



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

October 25, 2002

S. 1746

Nuclear Security Act of 2002

*As ordered reported by the Senate Committee on Environment and Public Works
on July 25, 2002*

SUMMARY

S. 1746 would establish several new security programs for the nation's nuclear infrastructure. Programs would include federal security coordinators for designated nuclear facilities, antiterrorism teams to protect nuclear facilities, mock terrorism drills, new rules on security compliance at nuclear facilities, and a program to classify, track, and monitor radioactive sources throughout the country.

Based on information from the Nuclear Regulatory Commission (NRC), CBO estimates that implementing S. 1746 would have a gross cost of \$486 million over the 2003-2007 period. However, the NRC has the authority to offset a substantial portion of its annual appropriation with fees charged to the facilities it regulates. Accounting for such collections, CBO estimates that implementing S. 1746 would result in a net cost of \$126 million over the 2003-2007 period, assuming appropriation of the necessary amounts.

The bill also would require all employees at nuclear facilities to undergo background checks. Because the Department of Justice (DOJ) would charge the applicant a fee to offset the cost of background checks required by the bill, we estimate that this provision would have a negligible impact on direct spending.

In addition, S. 1746 would establish new criminal penalties for the sabotage of nuclear production, utilization, or waste storage facilities and for noncompliance with certain employee background checks that would be established by the bill. CBO estimates that these penalties would increase revenues and subsequent direct spending of those collections by less than \$500,000 a year.

S. 1746 would impose both intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) by:

- Effectively increasing the annual fees collected from NRC licensees;
- Requiring new security standards and procedures at sensitive nuclear facilities; and
- Expanding the system for licensing sensitive radioactive materials.

Because several of the mandates are dependent upon future actions of the NRC, for which information currently is not available, CBO cannot precisely determine the aggregate cost of all mandates contained in the bill. However, CBO estimates that the costs to the private sector would likely exceed the annual threshold for private-sector mandates (\$115 million in 2002, adjusted annually for inflation) in fiscal year 2004, primarily because of the increase in annual fees imposed on NRC licensees. CBO expects that the aggregate costs to public entities of all mandates would not exceed the intergovernmental threshold (\$58 million in 2002, adjusted annually for inflation).

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of S. 1746 is shown in the following table. The costs of this legislation fall within budget function 270 (energy) and 750 (administration of justice).

BASIS OF ESTIMATE

For this estimate, CBO assumes that the bill will be enacted by the end of calendar year 2002, that the necessary amounts will be appropriated for each year, and that outlays will occur at historical rates for similar programs.

Spending Subject to Appropriation

S. 1746 would establish several new security programs to be implemented at the nation's sensitive nuclear facilities, including creating antiterrorism teams, running mock terrorism drills, and establishing federal security coordinators at each site. For this estimate, we assume that 84 commercial nuclear sites in 35 states would meet the bill's definition of a "sensitive nuclear facility" and thus would be subject to its requirements. In addition, the bill

would require the registration and tracking of radioactive material, several new federal rules concerning nuclear security, and it would establish a training and grant program for the National Guard and state and local law enforcement personnel.

	By Fiscal Year, in Millions of Dollars				
	2003	2004	2005	2006	2007
CHANGES IN SPENDING SUBJECT TO APPROPRIATION ^a					
Federal Security Programs at Nuclear Facilities					
Estimated Authorization Level	73	88	64	64	64
Estimated Outlays	58	85	69	64	64
National Guard and Law Enforcement Training					
Estimated Authorization Level	11	17	14	14	14
Estimated Outlays	9	16	15	14	14
Sensitive Radioactive Materials					
Estimated Authorization Level	9	17	10	8	8
Estimated Outlays	7	15	11	8	8
Security and Emergency Response Plan Review					
Estimated Authorization Level	8	9	1	1	1
Estimated Outlays	6	9	3	1	1
Security Rulemakings					
Estimated Authorization Level	3	3	1	1	1
Estimated Outlays	2	3	1	1	1
Estimated Gross Authorizations for the NRC under S. 1746					
Estimated Authorization Level	104	134	90	88	88
Estimated Outlays	83	128	99	88	88
Offsetting Collections ^b					
Estimated Authorization Level	-98	-124	-81	-29	-29
Estimated Outlays	-98	-124	-81	-29	-29
Net New NRC Spending Under S. 1746					
Estimated Authorization Level ^a	6	11	9	59	59
Estimated Outlays	-15	5	18	59	59

Note: Components may not sum to totals because of rounding.

a. A full-year appropriation has not yet been enacted for the NRC; in 2002, the agency received a gross appropriation of \$553 million, and offsetting collections totaled \$474 million.

b. Collections are authorized at declining percentages of the NRC's budget: 94 percent in 2003, 92 percent in 2004, 90 percent in 2005, and 33 percent after 2005.

Based on information from the NRC and other federal agencies, CBO estimates that implementing S. 1746 would have a gross cost of \$486 million over the 2003-2007 period, assuming appropriation of the necessary amounts. However, the NRC has the authority to offset a substantial portion of its annual appropriation with fees charged to facilities it regulates. After accounting for such collections, we estimate that the net cost of implementing S. 1746 would be \$126 million over the 2003-2007 period.

Federal Security Programs at Nuclear Facilities. S. 1746 would authorize funding for federal antiterrorism teams, mock terrorism teams, and security coordinators for the nuclear facilities covered by the bill. We estimate that implementing these three programs would have a gross cost of \$340 million over the 2003-2007 period for additional staff, equipment, training, and consulting.

Antiterrorism Teams. Although the bill does not specify the scope of the antiterrorism teams, for this estimate, we assume the NRC would establish 16 antiterrorism teams of 10 people each (four teams for each of NRC's four regions). Those teams would be trained in local topography, geography, nuclear infrastructure, and security tactics and would be available to respond to security incidents 24 hours a day. Based on information from the NRC, we estimate that it could cost as much as \$500,000 per person, initially, to provide such specialized training, equipment, and staff support. We expect that annual costs would be reduced by half that amount once the program is established. CBO estimates that implementing this provision would have a gross cost of \$232 million over the 2003-2007 period.

Federal Security Coordinators. S. 1746 also would require that the NRC hire and train security coordinators to be stationed at each of the 84 sensitive nuclear facilities that would be covered by the bill. They would coordinate all security programs at the nuclear facility. We expect that it would take NRC one year to issue rules and establish this new program. We assume that the agency would need 110 additional people to staff and manage the federal security coordinator program at a cost of \$11 million a year beginning in 2004 and that NRC would spend an additional \$3 million a year on training and equipment. CBO estimates that implementing this provision would cost \$54 million over the 2003-2007 period.

Mock Terrorism Teams. Under S. 1746, mock terrorism teams would be deployed to perform security drills at each nuclear facility every three years. We estimate that the NRC would establish a team of 30 people to conduct such drills at a cost of about \$3 million a year. In addition, we estimate the NRC would need \$10 million for support personnel, equipment, and travel over the 2003-2004 period, and that the initial cost for training and equipment would drop by about half after the teams are established. We also would expect the NRC to contract with private security firms or the Department of Defense for staff

support and assistance in designing the drills at a cost of about \$5 million per year. We estimate that this program would cost \$54 million over the 2003-2007 period, assuming appropriation of the necessary amounts.

National Guard and Law Enforcement Training. S. 1746 would require the President to establish a program to provide technical assistance and training to the National Guard and state and local law enforcement agencies to respond to threats against the nation's nuclear facilities. Under this program, we expect that the NRC would provide training at each of the covered 84 nuclear facilities four times a year at a cost of about \$120,000 a year (or a total cost of about \$10 million per year). In addition, we expect that the 35 states with sensitive nuclear facilities would receive grants of \$100,000 per year for technical assistance and training. Assuming appropriation of the necessary amounts, we estimate that implementing these training and assistance programs would cost on average \$14 million a year.

Sensitive Radioactive Material. S. 1746 would require the NRC to establish a program to register, track, and control sensitive radioactive material. Currently, the NRC spends about \$1 million per year to regulate certain radioactive material used for industrial purposes. S. 1746 would significantly expand that program to include a wide variety of sources and uses of radioactive material.

Based on information from the NRC we estimate this program would cost an average of \$10 million per year for evaluating, classifying, and tracking of such materials. Funds would be used for establishing new computer programs, hiring of additional staff, and auditing sites with radioactive materials. Overall, we estimate that implementation of this program would cost about \$50 million over the 2003-2007 period.

Security and Emergency Response Plan Review. S. 1746 would require the NRC to review the emergency response plans for each of the 84 sensitive nuclear facilities in the United States within nine months of enactment and their security plans within 21 months of enactment. In addition, the bill would require the NRC to conduct emergency response exercises every two years at each facility. After each review and exercise, the NRC would submit a report to the Congress and work with the facilities on any necessary improvements to plans and procedures. Based on information from the NRC, we estimate those reviews would require 60 additional staff at a cost of about \$6 million in 2003, and that costs would drop significantly in the following years as the reviews and follow-up inspections are completed. We estimate that the agency would need about \$3 million in 2003 and 2004 for travel and contract services to accomplish the reviews in the time frame established in the bill. We estimate emergency response exercises would cost about \$1 million a year. In total, we estimate that implementing the security and emergency response plan reviews required

by the bill would cost \$20 million over the 2003-2007 period, assuming appropriation of the necessary amounts.

Security Rulemakings. S. 1746 would require the NRC to establish several new rules to enhance security at the nation's nuclear facilities. The rulemakings would cover threat levels and threats that facilities would be required to defend, the coordination of federal agencies during a nuclear threat or attack, background checks for employees at nuclear facilities, and weapons policies for security personnel at nuclear facilities. We estimate that the NRC would need an additional 25 people at a cost of about \$2.5 million a year to complete these rulemakings over the 2003-2004 period. We expect that staff needs would diminish as the rulemakings are completed, thus reducing the cost to about \$1 million per year. CBO estimates all of these rulemakings would cost \$8 million over the 2003-2007 period, assuming appropriation of the necessary amounts.

Direct Spending and Revenues

CBO estimates that enacting S. 1746 would increase both offsetting receipts and direct spending of those receipts by \$2.3 million in 2003 for background checks on nuclear security personnel required by the bill; thus, the net budgetary impact of this requirement would be negligible. In addition, it would establish criminal penalties for noncompliance with such background checks and penalties for the sabotage of nuclear facilities. We estimate that any increase in penalties would be less than \$500,000 per year.

Fingerprinting and Background Checks. S. 1746 would require that all employees of covered nuclear facilities undergo fingerprinting and background checks within 60 days of passage of the bill. Such checks would be performed by the Department of Justice. Based on information from DOJ, we expect most checks would cost about \$22 per person. On average, about 1,250 people work at each of the 84 covered facilities. Because DOJ would charge a fee of \$22 for each person that applies for a background check, we estimate that the agency would collect about \$2.3 million in 2003. DOJ is authorized to spend such fees without further appropriation, and we expect that most of the money would be spent in the year in which it is collected. Thus, the net impact on DOJ spending would be negligible.

Penalties. S. 1746 would strengthen the criminal penalties for the sabotage of nuclear production, utilization, or waste storage facilities and for noncompliance with the background checks established by the bill. CBO estimates that enacting these new penalties would increase governmental receipts by less than \$500,000 a year. Any criminal fines collected would be deposited in the Crime Victims Fund and spent in subsequent years. Any

resulting change in direct spending from the fund also would amount to less than \$500,000 annually.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

S. 1746 would impose both intergovernmental and private-sector mandates as defined in UMRA by:

- Effectively increasing the annual fees collected from NRC licensees;
- Requiring new security standards and procedures at sensitive nuclear facilities; and
- Expanding the system for licensing sensitive radioactive materials.

Because several of the mandates are dependent upon future actions of the NRC, for which information currently is not available, CBO cannot precisely determine the aggregate cost of all mandates contained in the bill. However, CBO estimates that the costs to public entities would not exceed the intergovernmental threshold (\$58 million in 2002, adjusted annually for inflation), while the cost to the private sector would likely exceed the annual threshold for private-sector mandates (\$115 million in 2002, adjusted annually for inflation) in fiscal year 2004.

Increasing Annual Fees for NRC Licensees

Under current law, the NRC collects annual fees from its licensees, both public and private, to offset a major portion of its general fund appropriation. Because S. 1746 would require the NRC to engage in a variety of initiatives to augment security at licensed facilities, CBO expects that additional fees would be collected from the licensees to cover the cost of such initiatives. The duty to pay those fee increases would be considered both a private-sector and an intergovernmental mandate under UMRA, as it results in an increase in the cost of an existing mandate. Assuming an appropriation level of amounts necessary to cover the costs of the NRC's security initiatives starting in 2003, CBO estimates that the increment in fees would total approximately \$98 million in fiscal year 2003, \$124 million in fiscal year 2004, \$81 million in 2005, and drop to around \$29 million in subsequent fiscal years. Because less than 5 percent of nuclear facilities are publicly owned, CBO estimates that the increase borne by public nuclear facilities would not be significant.

Security Procedures at Sensitive Nuclear Facilities

S. 1746 would establish new security procedures for nuclear facilities in order to prevent acts of radiological sabotage and the theft of special nuclear material. Accordingly, the bill would require the NRC to promulgate rules revising:

- The threats sensitive nuclear facilities must protect against;
- The threat levels at which each facility must operate; and
- The hiring and training standards for employees of the facilities.

Compliance with each of the rules would constitute a mandate as defined by UMRA. The extent of those mandates would be based upon future actions of the NRC, which would track the recommendations of an interagency task force on nuclear infrastructure security. At this time, the NRC could not give any indication as to the scope of the rules to be issued and accordingly, CBO cannot determine the cost of compliance.

In response to the events of September 11, 2001, the NRC issued interim security measures for sensitive nuclear facilities, while further analysis regarding future regulatory action was undertaken. The interim measures, which included determinations as to the types of threats nuclear facilities must protect against, became binding prior to, or in August of this year for the vast majority of sensitive nuclear facilities. In addition, the NRC issued voluntary guidelines on the threat levels at which facilities could operate, which parallel the threat levels established by the Office of Homeland Security. The NRC indicates that most, if not all, NRC licensees adopted those guidelines. According to representatives of the nuclear industry, sensitive nuclear facilities have already spent about \$90 million to upgrade security to comply with the NRC's interim security measures. To the extent that future security and threat level regulations mirror those that are currently in place, sensitive nuclear facilities would not bear substantial additional costs associated with the mandate.

In addition, S. 1746 would require that employees of sensitive nuclear facilities undergo more extensive background investigations that would include checks of fingerprint records located in the National Crime Information Center data sets, the United States National Central Bureau of Interpol, the National Instant Criminal Background Check system, and the Immigration and Naturalization Service data sets. Employees are currently fingerprinted for an FBI criminal history check. According to the Department of Justice, the incremental cost of the expanded check would be approximately \$22, and based upon the number of individuals employed by the industry, CBO estimates that the cost that would be borne directly by licensees would be roughly \$2.3 million in 2003.

Licensing System for Sensitive Nuclear Materials

The bill would require the NRC to revise and expand the system for licensing certain radioactive materials, such as those used in industrial, medical, and research applications, based on the recommendations of an interagency task force. Information from the NRC suggests that some regulatory changes for sensitive radioactive material are already underway and that the agency does not intend to impose a heavy burden on the entities affected. Consequently, CBO expects that the costs relating to this mandate would not be significant.

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