



## Statement for the Record

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### **The Federal Government's Responsibilities and Liabilities Under the Nuclear Waste Policy Act**

**for the**  
**Committee on the Budget**  
**U.S. House of Representatives**

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Mr. Chairman, Congressman Ryan, and Members of the Committee, I am pleased to provide updated information about the federal government's responsibilities and liabilities under the Nuclear Waste Policy Act of 1982 (NWPA). Since I testified on this topic in 2009, there have been a number of important developments.<sup>1</sup> After signaling its intention to terminate a project to build a geologic repository for nuclear waste at Yucca Mountain—the only site where such waste is authorized to be stored under current law—the Administration announced in January 2010 the formation of a Blue Ribbon Commission to make recommendations on alternative means of storing, processing, and disposing of nuclear waste. In March, the Administration filed a motion with the Nuclear Regulatory Commission (NRC) to withdraw its license application to construct a permanent repository at Yucca Mountain. That motion was denied in June by a three-member NRC panel; the Administration has subsequently appealed that decision.

Despite those developments, the federal government remains responsible for permanently disposing of spent nuclear fuel generated by civilian facilities, and the owners of those facilities continue to pay fees for that service. Regardless of how the government meets that responsibility, that task will require a significant amount of federal spending over many decades.

## **The Federal Government's Responsibilities Under the Nuclear Waste Policy Act**

The Nuclear Waste Policy Act requires the federal government to take possession of and permanently dispose of spent nuclear fuel generated at civilian nuclear reactors and to dispose of radioactive waste that results from federal activities in manufacturing nuclear weapons. Under current law, the only solution that the government is authorized to pursue involves permanent disposal of waste at a geologic repository, and Yucca Mountain in Nevada is the only place where such a repository may be located.

Under the NWPA, the federal government, through the Department of Energy (DOE), faces substantial costs to establish a repository for the nation's nuclear waste. It has also incurred contractual obligations to remove waste from civilian nuclear facilities. The government will also be responsible for disposing of waste from any new facilities built in the future.

## **Financing the Costs of Disposing of Nuclear Waste**

The NWPA addressed how the disposal of spent nuclear fuel and defense-related waste was to be paid for. Under that act, the costs are to be borne by the parties that

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1. See the statement of Kim Cawley, Congressional Budget Office, *The Federal Government's Responsibilities and Liabilities under the Nuclear Waste Policy Act*, before the House Committee on the Budget, July 16, 2009.

generate it, and the law authorizes DOE to levy fees on the nuclear power industry to cover the costs for the waste it generates. The law also authorizes appropriations from the Treasury's general fund to pay for disposing of high-level radioactive waste generated by the nation's defense programs.

In 2008, DOE published an estimate of the total costs—including those for transportation and project management—associated with geologic disposal of waste generated by existing nuclear plants. At that time, Yucca Mountain was assumed to be the primary repository. In DOE's estimation, the project would cost about \$96 billion in 2007 dollars over a period of more than 100 years.<sup>2</sup> DOE has not published an updated estimate of the cost of completing a geologic repository for the nation's nuclear waste.

### **Financing the Costs Associated with Civilian Nuclear Waste**

Starting in 1983, the NWPA authorized DOE to charge electric utilities fees to cover the costs of disposing of the nuclear waste they generate. Utilities today pay annual fees at a rate of 1 mil (0.1 cent) per kilowatt-hour of the electricity they sell that is generated by nuclear power plants. In addition to the ongoing yearly fees, the NWPA established one-time fees to cover the costs of disposing of waste that was generated before the law was enacted. DOE provided utilities with several options for paying that one-time charge, but several utilities have not yet paid the fee, and a significant amount remains uncollected.

The fees, which are recorded in the budget as offsetting receipts (a credit against direct spending), are deposited into the Treasury's Nuclear Waste Fund. The NWPA authorized appropriations from the Nuclear Waste Fund to cover the costs of the civilian nuclear waste program. In addition, the law authorized the Secretary of the Treasury to invest the fund's unspent balances in nonmarketable Treasury securities, which are credited with interest.

Table 1 summarizes the government's receipts and disbursements related to the nuclear waste disposal program from 1983 through the end of fiscal year 2009. During that time, \$31.0 billion was credited to the Nuclear Waste Fund. That amount includes fees paid by the nuclear industry totaling \$17.1 billion as well as \$13.8 billion from intragovernmental transfers of interest credited to the fund. Cumulative expenditures from the fund during that period totaled about \$7.3 billion, mostly for analyses related to the waste disposal program and for initial design work by DOE on the Yucca Mountain facility. The NRC and other federal entities also received modest appropriations from the fund for work related to the program, leaving an unspent balance of \$23.6 billion at the end of fiscal year 2009. CBO estimates that in 2010, another \$2.0 billion will be credited to the fund—nearly \$800 million from fees and

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2. Department of Energy, Office of Civilian Radioactive Waste Management, *Analysis of the Total System Life Cycle Cost of the Civilian Radioactive Waste Management Program*, DOE/RW-0591 (July 2008).

**Table 1.**


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## Cumulative Receipts and Disbursements of the Nuclear Waste Fund

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(Billions of dollars)

	Cumulative Totals 1983 Through 2009	Estimated 2010
Deposits		
Annual fees	15.6	0.8
One-time fees	<u>1.5</u>	<u>0</u>
Subtotal, cash receipts	17.1	0.8
Interest credited <sup>a</sup>	<u>13.8</u>	<u>1.2</u>
Total Deposits	31.0	2.0
Disbursements	7.3	0.2
Fund Balance	23.6	25.4
<b>Memorandum:</b>		
Appropriations from the General Fund for Defense-Related Activities	3.7	0.1

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Source: Department of Energy and Congressional Budget Office.

Notes: Amounts are in nominal dollars.

Components may not add up to totals because of rounding.

a. Intragovernmental transfers from general revenues.

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the rest from interest. Expenditures in 2010 will total \$0.2 billion, bringing the fund's end-of-year balance to \$25.4 billion, CBO estimates.

If all of today's 104 licensed nuclear reactors continue to generate electricity, future annual receipts from industry fees are likely to average between \$750 million and \$800 million for at least the next decade. Most U.S. nuclear power plants began operating in the mid-1970s or during the 1980s under 40-year licenses. The NRC has approved 20-year extensions to the licenses of more than half of the plants in operation today, and it anticipates that many of the others will apply for such extensions. When those plants reach the end of their license extensions (or their economically useful lives) and cease operations—probably in the 2030s and 2040s—they will no longer pay fees to the Nuclear Waste Fund to dispose of their waste.

Receipts from the one-time fees that remain unpaid and become due once the federal repository is opened currently amount to about \$3.2 billion, DOE estimates.<sup>3</sup> Interest accrues on the balances due from those one-time fees until the utilities pay them to the government; therefore, eventual deposits of such fees will probably be significantly

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3. Data supplied to the Congressional Budget Office in July 2010 by the Department of Energy.

greater than the current balances due. Also accruing and adding significantly to the fund's balances are credits of interest on the fund's unspent dollars. Those amounts are intragovernmental transfers because the fund's balance is invested in U.S. Treasury securities, and thus, the crediting of interest does not create net receipts to the federal government. However, such amounts add to the resources that are authorized to be used for the waste disposal program.

### **Financing the Costs Associated with Defense-Related Nuclear Waste**

In addition to the amounts appropriated from the fees and interest credited to the Nuclear Waste Fund, the Congress has provided annual appropriations to the nuclear waste program to cover the costs that DOE estimates are related to the disposal of nuclear waste generated by federal defense programs. In 2008, DOE determined that about one-fifth of the total life-cycle costs of the waste disposal program was attributable to that endeavor and that this share of the program's total costs should be paid for with appropriations from the general fund of the Treasury.<sup>4</sup> Since 1993, the Congress has provided about \$3.8 billion from the general fund for such costs—roughly half of the budgetary resources provided to the waste program so far.

### **Contractual Obligations and Liabilities for Nuclear Waste**

Under contracts signed with electric utilities pursuant to the Nuclear Waste Policy Act, DOE was scheduled to start removing waste from storage sites at individual power plants for transport to a federal storage or disposal facility by 1998. After the federal government missed its 1998 contractual deadline to start collecting waste, electric utilities began—successfully—to sue the government for resulting damages, which are paid from the Treasury's Judgment Fund.

Pursuant to the Department of Justice's settlements with electric utilities, utilities have been reimbursed for the costs they incurred because of DOE's partial breach of its contracts. Such costs are unique to each nuclear power plant and depend partly on the age and operating status of the plant and the size and configuration of the plant's available space for nuclear waste storage.

### **Existing Liabilities Under the Nuclear Waste Policy Act**

According to DOE, as of June 2010, electric utilities filed 72 lawsuits seeking compensation for costs they incurred because the federal government could not begin to accept nuclear waste for disposal in 1998. Of those lawsuits, 11 have been settled, and about \$725 million has been paid under those settlements. Ten other cases have been dismissed, and one affirmed judgment has resulted in a payment of \$35 million to the Tennessee Valley Authority (a government entity). Of the 50 pending cases, 20 have been decided, but some are subject to post-trial motions. If those decisions stand, the

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4. Department of Energy, Office of Civilian Radioactive Waste Management, *Analysis of the Total System Life Cycle Cost of the Civilian Radioactive Waste Management Program*, DOE/RW-0591 (July 2008).

federal government's liabilities, including amounts already paid pursuant to settlements, will total \$1.8 billion.<sup>5</sup> Because judicial claims for damages are made retroactively, many more cases can be expected in the coming decades as utilities seek to recover their ongoing costs for storing nuclear waste long after they expected it to be removed and sent to a permanent disposal site.

### **Future Liabilities Under the Nuclear Waste Policy Act**

DOE currently estimates that, if it begins to accept waste in 2021, taxpayers' liabilities to electric utilities—including amounts already paid—will total \$13.1 billion (in today's dollars).<sup>6</sup> Further, DOE anticipates that payments from the Judgment Fund will occur for several decades. DOE has previously estimated that liabilities will increase—by roughly \$500 million annually—if the schedule for completing the planned repository slips further beyond 2021 and waste continues to accumulate at utilities' storage sites.<sup>7</sup>

In addition, it is not clear how the Administration's decision to terminate the Yucca Mountain repository will affect the federal government's liabilities to electric utilities. If DOE is found at some point to have fully breached its contractual commitments, the federal government's liabilities could increase considerably.

Ultimately, a change in law would be required to authorize DOE to permanently dispose of all of the waste anticipated to be generated by existing nuclear facilities at a site other than Yucca Mountain. Even if such legislation is enacted, federal liabilities will remain substantial, and payments from the Judgment Fund to compensate utilities for storing waste will continue for many years.

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5. Information supplied to CBO in July 2010 by the Department of Energy.

6. Ibid.

7. Ibid.

