



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

August 14, 2003

S. 1043

Nuclear Infrastructure Security Act of 2003

*As ordered reported by the Senate Committee on Environment and Public Works
on May 15, 2003*

SUMMARY

S. 1043 would establish several new security programs designed to protect the nation's nuclear infrastructure. Those programs would include appointing federal security coordinators for designated nuclear facilities, enhanced systems to manage the security of sensitive radioactive materials, additional requirements for security and emergency-response plans at designated nuclear facilities, and additional training and grant funding for the National Guard and state and local authorities to improve security efforts at nuclear facilities.

Based on information from the Nuclear Regulatory Commission (NRC), CBO estimates that implementing S. 1043 would have a gross cost of \$253 million over the 2004-2008 period. Although the NRC currently has the authority to offset a substantial portion of its annual appropriation with fees charged to the facilities it regulates, S. 1043 would require that only the cost of security inspections be offset through annual fees. Accounting for such collections, CBO estimates that implementing S. 1043 would result in a net cost of \$235 million over the 2004-2008 period, assuming appropriation of the necessary amounts.

In addition, enacting S. 1043 would increase revenues by establishing new criminal penalties for the sabotage of nuclear facilities and by allowing certain facilities regulated by the NRC to import weapons subject to a transfer tax. CBO estimates that those penalties and transfer taxes would increase revenues by less than \$500,000 a year. Subsequent direct spending of criminal penalties also would be less than \$500,000 per year.

S. 1043 would impose both intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) by increasing NRC fees and requiring new security procedures at certain nuclear facilities. Because several of the mandates are dependent upon future actions of the NRC for which information currently is not available, CBO cannot determine the aggregate cost of all mandates contained in the bill nor whether

the costs to the private sector would exceed the annual threshold for private-sector mandates (\$117 million in 2003, adjusted annually for inflation). CBO estimates, however, that the costs to public entities would be small and would not exceed the intergovernmental threshold (\$59 million in 2003, adjusted annually for inflation).

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of S. 1043 is shown in the following table. The costs of this legislation fall within budget function 270 (energy).

	By Fiscal Year, in Millions of Dollars				
	2004	2005	2006	2007	2008
CHANGES IN SPENDING SUBJECT TO APPROPRIATION^a					
Federal Security Coordinators					
Estimated Authorization Level	0	20	21	21	22
Estimated Outlays	0	14	19	21	22
Security of Sensitive Radioactive Materials					
Estimated Authorization Level	12	12	12	12	13
Estimated Outlays	8	11	12	12	13
Security and Emergency-Response Plans					
Estimated Authorization Level	10	10	13	15	9
Estimated Outlays	7	9	12	14	11
National Guard and Law Enforcement Training					
Estimated Authorization Level	11	11	11	11	11
Estimated Outlays	8	10	11	11	11
Rulemakings, Evaluations, and Reports					
Estimated Authorization Level	6	4	6	2	1
Estimated Outlays	4	3	5	3	2
Gross Changes in NRC Costs Under S. 1043					
Estimated Authorization Level	39	57	63	61	56
Estimated Outlays	27	47	59	61	59
Offsetting Collections for Security-Response Evaluations ^b					
Estimated Authorization Level	-6	-6	-2	-2	-2
Estimated Outlays	-6	-6	-2	-2	-2
Net Changes in NRC Spending Under S. 1043					
Estimated Authorization Level	33	51	61	59	54
Estimated Outlays	21	41	57	59	57

NOTE: Details may not sum to totals because of rounding.

- a. S. 1043 also would affect revenues and direct spending but by less than \$500,000.
 - b. Under current law, collections are authorized at declining percentages of the NRC's budget (92 percent in 2004, 90 percent in 2005, and 33 percent after 2005). To estimate the net cost of S. 1043, those collection percentages were applied to the estimated cost of security inspection programs as required by S. 1043.
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BASIS OF ESTIMATE

For this estimate, CBO assumes that the bill will be enacted near the start of fiscal year 2004, 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. 1043 would establish several new security and emergency-response programs to be implemented at the nation's nuclear facilities. Based on information from the NRC, CBO assumes that 66 commercial nuclear sites in 31 states would meet the bill's definition of a "designated nuclear facility" and thus would be subject to the requirements of the bill. In addition, the bill would require new registration and tracking procedures for radioactive material, new nuclear security and emergency planning procedures, and it would establish a training and grant program for the National Guard and state and local law enforcement personnel to improve security at nuclear facilities.

In 2003, the NRC received a gross appropriation of \$574 million. The agency is authorized to collect fees from the nuclear industry to offset a significant portion of its budget; CBO estimates that NRC will have net spending of \$74 million in 2003. After the provisions of S. 1043 are fully implemented, CBO estimates that NRC's new responsibilities would cost around \$60 million a year (in addition to its net spending under current law), subject to appropriation of the necessary amounts.

Based on information from the NRC, CBO estimates that implementing S. 1043 would have a gross cost of \$253 million over the 2004-2008 period. Although the NRC has the authority under current law to offset a substantial portion of its annual appropriation with fees charged to the facilities it regulates, S. 1043 would require that only the cost of security inspections be offset through such fees. Accounting for such collections, CBO estimates that implementing S. 1043 would result in a net cost of \$235 million over the 2004-2008 period, assuming appropriation of the necessary amounts.

Federal Security Coordinators. S. 1043 would require that the NRC hire and train security coordinators to be stationed in each of the NRC's four regions. Under the bill, the Governor of a state may request a security coordinator for each of the nuclear facilities located in that state. For this estimate, we assume that all 31 affected Governors would make such requests and that all 66 sites designated under the bill would have individual security coordinators in addition to the regional coordinators.

Overall, we estimate that implementing this program would require the NRC to hire and train about 85 personnel at a cost of about \$14 million per year and that the program would start in 2005. We expect that the NRC would spend about \$6 million per year on training, travel, and equipment for those security coordinators. Overall, CBO estimates that implementing this program would cost \$76 million over the 2005-2008 period.

Security of Sensitive Radioactive Material. S. 1043 would require the NRC to improve the security requirements for sensitive radioactive materials. Such improvements would include revising licensing and classification systems, establishing a tracking system, and increasing evaluation and inspection of safeguard measures. Currently, the NRC spends about \$1 million per year to regulate certain radioactive material used for industrial purposes. S. 1043 would significantly expand that program to include a wide variety of radioactive materials.

Based on information from the NRC, we estimate that this expanded program would require additional appropriations of \$12 million per year over the next five years. Funds would be used for establishing new computer systems, hiring of additional staff, and auditing sites with radioactive materials. Overall, we estimate that implementation of this program would result in outlays of \$56 million over the 2004-2008 period.

Security- and Emergency-Response Plans. S. 1043 would require the NRC to evaluate the emergency-response plans for each of the 66 designated nuclear facilities in the United States. Based on information from the NRC, CBO estimates that those evaluations would cost an average of about \$11 million per year, or \$53 million over the 2004-2008 period for additional staff, equipment, training, and consulting services. We expect that the new evaluation program would be offset by fees charged to the NRC's licensees, thus we estimate that net outlays for those provisions would be \$35 million over the next five years.

Emergency-Response Planning. S. 1043 would require the NRC to review and update the regulations for preparing emergency-response plans at designated nuclear facilities. After such regulations are updated, the NRC would be required to review each plan for compliance and report to the Congress. We estimate that it would cost the NRC about \$1 million to review and promulgate new rules for emergency-response plans over the 2004-2005 period

and that reviewing the plans after new rules are issued would cost about \$8 million over the 2006-2008 period.

In addition to requiring upgrades to emergency plans, S. 1043 would require the NRC to observe and evaluate emergency-response exercises and report to the Congress. Based on information from the NRC, we expect that the agency would hire additional staff to establish evaluation criteria to observe emergency-response exercises. We estimate that activity would cost about \$9 million over the 2004-2008 period for additional staff, support, training, and travel.

Security-Response Evaluations. S. 1043 would require the NRC to establish a security-response-evaluation program that would simulate the threats that nuclear facilities must be able to defend against. At least once every three years, an evaluation would be required at each designated nuclear facility. We expect that the NRC would use contractors to conduct mock exercises, known as force-on-force. Overall, we estimate that the NRC would spend about \$7 million per year to staff and support a program office and contract for such exercises. CBO estimates that the program would have a gross cost of about \$35 million over the 2004-2008 period. Based on information from the NRC, however, we expect that the cost of this program would be offset by fees charged to the NRC's licensees. Such fees are charged annually in declining percentages of the budget authority for the NRC's programs. Accounting for such fees, we estimate that implementing this provision would result in net outlays of \$17 million over the 2004-2008 period.

National Guard and Law Enforcement Training. S. 1043 would establish a new program to provide technical assistance and training for the National Guard and state and local law enforcement agencies to respond to threats against the nation's nuclear facilities. Under this program, the NRC would provide training at each of the designated 66 facilities four times a year at a cost of about \$125,000 a year—at an estimated total cost of \$8 million per year. In addition, we estimate that the 31 states with designated nuclear facilities would each receive grants of \$100,000 per year for technical assistance and training. Assuming appropriation of the necessary amounts, we estimate that implementing those training and assistance programs would require appropriations of about \$11 million a year, which would result in outlays of \$51 million over the 2004-2008 period.

Rulemakings, Evaluations, and Reports. The bill would require the NRC to prepare several reports for the Congress on nuclear security issues and conduct reviews of security matters at the nation's nuclear facilities. CBO has estimated the cost of those additional efforts based on information from the NRC. Specifically, the bill would require:

- An examination of the security requirements for the nation's nuclear infrastructure at an estimated cost of \$4 million over the 2004-2005 period;

- An update to rules on design-basis threat or the threat that designated nuclear facilities must be able to defend against at an estimated cost of \$2 million over the 2004-2006 period;
- An evaluation of each designated nuclear facility's plan to defend against the updated design-basis threat at an estimated cost of \$3.5 million in 2006;
- New rules regarding the handling of accelerator-produced and by-product radioactive material at an estimated cost of \$1.5 million per year over the 2005-2007 period;
- A review and update of employee security standards at the nation's nuclear facilities at an estimated cost of \$4 million over the 2004-2008 period;
- A report on the adequacy of criminal penalties under the Atomic Energy Act at an estimated cost of \$500,000 in 2004; and
- A system to determine threat levels for the nation's nuclear infrastructure at an estimated cost of \$300,000 over the 2005-2006 period;

Overall, we would expect that such evaluations, rulemakings, and reports to the Congress have a cost of \$19 million over the 2004-2008 period for additional staff, support, and consulting services.

Direct Spending and Revenues

Enacting S. 1043 would increase revenues by establishing new criminal penalties for the sabotage of a wide range of nuclear facilities and fuel and allow certain facilities regulated by the NRC to import weapons subject to a transfer tax. CBO estimates that those penalties and transfer taxes would increase revenues by less than \$500,000 a year. Subsequent direct spending of penalties collected for violation of the criminal code would also be less than \$500,000 per year.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

S. 1043 would impose both intergovernmental and private-sector mandates as defined in UMRA by:

- Effectively increasing the annual fees collected from NRC licensees to cover the costs of security inspections by the NRC;
- Effectively increasing fees collected from licensees to pay for fingerprint checks by increasing the number of individuals requiring background checks; and
- Requiring new security standards and procedures at designated nuclear facilities.

Because several of the mandates are dependent upon future actions of the NRC for which information currently is not available, CBO cannot determine the aggregate cost of all mandates contained in the bill nor whether the costs to private-sector entities would exceed the annual threshold for private-sector mandates (\$117 million in 2003, adjusted annually for inflation). CBO estimates, however, that the costs to public entities would be small and would not exceed the intergovernmental threshold (\$59 million in 2003, adjusted annually for inflation).

S. 1043 would require the NRC to conduct security inspections at licensed facilities. In addition, the bill would require fingerprinting of additional individuals connected with nuclear facilities as part of criminal background checks done through the U.S. Attorney General's Office. The bill would permit the NRC to offset the costs of the security inspections with an increase in annual license fees. (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.) The cost of the government background checks would be borne directly by licensees. Those increased costs would be both a private-sector and an intergovernmental mandate under UMRA. Based on information from the NRC, CBO estimates that the additional annual fees they would collect would total \$1 million for publicly owned licensees (which represent approximately 5 percent of all affected licensees) and \$17 million for private licensees over the 2004-2008 period. The increased fees for background checks would be small.

In addition, S. 1043 would require the NRC to promulgate rules concerning:

- Security requirements of sensitive radioactive materials;
- Threats that designated nuclear facilities must protect against;
- Security plans, emergency-response plans, and preparedness for the facilities;
- Involvement of appropriate local governments, employers, and interested groups in the emergency-planning process;

- Access and training standards for employees of the facilities; and
- Handling of certain radioactive materials.

Complying with these new rules would constitute a mandate as defined in UMRA, although the extent of those mandates would be based upon future actions of the NRC. At this time, the NRC cannot indicate the scope of the rules to be issued, and accordingly, CBO cannot determine the cost of compliance.

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