

At a Glance

H.R. 2699, Nuclear Waste Policy Amendments Act of 2019

As ordered reported by the House Committee on Energy and Commerce on November 20, 2019

By Fiscal Year, Millions of Dollars	2020	2020-2025	2020-2030
Direct Spending (Outlays)	0	1,916	3,614
Revenues	0	0	0
Increase or Decrease (-) in the Deficit	0	1,916	3,614
Spending Subject to Appropriation (Outlays)	0	-481	-1,953
Statutory pay-as-you-go procedures apply?	Yes	Mandate Effects	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2031?	< \$5 billion	Contains intergovernmental mandate?	Yes, Under Threshold
		Contains private-sector mandate?	Yes, Under Threshold

The bill would

- Temporarily limit the authority of the Department of Energy (DOE) to collect certain fees from utilities with nuclear plants and reclassify those fees as discretionary offsetting collections
- Authorize DOE to enter into agreements to provide benefits to state, local, and tribal governments that might host or be affected by facilities related to the nuclear waste program
- Require DOE to establish grants for studying the effects on human health from uranium mining and milling
- Impose an intergovernmental mandate by preempting state and local regulatory authority over hazardous waste transport and storage in a nuclear waste repository in Nevada
- Impose a private-sector mandate by prohibiting mining on certain federal land that will be used for nuclear waste

Estimated budgetary effects would primarily stem from

- Limiting the collection of certain fees and reclassifying those fees as discretionary offsetting collections
- Authorizing the appropriation of funds for monitored retrievable storage (MRS) agreements and benefits agreements with state, local, and tribal governments

Areas of significant uncertainty include

- Projecting the timing and amount of spending needed for the government to meet its obligations under the Nuclear Waste Policy Act of 1982
- Projecting the timing and results of various licensing decisions of the Nuclear Regulatory Commission
- Determining whether DOE will reinstate the annual fees paid by utilities with nuclear plants
- Projecting the amount and timing of spending to provide benefits to certain governments and MRS facilities

Detailed estimate begins on the next page.



Bill Summary

H.R. 2699 would amend certain current-law programs and provisions related to nuclear waste disposal. Under the Nuclear Waste Policy Act of 1982 (NWPA), the federal government, through the Department of Energy (DOE), is responsible for permanently disposing of the nation’s nuclear waste in a geologic repository at Yucca Mountain, Nevada. Without changing that fundamental requirement, the bill would do the following:

- Limit, temporarily, DOE’s authority to collect certain fees charged to utilities with nuclear plants to cover the costs of disposing of the waste they generate,
- Reclassify those fees from mandatory offsetting receipts to discretionary offsetting collections,
- Authorize DOE to temporarily store nuclear waste at monitored retrievable storage (MRS) facilities, and
- Authorize DOE to enter into agreements to provide benefits to state, local, and tribal governments that might host or be affected by facilities related to the waste management program.

The bill also would require various agencies to report to the Congress on nuclear waste programs and would require DOE to establish a grant program to study the epidemiological consequences of uranium mining and milling.

Estimated Federal Cost

The estimated budgetary effect of H.R. 2699 is shown in Table 1. The costs of the legislation fall largely within budget function 270 (energy).

Table 1.
Estimated Budgetary Effects of H.R. 2699

	By Fiscal Year, Millions of Dollars											2020-2025	2020-2030
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Increases in Direct Spending													
Estimated Budget Authority	0	390	383	384	385	374	339	339	340	340	340	1,916	3,614
Estimated Outlays	0	390	383	384	385	374	339	339	340	340	340	1,916	3,614
Increases or Decreases (-) in Spending Subject to Appropriation													
Estimated Authorization	0	70	83	83	-312	-304	-319	-309	-315	-315	-315	-380	-1,953
Estimated Outlays	0	17	33	33	-287	-277	-268	-259	-315	-315	-315	-481	-1,953



Background

Both the policy background and CBO's baseline treatment of costs related to nuclear waste disposal are key to understanding the costs associated with implementing H.R. 2699.

Policy Background

Under the NWPA, the federal government faces substantial costs to permanently dispose of the nation's nuclear waste.¹ The only location authorized for long-term disposal is a geologic repository at Yucca Mountain, Nevada. In 2008, DOE submitted an application to the Nuclear Regulatory Commission (NRC) for a license to construct that repository. However, in 2010, the previous Administration took actions to terminate that project and the Congress has not provided funding for it since that time. Because the funds previously appropriated for that licensing effort have been exhausted, neither DOE nor the NRC can conduct the regulatory activities that must be completed before DOE can implement a nuclear waste disposal program.² The current Administration requested funding to resume licensing in its first three budget proposals (in 2020, \$154 million for DOE and the NRC), but those funds were not appropriated. The Administration did not request funding for Yucca Mountain in its 2021 budget.

DOE also has incurred—and partially breached—contractual obligations to remove waste from existing nuclear facilities. Under contracts with electric utilities consistent with the NWPA, DOE was scheduled to start removing waste from storage sites at power plants for transport to a federal storage or disposal facility by 1998, in exchange for fees to cover the government's costs. After the government missed that deadline, utilities with nuclear plants began to sue the government for damages. By the end of fiscal year 2019, the government had paid \$8 billion to utilities from the Judgment Fund (a permanent indefinite appropriation used to pay judicially and administratively ordered monetary awards against the United States), and liabilities are expected to grow until DOE fulfills its contractual obligation to remove the waste.³

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1. For additional information about federal responsibilities and liabilities under the Nuclear Waste Policy Act, see the testimony of Kim Cawley, Chief, Natural and Physical Resources Cost Estimates Unit, Congressional Budget Office, before the Subcommittee on Environment and the Economy of the House Committee on Energy and Commerce, *The Federal Government's Responsibilities and Liabilities Under the Nuclear Waste Policy Act* (December 3, 2015), www.cbo.gov/publication/51035.
 2. See Government Accountability Office, *Commercial Nuclear Waste: Resuming Licensing of the Yucca Mountain Repository Would Require Rebuilding Capacity at DOE and NRC, Among Other Key Steps*, GAO-17-340 (April 2017), www.gao.gov/products/GAO-17-340.
 3. Department of Energy, *Agency Financial Report: Fiscal Year 2019* (November 2019), <https://go.usa.gov/xwA4g>.



CBO's Baseline Projections

Federal cash flows related to the nuclear waste program under current law include both discretionary and mandatory spending.

Under the NWPA, spending from the Nuclear Waste Fund (NWF) for waste management is controlled by annual appropriation acts. Currently, no funding has been provided for permanent geologic disposal as authorized under the NWPA.

In contrast, the fees paid by nuclear utilities are governed by statutory provisions of the NWPA and the terms of the contracts entered into under that act. As a result, they are classified as offsetting receipts, which are recorded in the budget as reductions in mandatory spending. Likewise, spending to meet DOE's liabilities from its partial breach of those contracts is classified as mandatory because the source—the Treasury's Judgment Fund—is governed by underlying law that provides permanent, indefinite budget authority for such payments.

Projected Receipts From Nuclear Waste Fees. Under the NWPA and the terms of related contracts entered into by DOE and utilities with nuclear power plants, utilities pay two types of fees to cover the costs of disposing of their nuclear waste. Annual fees are based on the amount of electricity the utilities sell that is generated by nuclear power and onetime fees are based on the volume of waste those plants generated before the NWPA was enacted.

CBO's baseline projections of those receipts reflect uncertainty about events that could transpire under current law. Following litigation in which the nuclear industry challenged DOE's authority to collect the annual fees, DOE complied in 2014 with a court order to effectively stop collecting such fees.⁴

However, that court order also referenced procedures established under the NWPA, which are still in effect, by which DOE could reinstate annual fees under certain conditions. The NWPA requires DOE to periodically review and, if necessary, adjust the rate of the annual fee to ensure that the projected balances of the NWF (including interest credited to the fund) are sufficient to pay the full long-term costs associated with geologic disposal of nuclear waste. Under the court order, if DOE completed such an analysis and determined that additional fees were needed, it could reinstate fees at whatever rate it considered necessary. Given that possibility, CBO's baseline follows the agency's usual practices for projecting spending and receipts related to activities affected by the possibility of administrative

4. The National Association of Regulatory Utility Commissioners and the Nuclear Energy Institute filed petitions with the U.S. Court of Appeals for the District of Columbia Circuit to end the federal government's collections of annual fees. In 2013, that court found that DOE had failed to provide a legally justifiable basis for continuing to collect fees in the absence of an identifiable strategy for waste management. The court ordered DOE to reduce the annual fee from \$0.001 per kilowatt hour (kWh) of electricity generated by nuclear power to \$0.0 per kWh until the agency either justifies a reinstatement of annual fees with a new study on the adequacy of the balances in the NWF or until the Congress enacts new legislation authorizing an alternative to Yucca Mountain as a disposal site.



actions. Specifically, CBO estimates the total amounts that would be collected if fees were fully reinstated, and to account for the uncertainty under current law, includes 50 percent of those amounts in its baseline.

Projected Spending for DOE’s Contractual Liabilities. CBO’s baseline projections of mandatory spending include significant amounts of spending for continued on-site storage of waste at civilian nuclear facilities. That spending reflects payments from the Judgment Fund related to DOE’s contractual liabilities. Because of the lag between when such liabilities are incurred and damages are paid, CBO expects that most of the associated spending over the next 10 years will be attributable to liabilities that DOE has either already incurred or cannot avoid.

Estimates of the government’s remaining liabilities are uncertain and depend on when and how DOE begins to remove waste and how long it will take to eliminate the backlog. DOE estimated that its remaining liability was \$28.5 billion at the end of fiscal year 2019, assuming that licensing resumes in 2021.⁵ However, as long as DOE does not meet its obligations under the NWPA, the government will continue to incur additional liabilities.

Basis of Estimate

For this estimate, CBO assumes that the bill will be enacted early in fiscal year 2021 and that appropriations of the specified and necessary amounts will be provided. Estimated outlays are based on historical spending patterns for similar programs.

In addition, implementing several provisions in H.R. 2699 would depend on the timing and outcome of the NRC’s licensing decision regarding the Yucca Mountain repository. The bill would require the NRC to issue its final decision within 42 months of enactment. On that basis and using information from the NRC, CBO assumes that the decision would come in 2024.

Direct Spending

CBO estimates that implementing H.R. 2699 would increase direct spending by \$3.6 billion over the 2020-2030 period (see Table 2).

5. Department of Energy, *Agency Financial Report: Fiscal Year 2019* (November 2019), <https://go.usa.gov/xwA4g>.



**Table 2.
Estimated Increases in Direct Spending Under H.R. 2699**

By Fiscal Year, Millions of Dollars												2020- 2025	2020- 2030
2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030			
Temporary Limit on Annual Fees													
Estimated Budget Authority	0	390	383	384	0	0	0	0	0	0	0	1,157	1,157
Estimated Outlays	0	390	383	384	0	0	0	0	0	0	0	1,157	1,157
Reclassification of Annual Fee Collections													
Estimated Budget Authority	0	0	0	0	385	374	339	339	340	340	340	759	2,457
Estimated Outlays	0	0	0	0	385	374	339	339	340	340	340	759	2,457
Total Increase in Direct Spending													
Estimated Budget Authority	0	390	383	384	385	374	339	339	340	340	340	1,916	3,614
Estimated Outlays	0	390	383	384	385	374	339	339	340	340	340	1,916	3,614

Temporary Limit on Annual Fees. H.R. 2699 would direct DOE to establish separate procedures for assessing annual fees and accepting payments. Under the bill, within 180 days of enactment, DOE would establish procedures for assessing the annual fees. CBO expects those procedures would be consistent with the NWPA’s underlying requirement that the department set the rate at the amounts necessary to ensure that projected balances in the NWF will be sufficient to cover the costs of disposing of civilian nuclear waste. Because enacting H.R. 2699 would not substantively affect those costs, CBO expects that the new procedures would not significantly change the total amount that DOE would assess in each year.

However, the bill would prohibit DOE from accepting payments of annual fees until the NRC issues its Yucca Mountain licensing decision. Thus, enacting that provision would prohibit DOE from collecting any fees while the NRC conducts its analysis. CBO estimates that the temporary prohibition would reduce annual fees, and thus increase direct spending, by \$1.2 billion over the 2021-2023 period.

Reclassification of Annual Fee Collections. Once the NRC issues its final licensing decision, H.R. 2699 would require that any annual fees collected be credited as offsetting collections, which would be recorded as reductions in the cost of annual appropriation acts that provide funding for the waste program—effectively reclassifying projected fees from



mandatory offsetting receipts to discretionary offsetting collections. CBO estimates that provision would increase direct spending by \$2.5 billion over the 2024-2030 period.⁶

Spending Subject to Appropriation

CBO estimates that implementing H.R. 2699 would, on net, reduce spending subject to appropriation by about \$2.0 billion over the 2020-2030 period, assuming appropriation actions consistent with that estimate (see Table 3).

Table 3.
Estimated Changes in Spending Subject to Appropriation Under H.R. 2699

	By Fiscal Year, Millions of Dollars											2020-2025	2020-2030
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		
Reclassification of Annual Fee Collections													
Estimated Authorization	0	0	0	0	-385	-374	-339	-339	-340	-340	-340	-759	-2,457
Estimated Outlays	0	0	0	0	-385	-374	-339	-339	-340	-340	-340	-759	-2,457
MRS Agreement													
Estimated Authorization	0	50	50	50	50	50	0	0	0	0	0	250	250
Estimated Outlays	0	0	0	0	75	75	50	50	0	0	0	150	250
Benefits Agreements													
Estimated Authorization	0	15	30	30	20	20	20	30	25	25	25	115	240
Estimated Outlays	0	15	30	30	20	20	20	30	25	25	25	115	240
Other Provisions													
Estimated Authorization	0	5	3	3	3	0	0	0	0	0	0	14	14
Estimated Outlays	0	2	3	3	3	2	1	0	0	0	0	13	14
Total Increase or Decrease (-) in Spending													
Estimated Authorization	0	70	83	83	-312	-304	-319	-309	-315	-315	-315	-380	-1,953
Estimated Outlays	0	17	33	33	-287	-277	-268	-259	-315	-315	-315	-481	-1,953

MRS = monitored retrievable storage.

6. DOE's authority to collect fees could be affected by the funding provided for the waste disposal program. H.R. 2699 would limit DOE's authority to collect annual fees that total more than 90 percent of the amount appropriated in that year from the NWF for activities related to the Yucca Mountain project. The bill also would specify that regardless of any limitation on payments in a given year, the utilities would remain liable for the full amount of the fees assessed. It also would set forth conditions under which the Secretary could require utilities to pay uncollected portions previously assessed. Enacting those provisions could affect the timing and amount of receipts from payments of annual fees. CBO has no basis, however, for estimating how much those receipts would differ from its baseline.



Reclassification of Annual Fee Collections. As explained above, H.R. 2699 would reclassify the annual nuclear waste fees paid by utilities as discretionary offsetting collections. CBO estimates implementing that provision would increase discretionary collections and thus reduce discretionary spending by \$2.5 billion over the 2024-2030 period, mirroring the estimated increase in direct spending shown in Table 2.

Monitored Retrievable Storage Agreement. H.R. 2699 would direct DOE to determine the need for MRS facilities to temporarily store waste until the department can permanently dispose of it in a geologic repository. The bill also would authorize DOE and willing utilities to enter into new contracts or renegotiate the terms of existing contracts so DOE could store the utilities' waste at an MRS facility.

Unless the Secretary determines that constructing a federal MRS facility would be faster and less costly, the bill would direct DOE to prioritize storage of civilian waste at nonfederal MRS facilities, although none currently exist. Under H.R. 2699, DOE could not enter into an agreement with an MRS facility to accept and temporarily store department-owned waste unless the facility's sponsor obtained a license from the NRC and permission from the state's governor to store the waste. Permission also would be required from any local government agencies with jurisdiction over the area and from affected Indian tribes. The bill would allow DOE to enter into more than one MRS agreement, but only one could be signed before the NRC issues its Yucca Mountain licensing decision (in general, construction of the MRS facility would not be authorized until the NRC issues a decision).

The bill would authorize appropriations to implement the initial MRS agreement and to compensate a facility for temporarily storing department-owned waste. Through 2022, the bill would authorize the annual appropriation of the greater of \$50 million or 10 percent of the amount appropriated from the NWF. For fiscal years 2023 through 2025, the bill would authorize appropriations equal to 10 percent of the amount appropriated from the NWF. For this estimate, CBO assumes that annual authorizations over the 2021-2025 period would equal \$50 million.

Thus, CBO estimates that H.R. 2699 would authorize appropriations totaling \$250 million over the 2021-2030 period for DOE to implement an initial MRS agreement and that the resulting outlays over that period would be the same amount. Using information from DOE and the NRC, CBO expects that those amounts would support the development of one nonfederal MRS facility that would receive its NRC license and execute an agreement with DOE in 2024, be constructed in 2025 and 2026, and begin operation in 2027.⁷

Benefits Agreements. H.R. 2699 would authorize DOE to enter into a benefits agreement with Nevada and specify annual amounts to be paid to that state, subject to the availability of

7. According to the NRC, licensing efforts typically require three to four years to complete, but evidence from similar projects suggests that the process could last much longer.



appropriated funds. Annual benefits to Nevada would equal \$15 million until the repository first accepts waste. After it begins to accept waste, the bill would authorize a \$400 million onetime payment and \$40 million annually until the facility closes. However, CBO does not expect that the Yucca Mountain repository will accept waste before 2031, so those costs are not shown in this estimate.

The bill also would authorize DOE, one year after enactment, to enter into agreements with affected local governments within Nevada. CBO expects that DOE would enter into an agreement with Nevada in 2021 and with other governments in 2022. CBO also expects that payments to those other governments would not, in total, exceed the amount authorized to be paid to Nevada.

Under H.R. 2699, DOE could terminate those agreements if the NRC disapproves the license application for Yucca Mountain, although CBO has no basis for predicting the NRC's decision. To account for that uncertainty, CBO assumes for this estimate that there is a 50 percent chance that payments to Nevada and local governments within that state would continue after 2024. On that basis, CBO estimates that spending for repository-related benefits agreements would total \$180 million over the 2020-2030 period, assuming appropriation of the necessary amounts. That amount includes \$15 million in 2021 (for Nevada) and \$30 million annually (for Nevada and local governments) for 2022 and 2023—the full amount that CBO estimates would be authorized during those years while the NRC completes its licensing activities. To account for uncertainty about whether payments would continue after that, CBO's estimate also includes payments to Nevada and affected governments totaling \$15 million annually over the 2024-2030 period (half the total amount CBO estimates would be paid to those governments over that period if the NRC approves the license).

In addition, DOE could enter into benefits agreements with states where land is selected for an MRS facility. The host government would receive \$5 million annually during facility licensing and construction, and once the facility starts to accept the waste, that government would receive a onetime \$10 million payment. Subsequent payments would be \$10 million annually for the life of the facility. All such payments would be subject to the availability of appropriated funds.

For this estimate, CBO assumes that DOE would commit to pay at least one state to site an MRS facility over the 2020-2030 period. Based on how long it would probably take to develop such a facility, CBO estimates that payments would begin in 2024 and, assuming the facility began to accept waste in 2027, would total \$60 million through 2030.

In total, CBO estimates, implementing the benefits agreement payments would cost \$240 million over the 2020-2030 period—\$180 million for the repository and \$60 million for an MRS facility.



Other Provisions. CBO estimates that implementing other provisions in H.R. 2699 would cost \$14 million over the 2020-2030 period. The bill would authorize the appropriation of \$3 million annually through 2024 for DOE to establish a grant program to study the epidemiological consequences of uranium mining and milling. In addition, CBO estimates that fulfilling reporting requirements and other related tasks under the bill would cost about \$2 million.

Uncertainty

CBO's cost estimate for H.R. 2699 depends on several factors that are uncertain.

NWPA Implementation. Both the timing and amount of additional spending necessary for the government to meet its obligations under the NWPA and the extent to which federal costs will be defrayed by fees from nuclear utilities are uncertain. Resuming activities to execute the program as currently authorized will require a significant and sustained increase in federal appropriations to rebuild DOE's and the NRC's capacity to complete licensing and to construct the facilities and infrastructure authorized under the act. CBO cannot predict whether the necessary funding will be provided.⁸ Likewise, although the NWPA requires DOE to charge fees to nuclear utilities to cover the government's cost to dispose of those utilities' wastes, the extent to which the Secretary will exercise discretion under current law to assess and collect such fees is uncertain.

Licensing Outcomes and Benefits Agreements. The cost of repository-related benefits agreements would depend on the timing and results of the NRC's licensing decision, both of which are uncertain. That agency's decision would probably determine whether payments for benefits agreements related to a repository at Yucca Mountain continued. If the NRC approves the application, CBO anticipates that the affected governments would continue to receive benefits. However, if the NRC denies the application, CBO expects that DOE would exercise its authority to terminate any agreements governing such benefits. CBO has no basis, though, for predicting the outcome of the NRC's licensing process.

Similar uncertainties exist for the MRS facility, including the timing and outcome of associated licensing efforts, whether a state government would provide the necessary approval, and how much spending would be needed to provide benefits to that state's government.

8. In 2008, DOE estimated that costs associated with geologic disposal of civilian and defense-related nuclear waste (including costs related to transportation and project management) would total \$96 billion (in 2007 dollars) over a period of more than 100 years. See Department of Energy, Office of Civilian Radioactive Waste Management, *Analysis of the Total System Life Cycle Cost of the Civilian Radioactive Waste Management Program, Fiscal Year 2007*, DOE/RW-0591 (July 2008), <https://go.usa.gov/xwAGX>. The NRC estimated in 2014 that completing its review and adjudication of DOE's license application for a repository at Yucca Mountain would cost \$330 million. See Government Accountability Office, *Commercial Nuclear Waste: Resuming Licensing of the Yucca Mountain Repository Would Require Rebuilding Capacity at DOE and NRC, Among Other Key Steps* (April 2017), www.gao.gov/products/GAO-17-340.



Pay-As-You-Go Considerations

The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in outlays that are subject to those pay-as-you-go procedures are shown in Table 4.

Table 4.
CBO’s Estimate of the Statutory Pay-As-You-Go Effects of H.R. 2699, the Nuclear Waste Policy Amendments Act of 2019, as Ordered Reported by the House Committee on Energy and Commerce on November 20, 2019

	By Fiscal Year, Millions of Dollars											2020-2025	2020-2030
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030		
	Net Increase in the Deficit												
Pay-As-You-Go Effect	0	390	383	384	385	374	339	339	340	340	340	1,916	3,614

Increase in Long-Term Deficits

CBO estimates that enacting H.R. 2699 would not increase deficits by more than \$5 billion in any of the four consecutive 10-year periods beginning in 2031.

Mandates

H.R. 2699 would impose intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA). CBO estimates that the cost of complying with the mandates would not exceed the annual thresholds established in UMRA of \$84 million and \$168 million, respectively, in 2020 (adjusted annually for inflation).

Mandates on Public Entities

The bill would impose an intergovernmental mandate as defined in UMRA by preempting state and local regulatory authority over hazardous waste that would be transported to and stored in the Yucca Mountain nuclear waste repository. Although the preemption would limit the application of state and local laws and regulations, CBO estimates that it would impose no duty on state or local governments that would result either in additional spending or in a loss of revenues.

Mandates on Private Entities

H.R. 2699 would impose a private-sector mandate on owners of mining claims by prohibiting mining on certain federal land that will be used for a nuclear waste repository. Using information from DOE’s license application to the NRC and information from the Government Accountability Office, CBO estimates that about 100 mining claims may be affected by the mandate. The mandate would apply only to owners of valid claims, as determined by the Secretary of the Interior, and the cost of the mandate would be the fair market value of the claims. Mining claims on federal land are determined to be valid only



after the discovery of a valuable mineral deposit. Using information on the value of the affected claims, CBO estimates that the value per claim would not be substantial and consequently that the cost of the mandate would be small. Furthermore, H.R. 2699 would require the government to compensate owners for the lost value of valid claims.

Other Effects on Public Entities

Although the NWPA does not require state, local, and tribal governments to participate in licensing and review related to Yucca Mountain or another MRS facility, CBO expects that agencies of those governments would probably choose to participate and would incur costs to do so. Those costs would include legal and administrative expenses and the costs of conducting scientific and technical analyses. Any costs incurred would result from voluntary commitments. CBO expects that public agencies would spend about \$40 million annually over three or four years on administrative proceedings related to the Yucca Mountain repository. CBO estimates that costs would be lower for public agencies participating in proceedings related to an MRS facility because of the lower complexity involved with such a project. Under the NWPA, DOE is authorized to provide financial and technical assistance to defray such costs to public agencies.

Although H.R. 2699 would, by itself, establish no new enforceable duties on state, local, or tribal governments, shipments of nuclear waste for temporary storage at an MRS facility and for permanent storage at Yucca Mountain probably would increase their costs for complying with existing requirements for federal grants and conditions of participation in other federal programs. Those requirements include compliance with federal laws governing transportation, public safety, and environmental protection as implemented by public agencies.

Additional spending by state, local, and tribal agencies would support other activities, including emergency response planning and training, public health and safety, road and rail maintenance, inspections, and security activities. Such indirect costs would not stem from mandates as defined by UMRA, but they could total tens of millions of dollars per year among all public entities. In addition, past studies by the Nevada Department of Transportation suggest that costs for upgrading road or rail infrastructure to accommodate shipments could total hundreds of millions of dollars. In the event of an accident or attack involving shipment of radioactive waste, costs could be significantly higher.

H.R. 2699 would authorize DOE to enter into benefits agreements to compensate state, local, and tribal governments in Nevada and in states with an MRS facility for accommodating a nuclear waste storage site. Under such agreements, those governments would receive annual payments from DOE that would vary depending both on whether an MRS facility or repository is constructed in the state and on whether the site accepts waste shipments for storage.



CBO expects that DOE would make payments to state and local governments in Nevada for the Yucca Mountain site of \$180 million over the 2020-2030 period, assuming appropriation of the necessary amounts. If the NRC approves DOE's license application for the repository, CBO estimates, payments would continue at about \$15 million annually over the 2024-2030 period. When the repository first receives waste, parties to a benefits agreement would receive a onetime payment of about \$400 million and estimated annual payments of \$40 million thereafter for the lifetime of the repository.

The bill also would permit DOE to provide benefits of \$5 million annually to another host government to support an MRS facility. Once the facility starts accepting waste, the facility would receive a onetime \$10 million payment and annual payments would increase to \$10 million for the life of the facility.

Finally, the bill would require any economic benefits derived from the future retrieval of spent nuclear fuel from Yucca Mountain to be shared with affected state, local, and tribal governments.

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