

Uncertain future for Vermont Yankee fuel

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BRATTLEBORO — It's never been clear exactly when Vermont Yankee's radioactive spent fuel might leave Vernon, or where it might go.

And the situation may have gotten even murkier over the past year, mostly due to political changes in Washington.

State Nuclear Engineer Tony Leshinskie says he's been deeply involved in planning for the day when railcars full of spent fuel depart from Vermont Yankee. But he said a tangle of political and regulatory shifts at the federal level have made it "anyone's guess" when that day might come.

"At this point, it's really tough to say," Leshinskie said.

Entergy stopped producing power at Vermont Yankee at the end of 2014. Crews currently are in the process of moving the remainder of the plant's spent fuel from a cooling pool into sealed casks stored on concrete pads at the site.

The fuel will stay on those pads for the foreseeable future.

The federal government has a statutory responsibility to dispose of spent nuclear fuel but has been unable to establish a national repository. So that means current and former nuclear plants have become long-term storage areas for radioactive material that must remain under 24-hour guard.

Nuclear license holders like Entergy regularly sue the U.S. Department of Energy for recovery of spent fuel storage costs, leading to annual governmental payouts that Leshinskie calculated at \$500 million.

There have been various solutions proposed. The Obama administration halted work on a controversial disposal site at Yucca Mountain in Nevada, turning its attention instead to a "consent-based siting" approach wherein officials sought communities that might be interested in hosting nuclear waste.

There also have been proposals for "consolidated interim storage" - in other words, sites that could host high-level nuclear waste on a temporary basis.

Through it all, the official federal line has been that all of Vermont Yankee's fuel will leave Vernon by 2052. Entergy and NorthStar Group Services, the company that now wants to buy Vermont Yankee, have developed their decommissioning and financial plans in accordance with that date.

But in a Nov. 16 presentation to the Vermont Nuclear Decommissioning Citizens Advisory Panel, Leshinskie said the situation appears to be changing once again.

He noted that the Trump administration has pushed to restart Yucca Mountain licensing while also signaling support for development of interim storage sites.

The U.S. House has approved funding for Yucca Mountain licensing but has not backed interim storage, Leshinskie said. And a U.S. Senate subcommittee has taken the opposite stance, supporting interim storage and not Yucca Mountain.

"We have three branches of government each proposing something different which is why I'm making this presentation rather than the Department of Energy right now," Leshinskie said.

He noted one other change: The consent-based siting model pursued under the Obama administration appears to have fallen out of favor.

A visit to the Energy Department's consent-based siting webpage reveals the following message: "Thank you for your interest in this topic. We are currently updating our website to reflect the department's priorities under the leadership of President Trump and Secretary Perry."

Further complicating matters is the fact that any eventual solution for spent nuclear fuel will face opposition.

There is strong sentiment to get Vermont Yankee's spent fuel out of Vernon as soon as possible. The leaders of several New England citizens' groups have called for congressional action on that front, and U.S. Rep. Peter Welch, D-Vt., has supported development of interim storage sites.

But some activists argue that it's unfair to dump Vermont's nuclear waste on other areas. They say "hardened onsite storage" - a more-robust method of storing spent fuel near the place where it was produced - is a better option.

Given the "enormous costs" of developing national repositories, "it's considerably easier and cheaper to store this waste somewhere in this immediate neighborhood," Schuyler Gould, of the Brattleboro-based New England Coalition, told the nuclear advisory panel after hearing Leshinskie's presentation. "This fuel can be stored safely if it's well-monitored and well-stored."

Gould proposed that any money saved by using hardened onsite storage could be sent to communities that host nuclear fuel. Welch has introduced a bill calling for compensation for such communities.

The fuel issue is likely to come up for more debate at future advisory council meetings.

"The future of consolidated or really any other type of storage is fully in question, and we can't really count on that," said Lissa Weinmann, an advisory panel member from Brattleboro. "So we need to know what our options are."

Whatever those long-term storage options turn out to be, federal and state officials continue to work together to develop plans to transport spent nuclear fuel.

Last year, a team from the Department of Energy and other federal agencies visited Vernon and determined that rail cars - rather than trucks - would be the best option for removing Vermont Yankee's fuel.

Leshinskie - who represents Vermont in fuel-transportation talks - said the focus now is on development of an internet-based application called SMART. That stands for Stakeholder Tool for Assessing Radioactive Transportation, and it's supposed to help officials work through the logistics of moving radioactive material through multiple states.

The tool incorporates "quite a bit of information" including population numbers, hospital locations and the availability of emergency personnel, Leshinskie said.

Emergency services are especially important, he said, because responding to radiological emergencies requires special training.

"There are areas where there are quite a few first-responders trained, and then there are areas where there aren't," Leshinskie said. "This is something that would have to be discussed with local first responders or local planners."

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