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America's Nuclear Waste:

Options for Near-Term Federal Action

In 2012, the Blue Ribbon Commission on America's Nuclear Future (BRC), an expert panel convened at the direction of President Barack Obama and charged with developing recommendations for getting the U.S. nuclear waste management program on track, issued its final report. By that point, as the BRC noted, efforts by the federal government to meet its legal obligation to provide for the safe management and permanent disposal of spent nuclear fuel and high-level radioactive waste had all but broken down after decades of intense controversy, missed deadlines, wasted expenditures, and mounting loss of public trust.

The BRC's final report recommendations included a set of near-term actions that the commission concluded could be undertaken by the Department of Energy (DOE), the Nuclear Regulatory Commission (NRC), and other stakeholders—without necessarily requiring further action by Congress—to begin moving the nation's nuclear waste program beyond the state of impasse that has existed since the Obama administration's decision to stop efforts to license a geologic repository at Yucca Mountain in Nevada. This paper summarizes the main findings of a legal analysis of the BRC's near-term action recommendations, focusing in particular on whether and to what extent key actions can be taken under current statutory authority.¹



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Key Developments Since January 2012

Since the BRC issued its final report, three decisions by the D.C. Circuit Court of Appeals have changed the legal landscape for nuclear waste management in the United States. In 2012, the court's decision to invalidate the NRC's Waste Confidence Rule and remand aspects of the rule to the NRC for reconsideration prompted the NRC to temporarily stop issuing licenses or license extensions for commercial nuclear reactors. License proceedings, however, could continue. This suspension was lifted in 2014, when the NRC replaced the Waste Confidence Rule with a new Continued Storage Rule. But the new rule is being challenged by states and environmental groups who contend that indefinite storage of spent fuel, as opposed to geologic disposal, does not provide "reasonable assurance" that public health and safety will be protected.

Meanwhile, a separate finding by the D.C. Circuit Court concerning DOE's authority to continue collecting the 1.0 mil per kilowatt-hour nuclear waste fee² in light of the Obama administration's termination of the Yucca Mountain project prompted DOE to stop charging the fee in May 2014. Since Congress has not acted to clarify or amend DOE's authority to collect the fee, this has stopped—for now—the flow of new revenues (roughly \$700 million per year) to the Nuclear Waste Fund. Finally, a third decision by the D.C. Circuit in August 2013 has temporarily restarted the stalled Yucca Mountain licensing proceeding at the NRC. The NRC subsequently affirmed its commitment to continuing the licensing proceeding, including completing key documents, so long as it has appropriations for this purpose.

Consolidated Interim Storage

As one of its eight core recommendations, the BRC called for "[p]rompt efforts to develop one or more consolidated storage facilities." As the BRC pointed out, such a facility, by allowing for the "orderly transfer of spent fuel from reactor sites to safe and secure centralized facilities independent of the schedule for operating a permanent repository," would provide valuable flexibility for the nuclear waste program and potentially significant cost savings, especially if it expedited the removal of spent fuel from currently decommissioned reactor sites. Recognizing that the Nuclear Waste Policy Act (NWPA) prohibits DOE or one of its contractors from actually constructing a consolidated storage facility before a permanent repository site is identified, the BRC recommended action to begin laying the groundwork for such a facility. Notably, the NWPA does not bar a private entity, acting for itself, from building a storage facility. Historically and more recently, some parties have expressed interest in pursuing that option.

This analysis affirms the BRC's basic conclusion that work toward developing consolidated storage capability can begin without new legislation, based on provisions in the NWPA that give DOE authority to site, construct, and operate a "monitored retrievable storage" facility that could provide the kind of consolidated interim storage contemplated by the BRC. Such a facility would be designed to allow for continuous monitoring, management, and retrieval of nuclear waste materials, pending further processing or disposal. Specifically, clear authorization exists under current law to undertake several preparatory activities, including: (1) performing systems analyses and design studies; (2) preparing to respond to requests for information from communities, states, or tribes that might be interested in learning more about hosting a consolidated storage facility; and (3) working with the nuclear industry and other stakeholders on integration issues, such as standardizing dry cask storage systems.

Whether DOE can take the step of formally designating a site for a consolidated storage facility, however, is less clear. Under the NWPA, this step can only occur after the secretary of energy makes a recommendation to the president concerning a site for a

permanent geologic repository. In 2002, Yucca Mountain was formally recommended as the site for a permanent repository, but the status of that recommendation has since been thrown into doubt by DOE's subsequent decision to withdraw the Yucca Mountain license application. Thus, DOE's authority to proceed to site selection for a consolidated storage facility and to take a number of other actions short of actually commencing the construction of such a facility depend on the outcome of current court battles over the termination of the Yucca Mountain project. Clearly, actual construction of a consolidated storage facility before a geologic repository has been identified would require legislative action to amend the NWPAs. Meanwhile, DOE's practical ability to undertake any near-term activities related to consolidated storage also depends on congressional action to appropriate funds for this purpose.

Order of Removal of Spent Fuel from Reactor Sites

In the interests of promoting a more integrated approach to nuclear waste management generally, the BRC report recommends specific changes to the priority ranking (known as the "queue") that dictates the order in which spent fuel from commercial reactors is to be accepted by DOE and removed from reactor sites. Specifically, the BRC recommends that DOE modify the current queue so that spent fuel being stored at decommissioned reactor sites is first in line for transfer to a consolidated storage facility or permanent disposal repository. Prioritizing removal from shutdown reactor sites would have benefits both in terms of large cost savings and in terms of freeing these sites for other productive uses. More broadly, flexibility to select which fuel is removed from reactor sites and in what order could have important benefits from the standpoint of effective thermal management of spent fuel and in terms of maximizing the efficiency of waste transport and handling operations.

DOE has clear leeway, under its Standard Contract with nuclear plant operators, to negotiate changes in the acceptance queue for commercial spent fuel. This is because current law explicitly allows for deviations from the "oldest fuel first," or "OFF," principle used to establish the current queue in certain cases, including in the case of decommissioned reactors.

Timing and Method of Payment of the Nuclear Waste Fee

Ensuring that the funds being collected from nuclear utility ratepayers in the name of nuclear waste management are indeed available for that purpose was one of the BRC's eight core recommendations. As the BRC pointed out, the current fee mechanism has not worked as intended to provide a stable source of funding for the nuclear waste program. Instead, that program has been subject to uneven and often politicized congressional appropriations, while nuclear waste fee receipts have flowed to the Treasury where they may count against the federal budget deficit but are not necessarily made available for waste management activities.

To remedy this situation, the BRC proposed that DOE amend its Standard Contract with nuclear utilities so that utilities remit only the portion of the annual fee that is appropriated for waste management each year. Utilities would place the remainder of the fee in an irrevocable trust account held by a qualified, approved third-party financial institution to ensure that future waste fee revenues could be withdrawn only at the times and in the amounts needed to fund the federal waste management program. As noted previously, DOE stopped collecting the fee in 2014. If and when waste fee collections resume, either as a consequence of congressional action or further litigation, DOE would appear to have a sound legal basis for implementing the BRC's recommendation. This is because the NWPAs gives DOE broad discretion to select the method of collection and payment of the fee and to postpone the time of collection of a portion of the fee. This discretion, together with the NWPAs's specific direction regarding

the timing of fee deposits to the Treasury, permits DOE to require the use of an irrevocable trust fund to safeguard the government's interest in ultimately receiving the fees. Since the terms for waste fee collection are set by the Standard Contract, any changes to current practice to implement the BRC recommendation would, however, need to be negotiated and mutually agreed upon with affected utilities.

Use of the Nuclear Waste Fund

The BRC's final report included a number of recommendations concerning near-term actions that DOE could take to help fulfill its nuclear waste management responsibilities. As part of this analysis, the Bipartisan Policy Center (BPC) looked at which of these actions fits within the list of approved uses of the Nuclear Waste Fund specified in the NWPA. Subject to appropriations, such activities can be undertaken by DOE without further delay or need for congressional approval. The following BRC-recommended activities likely qualify: negotiations with nuclear utilities to revise the Standard Contract (for example, to address waste fee collection); early work to lay the groundwork for implementing consolidated storage; research and regulatory oversight on a number of storage-related technical issues; certain activities related to planning for the transport of nuclear waste; non-site-specific work to advance the repository program; research and development on alternative disposal concepts; and development of a database on past experience with facility siting in the United States and abroad. Other BRC recommendations that likely do not fall within the scope of NWPA-approved uses of the Nuclear Waste Fund include resolving current litigation over DOE's breach of the Standard Contract; establishing a new waste management organization; undertaking certain regulatory activities (for example, developing a generic safety standard for geologic disposal sites and possibly revising the current waste classification system); and other efforts related to workforce development and international safety, security, and non-proliferation.

Acceptance of Spent Fuel from Foreign Commercial Reactors

The BRC's final report states that the "capability to accept spent fuel from foreign commercial reactors, in cases where the President would choose to authorize such imports for reasons of U.S. national security, would be desirable within a larger policy framework that creates a clear path for the safe and permanent disposition of U.S. spent fuel." Based on BPC's analysis, it appears that DOE has authority to import spent fuel from foreign commercial reactors under the Atomic Energy Act, subject to certain procedures and criteria. Specifically, Congress would have to have an opportunity to review such arrangements, except in emergency situations where DOE can proceed without review if national security considerations necessitate such action.

Conclusion

Based on this review, there are several important BRC recommendations that can be implemented, or at least initiated, under existing provisions of the NWPA and other statutory and regulatory authorities. These include steps toward developing consolidated interim storage facilities for spent nuclear fuel; changing the order, or queue, for removing spent nuclear fuel from commercial reactors; and changing the timing and method of payment used to collect fees for the Nuclear Waste Fund from nuclear utilities.

End Notes

¹ The Bipartisan Policy Center was assisted in this analysis by the legal firm Van Ness Feldman LLP.

² A “mil” is equal to one-tenth of one cent or \$0.001. As discussed later in this summary, the intended purpose of the fee is to fund the federal government’s commercial nuclear waste management program.



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