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The politics of nuclear waste disposal

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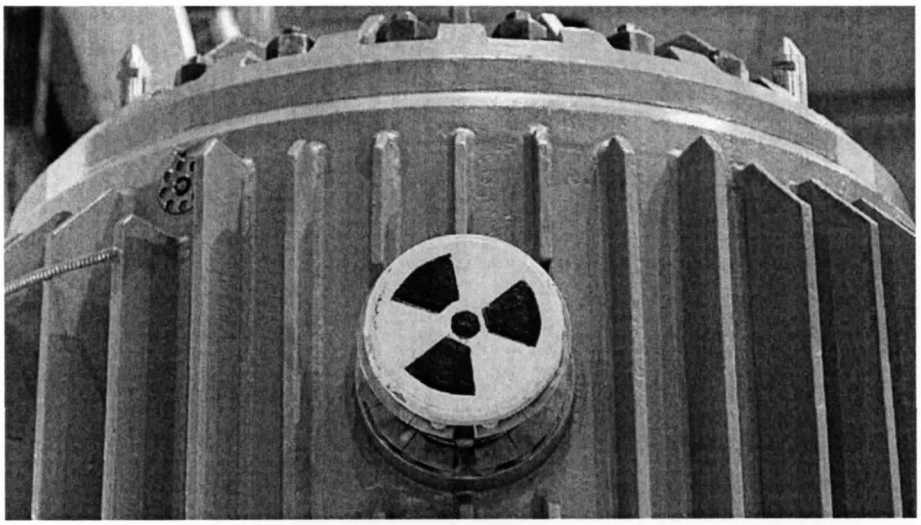

The closure of nuclear power plants — seven at last count — and the role of nuclear power in a low carbon world has received a fair amount of media coverage, including a piece in The Hill. What hasn't, however, is what to do about the nuclear waste stored at these plants and which will continue to be stored at these abandoned facilities for many decades to come.

While the topic has become a political hot potato, some in Congress, like Illinois Rep. John Shimkus (R), a senior member of the House Energy and Commerce Committee, recognize its importance and the need to address it in short order.

First, it's important to understand the reasons for the trend toward closures. The U.S. nuclear fleet is old. While many licenses to operate have been extended, required upgrades are expensive and regulatory oversight is extensive. Compounding the problem is the availability of reliable and cost-effective alternative power sources: shale production in the United States has contributed to a significant drop in gas prices and made natural gas-generated electricity comparatively cheap; also, increased accessibility to lower-cost renewable energy due to declining costs and supportive policies for investment has squeezed the profitability of nuclear generation. Finally, demand for electricity has declined due to a combination of efficiency improvements and manufacturing shifts.
As one analyst described the plight of nuclear energy: You cannot roll back the rules of economics.

Second, it's useful to have some historical context. In 1987, Congress amended the Nuclear Waste Policy Act of 1982 and designated Yucca Mountain in Nevada as the exclusive site for the study of a nuclear waste storage facility. In 2002, the decision to go forward was signed by the then-secretary of Energy and approved with overwhelming bipartisan support in both houses of Congress. In 2008, on the heels of a completed study and the declaration of Yucca Mountain as an appropriate storage for spent nuclear fuel, the U.S. Department of Energy filed for a license to begin construction. Shortly thereafter, however, activity in and around the site rapidly ground to a halt due to opposition from the administration and some of Nevada's politicians. According to the Nuclear Energy Institute (NEI), by 2020, the resulting cost to industry will be almost $20 billion.

Not surprisingly, the government inactivity has led to a shift in the conversation away from plants producing electricity and creating waste to plants being decommissioned and the waste being stranded on site. If Yucca Mountain is taken off the table as a permanent storage site, every nuclear power plant that has been storing nuclear waste on an interim basis could become its own version of Yucca Mountain. The Maine Yankee Plant, closed in 1997, is still home to 60 nuclear casks and 550 metric tons of waste. As

well, the Pilgrim plant in Massachusetts recently announced it is to be closing and is estimated to have 3,000 radioactive rods in storage that will be stored on-site indefinitely.

Utilities owning a nuclear plant are now caught in real bind. According to press reports, every dismantling decision has been accompanied by a request to divert reserved funds to also cover costs for long-term fuel storage. In the case of Vermont Yankee, this is a double-whammy. Not only are its reserve funds insufficient, forcing the utility to mothball the plant for 60 years until the dismantlement fund is adequate, the utility is pursuing an additional line of credit of $145 million to build a storage facility and estimates that it will take an additional $225 million for storage operation and security.

Stranded nuclear waste is precisely what Congress was trying to avoid. It is why Shimkus and others are now working to determine a responsible path forward on nuclear waste storage — a path that is based on science, not politics. To that end, he has called on his colleagues in the Senate, who have repeatedly blocked consideration and funding, to allow the licensing process to move forward.

Some have suggested that a political consensus is needed to pave the way forward for a permanent storage site. But storing nuclear waste properly and safely should not be a decision based on politics, but on science. In the case of Yucca Mountain, there is scientific consensus. It is time to set politics aside, fund the licensing of Yucca Mountain and remove nuclear waste from individual communities across the nation. Storing nuclear waste is too urgent of a public safety issue to be unaddressed by a gridlocked Congress.

Questions:

1. Give at least three reasons for the recent trend toward closing nuclear power plants.

2. Create a brief timeline outlining U.S. Nuclear Waste Policy. (need 5 points on the timeline)

3. Explain the continued hazard associated with nuclear power plants that have closed.

4. How is closing nuclear power plants also a fiscal (meaning money) issue?