

WASTE POLICY

Blue Ribbon Commission releases final report

THE BLUE RIBBON Commission on America's Nuclear Future (BRC) on January 26 released its final report to Energy Secretary Steven Chu. The 180-page report contains recommendations for creating a safe, long-term solution for managing and disposing of the nation's spent nuclear fuel and high-level radioactive waste.

Currently in the United States, over 65 000 tons of spent fuel is being stored at about 75 operating and shutdown reactor sites around the country, with more than 2000 tons being produced each year. In addition, the Department of Energy is storing another 2500 tons of spent fuel and large volumes of high-level nuclear waste, mostly from past weapons programs, at a handful of government-owned sites.

The recommended strategy outlined in the report contains what the BRC calls eight key elements:

■ Take a new, consent-based approach to

The BRC's recommended strategy contains eight key elements, among them a consent-based approach to siting waste management facilities.

siting future nuclear waste storage and disposal facilities. The BRC noted that trying to force such facilities on unwilling states, tribes, and communities has not worked.

■ Transfer responsibility for the nation's nuclear waste management program to a new organization that is independent of the DOE and dedicated solely to ensuring the safe storage and ultimate disposal of spent fuel and high-level radioactive waste.

■ Change the manner in which fees are paid into the Nuclear Waste Fund and make them accessible for their intended purpose. About \$750 million a year is paid into the NWF, and the budgetary treatment of those funds should be changed to ensure that they are being set aside and are available for use

as Congress initially intended.

■ Promptly initiate efforts to develop one or more geologic disposal facilities.

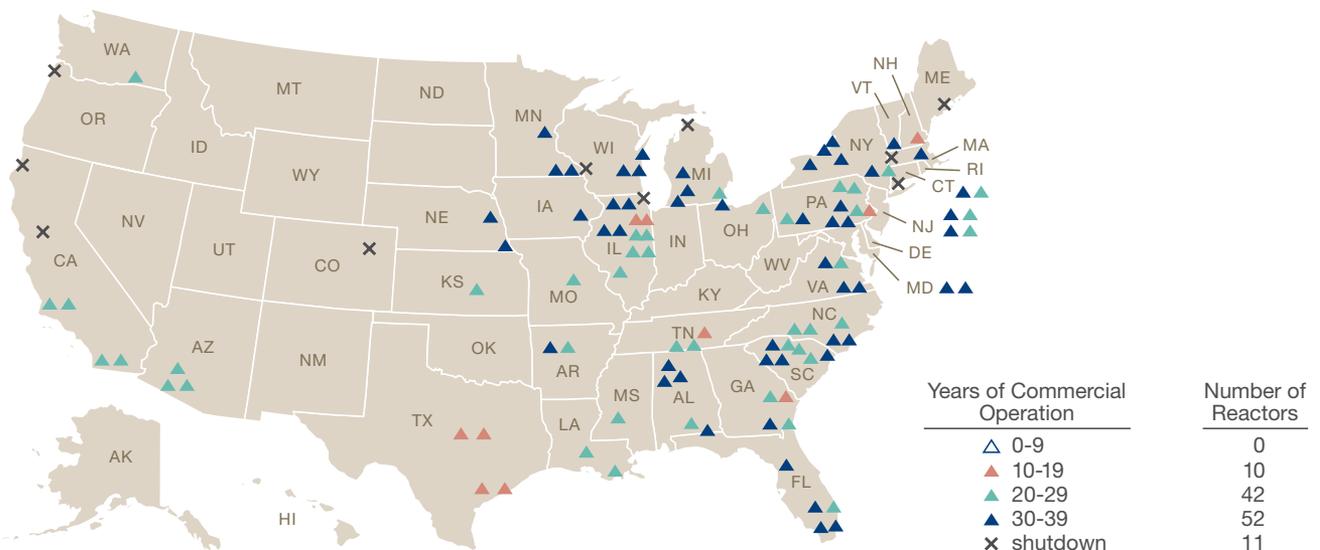
■ Develop one or more consolidated storage facilities.

■ Prepare for the eventual large-scale transport of spent fuel and high-level waste to consolidated storage and disposal facilities when such facilities become available.

■ Support continued innovation in the United States in nuclear energy technology and workforce development.

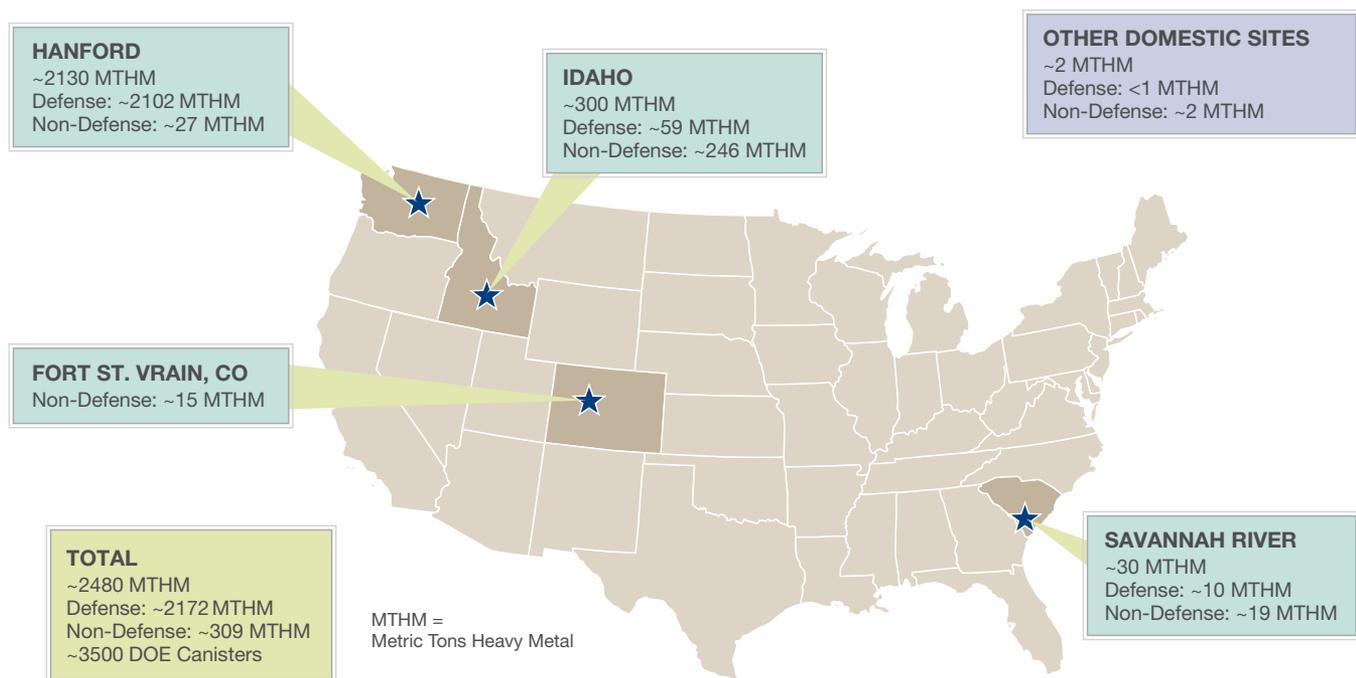
■ Promote active U.S. leadership in international efforts to address safety, waste management, nonproliferation, and security concerns.

Almost two years of work by the BRC



Source: U.S. Nuclear Regulatory Commission

Fig. 1. Operating and shutdown commercial nuclear power reactors in the United States



Source: BRC staff using information from DOE and other sources

Fig. 2. U.S. DOE spent nuclear fuel inventory in 2010

and its subcommittees went into preparing the report. Since it was established in March 2010, the BRC has met more than two dozen times, gathering testimony from experts and stakeholders. The BRC also visited nuclear waste management facilities in the United States and overseas.

Cochaired by former congressman Lee Hamilton and former national security advisor Brent Scowcroft, the BRC was tasked at the outset by Chu with devising a new strategy for managing the nation’s inventory of nuclear waste.

Hamilton and Scowcroft said they believe that the report’s recommendations offer a practical and promising path forward, and they cautioned that failing to act to address the waste issue will be damaging and costly.

“The majority of these recommendations require action to be taken by the administration and Congress, and offer what we believe is the best chance of success going forward, based on previous nuclear waste management experience in the U.S. and abroad,” the members of the commission stated in a letter to Chu that accompanied the report. “We urge that you promptly designate a senior official with sufficient authority to coordinate all of the DOE elements involved in the implementation of the commission’s recommendations.”

The report notes that the Obama administration’s decision to halt work on a geologic repository at Yucca Mountain in Nevada is the latest indicator of a nuclear waste management policy that has been troubled for decades and has now reached an impasse. Allowing that impasse to continue is not an option, the report says.

“The need for a new strategy is urgent, not just to address these damages and costs, but because this generation has a fundamental, ethical obligation to avoid burdening future generations with the entire task of finding a safe, permanent solution for managing hazardous nuclear materials they had no part in creating,” the report’s executive summary states.

The BRC was specifically not tasked with rendering any opinion on the suitability of Yucca Mountain, proposing any specific site for a waste management facility, or offering any opinion on the role of nuclear power in the nation’s energy supply mix.

“These are all important questions that will engage policymakers and the public in the years ahead,” the BRC notes. “However, none of them alters the urgent need to change and improve our strategy for managing the high-level wastes and spent fuel that already exist and will continue to accumulate so long as nuclear reactors operate in this country.”

The BRC said that to implement the recommendations, a consensus is needed in Congress to enact authorization bills, and action by the Obama administration to apply them.

Hamilton and Scowcroft testified on January 26—the day the report was released—at a Senate hearing on the report. During the hearing, Sen. Lisa Murkowski (R., Alaska) noted that 30 years and about \$10 billion has been spent, with no solution for the disposal of the nation’s civilian nuclear waste. Compounding the problem, she said, is the government’s mounting financial liability because of the DOE’s failure to take pos-

session of the waste. So far, \$2 billion has been paid out in damages to nuclear utilities, and further settlements could reach \$15 billion or higher.

Murkowski noted that the Obama administration’s decision to terminate the Yucca Mountain Project would probably be reviewed in court, and added that any commercial nuclear waste was unlikely to be in the government’s possession by 2021.

Hamilton concurred with the general frustration of the participants in the hearing, saying that the Nuclear Waste Policy Act “simply hasn’t worked.” He added, however, that the BRC members were unanimous in their approval of the report, and said, “We are confident that we can turn this record around.”

Scowcroft said, “Simply put, we know what we have to do, we know we have to do it, we even know how to do it.” Regarding finding a final storage place for nuclear waste, he said, “The core difficulty remains what it has always been: finding a way to site these inherently controversial facilities and to conduct a waste management program in a manner that allows all stakeholders, especially those host communities, states, and tribes, to conclude that their interests have been adequately protected and their well-being enhanced, not merely sacrificed or overridden by the interests of the country as a whole.”

A solution to short-term storage would take at least five years to establish, and a geologic repository would take 15 to 20 years. Hamilton concluded that the BRC had heard “150 times” from various people attending BRC meetings that there was a general distrust of the federal government.

Changing the law

The draft report issued by the BRC last July (*NN*, Sept. 2011, p. 43) contains five recommendations that would require the passage of new federal legislation, either to amend the Nuclear Waste Policy Act of 1982 or to stand alone. Those five are essentially repeated in the final report, and a sixth recommendation has been added. The five are as follows: to create a consent-based siting process for storage and disposal facilities; to establish one or more storage facilities; to set up a waste management organization separate from the DOE; to give that new organization access to the Nuclear Waste Fund; and to help other countries manage their waste, with non-proliferation being one of the goals.

The new, sixth recommendation is to broaden support to jurisdictions affected by the transport of radioactive waste. The NWPA provides funding and technical assistance for training public safety officials of states and tribes whose jurisdictions would be traversed by shipments of spent fuel to a storage or disposal facility. The BRC said that the NWPA should be amended to give the waste management organization the broader authorities given to the DOE in the Waste Isolation Pilot Plant Land Withdrawal Act that supported the successful large-scale transport of transuranic waste to WIPP, in New Mexico, including a public information program, support for the acquisition of equipment to respond to transportation incidents, and broad assistance for other waste-related transportation safety programs.—*R.M.*

The report is available online at <http://1.usa.gov/wEbw8>.

Comments about

Comments on the report came from many corners. The American Nuclear Society issued a statement on January 26, saying that it agreed with the report regarding the creation of an independent agency to resolve the spent fuel matter. ANS's opinion on the issue is contained in a November 2009 position statement, available online at www.new.ans.org/pi/ps/docs/ps76.pdf.

ANS also agreed about consolidated storage. "Until a final resolution of the storage of used nuclear fuel is established, interim solutions must be found," the ANS statement says. An ANS position statement on

this subject, issued in February 2008, is available at www.new.ans.org/pi/ps/docs/ps22.pdf.

ANS is also pleased that the report advocates the development of advanced technology in the recycling of spent fuel. "Many of the issues associated with storage will be effectively addressed by the implementation of new technologies to reduce the quantities of used nuclear fuel," the statement says.

Missing from the BRC's report, ANS noted, is any comment on the licensing of the Yucca Mountain repository. "We are aware that the commission was expressly instructed not to consider this matter, but also note that we have urged the Nuclear Regulatory Commission to continue the licensing in order to obtain the benefit of the

considerable scientific research and solutions the application has produced," ANS said. ANS's position statement on the Yucca Mountain repository, issued in February 2009, is available at <http://bit.ly/xypfau>.

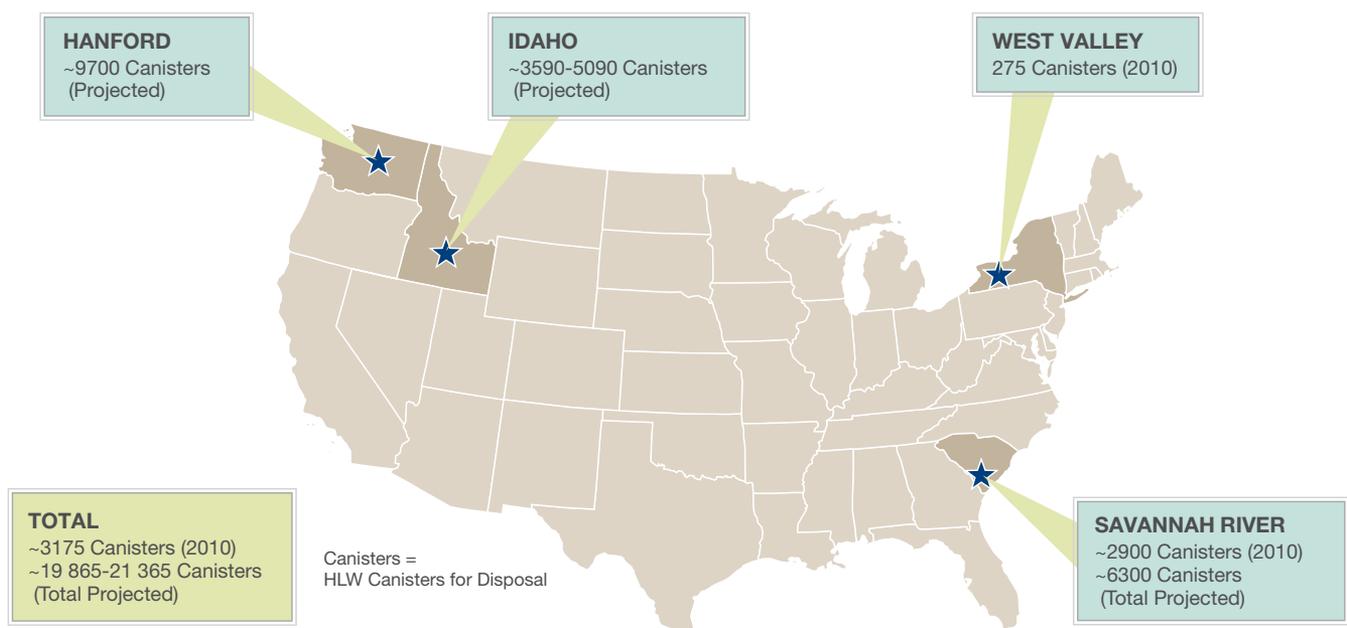
Also on January 26, the Nuclear Energy Institute issued a statement noting that various industry organizations welcomed the release of the BRC's report. Those groups—the National Association of Regulatory Utility Commissioners, the Nuclear Waste Strategy Coalition, the American Public Power Association, the National Rural Electric Cooperative Association, and Edison Electric Institute, along with NEI—collectively represent state public utility commissions, nuclear energy producers and suppliers, and public and private organizations interested in spent fuel management.

"After two years of fact-finding and intense study, the commission has officially endorsed a number of strategic used fuel management initiatives that our members and other experts have long supported and that will reform and reenergize the country's high-level radioactive waste program," NEI said.

NEI added that the groups agreed with the BRC's eight key recommendations, and that three recommendations—a consent-based approach to siting future waste storage and disposal facilities, the creation of a new organization to manage waste, and a change to the Nuclear Waste Fund—should be given high priority.

The groups agreed that actions should be taken toward consolidated interim storage in a willing host community within the next 10 years, since the DOE was required to begin accepting spent fuel by 1998. "We understand that site selection for storage and

Continued



Source: BRC staff using information from DOE and other sources

Fig. 3. U.S. DOE high-level waste inventory in 2010

disposal facilities was not within the scope of the BRC's work," NEI said. "However, we continue to believe that the Nuclear Regulatory Commission's review of the DOE's license application for the proposed Yucca Mountain, Nev., repository should be completed to determine whether it is a suitable site."

NEI's statement commented that the six groups were ready to work with the DOE, the administration, and Congress to implement the BRC recommendations.

Others did not view the report favorably. Eighty-eight antinuclear groups of various membership sizes sent a letter to Chu on January 25—the day before the report was released—urging him to reject the BRC's recommendation to establish a consolidated storage facility.

The groups—including the Sierra Club, the Nuclear Energy Information Service, the Nuclear Information and Resource Service, GE Stockholders Alliance, San Luis Obispo Mothers for Peace, Citizens Against Ruining the Environment, and the Stand Up/Save Lives Campaign—claimed that the BRC was made up largely of members who have profited from the nuclear industry but made no further comments about how this connection might have influenced the recommendations.

The groups noted that congressional efforts in the 1990s to establish a consolidat-

ed site and to begin a national waste transportation program led to "widespread public concern about a 'Mobile Chernobyl,'" and that President Bill Clinton ultimately vetoed such legislation. The groups did not explain that the storage casks could not explode, and thus that "Mobile Chernobyl" is just a rhyming gimmick.

The groups urged Chu to "apply the logic that is missing" from the BRC report and to prevent the transportation of nuclear waste "until a permanent isolation program is available." The groups also called for the implementation of on-site dry cask storage at reactor sites instead of moving the spent fuel to a consolidated site. The groups' letter is available at <http://bit.ly/wdAzyF>.—
Rick Michal