case is now pending before the full commission, which is chaired by Gregory Jaczko, a political appointee. He is the former

chief of staff to Senate majority leader Harry Reid of Nevada, who has spearheaded opposition to Yucca Mountain, and

many believe that Jaczko is stalling to prevent a ruling against the administration.

"The chairman controls when the NRC votes, and the chairman doesn't like the current vote," says Lake Barrett, a consultant and former deputy director at the energy department. NRC officials say the commissioners are still deliberating on the issue.

Speaking at the Annual Nuclear Industry Conference and Nuclear Supplier Expo in Washington DC on 11 May, deputy energy secretary Daniel Poneman told industry officials that the administration is hoping the presidential commission will find a way to reshape the discussion and build the kind of consensus that will at last allow the country to move forward.

"Clearly, the mistake we made in 1987 was jamming it down the throat of the Nevadans," says Phil Sharp, a commission member and president of Resources for the Future, a think tank based in Washington DC. Sharp says the government must work with the public and communities, presenting nuclear waste disposal as a national priority in a way that appeals to people's patriotism.

***"Yucca Mountain has nine lives, and nobody knows how many lives have been used up."***

The commission intends to issue a draft report in July and a final one next January. With its recommendations in hand, the administration is expected to propose legislation that would establish a new process for identifying nuclear waste storage sites.

Yet such a process could well take decades, the GAO report concludes, and the government's reversal at Yucca Mountain could serve to galvanize public opposition at other candidate sites. Since the debate began, "no states have expressed an interest in hosting a permanent repository for this spent nuclear fuel ... including the states with sites currently storing the waste", the report adds. The commission's scheme for an interim storage facility may prove no more appealing, given fears that 'interim' means permanent as long as the present impasse continues. Such fears have in the past halted interim storage proposals in states such as Wyoming. And even if one community decides that it is willing to play host to the waste, that doesn't mean others won't challenge nuclear-waste transportation routes.

Nevertheless, the nation will need to find a permanent repository at some point, and Yucca Mountain, it seems, is down but not out. "Yucca Mountain has nine lives," says Ed Davis, a nuclear consultant who heads the Pegasus Group in Washington DC. "And nobody knows how many lives have been used up." ■

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