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ENERGY

Nuclear Waste in the Age of Climate Change

Concerns about global warming are giving a boost to nuclear power. And that's bringing new focus — and a possible solution -- to the problem of radioactive waste.

by Coral Davenport

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The Perry Nuclear Power Plant in Perry, Ohio. (Jamie-Andrea Yanak/AP Photo)

In the icy deadlock of the partisan Congress, there's a new thaw around an old problem: what to do with the nation's nuclear waste.

It's a worrisome question. For more than 50 years, the nation's nuclear-power plants, which produce about 20 percent of U.S. electricity, have been generating radioactive spent fuel—the toxic stuff left over after the power is produced. At 121 current and retired power plants in 39 states, nuclear waste continues to accumulate, a state of affairs that came under renewed scrutiny in 2011 when an earthquake struck Japan's Fukushima Daiichi nuclear-power plant, igniting a radioactive inferno.

Scientists determined long ago that the best place to store nuclear waste was not on-site at power plants but underground in an earthquake-proof repository where it can be kept for millions of years. Congress decreed in a 1987 law where that repository should be: Yucca Mountain, about 100 miles northwest of Las Vegas. But Nevada lawmakers—who derided the law as the “Screw Nevada Act”—vowed to keep nuclear waste out of their home state. So, the project has stayed dormant, and President Obama has said that Yucca is “not an option” for a dump.

But new realities—including the specter of Fukushima, the fragile



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economy, a soaring deficit, and a renewed push for action on climate change—have revived interest in finding a solution to the nation’s nuclear-waste problem. The effort is also getting a push from the emergence of a key senator, whose efforts illustrate dramatically how local politics can influence national policy.

Because Yucca Mountain is not on the table as long as Harry Reid, the Senate majority leader from Nevada, retains his post, experts have come up with another solution: creation of an interim storage site, a government-run “halfway house,” where the waste could be moved from power plants and sit for up to a century awaiting construction of a final resting place. The most likely location for such a spot is near Carlsbad, N.M., where the Energy Department already stores nuclear-weapons waste. But from 2001 to 2012, the Senate Energy Committee was chaired consecutively by two New Mexicans—Republican Pete Domenici and Democrat Jeff Bingaman—who didn’t relish that prospect. Now, both have retired from the Senate. And the committee’s new chairman, Oregon Democrat Ron Wyden, has a very different take. For 16 years, his state was home to the Trojan nuclear-power station, a facility that was dogged by protests from the day it was built. Trojan is now retired, but the site remains home to 34 casks of buried nuclear waste, which Wyden and his constituents would love to see hauled out of Oregon.

“This is going to be a priority for me,” Wyden told *National Journal*. “It’s an issue where I think we can break through partisan gridlock.”

Wyden is working with the Senate Energy Committee’s ranking Republican, Lisa Murkowski of Alaska, on a bill to create a “medium-term” nuclear-waste storage site. Joining them is another powerful bipartisan pair—California Democrat Dianne Feinstein and Tennessee Republican Lamar Alexander, who cochair the spending committee that would oversee the project. As long as it doesn’t name Yucca Mountain, their bill appears to have strong prospects on the Senate floor.

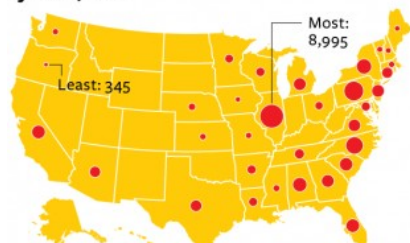
Wasteful Spending

The federal government has paid nuclear energy producers millions to store spent fuel because the federal nuclear waste dump that was supposed to be ready in 1998 hasn’t been built yet.

Damages paid to nuclear energy producers to store spent fuel



Metric tons of spent nuclear fuel accumulated by state, 2012



In the House, there’s also a bipartisan push—particularly by those in the 39 states home to current or retired nuclear plants—to find a nuclear-waste solution. For now, House leaders say that a bill to create a nuclear halfway house must still name Yucca Mountain as the waste’s final destination, dooming the measure’s Senate prospects. “We cannot have a serious conversation about solving America’s nuclear-waste problems without talking about Yucca Mountain,” said House Energy Committee Chairman Fred Upton, R-

Even if House Republicans do agree to strip Yucca Mountain from a bill, other challenges await: Any state hosting the facility will fear that it could become a de facto permanent dump. There will be fights about nuclear waste traveling across the country by train, truck, and barge.

Several forces are coming to a head to force a resolution. By law, the U.S. government was to have taken title of all the nation's nuclear waste in 1998, presumably at Yucca Mountain. For each year that power companies hold that waste on site, they sue the government; to date, Washington has paid \$1.2 billion in liabilities. Without a government-run site for nuclear waste, some utilities estimate that the taxpayer costs could rise as high as \$100 billion in the coming decades.

In addition, Peter Lyons, the Energy Department's assistant secretary for nuclear energy, sees a major shift in how states view nuclear waste. In today's economic environment, several have approached DOE to express interest in hosting a nuclear-waste facility. "There's a very different dynamic. Nevada had no choice. It was crammed down their throats. But a lot has happened since then," Lyons said. "Now, communities see that this is going to be a jobs engine."

Meanwhile, Obama's call for action on climate change could lead to new demand for nuclear power, which is the nation's cheapest and most widely available source of zero-carbon-pollution electricity. But the industry acknowledges that it's almost impossible to build nuclear plants until lawmakers find a solution for the waste.

"I think there is a change, a new openness to this as a solution," said economist Cliff Hamal, chief author of a federal report recommending the creation of an interim site. "California, Oregon, and other places that keep spent nuclear fuel are tired of having it. Centralizing this waste will lower the government's financial liability. The savings are substantial. And from a community's perspective, it will add well-paying jobs."

He added, "This is a real problem, and the numbers are adding up."

CORRECTION: An earlier version of this article incorrectly stated that the pools of nuclear spent fuel at the Fukushima Daiichi plant ignited after a 2011 earthquake.

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