



CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

September 16, 1999

H.R. 1656

Department of Energy Commercial Application of Energy Technology Authorization Act of 1999

As ordered reported by the House Committee on Science on May 26, 1999

SUMMARY

H.R. 1656 would authorize appropriations for civilian research and development programs at the Department of Energy (DOE) for fiscal years 2000 and 2001, and would end DOE's authority to regulate or enforce environmental, safety, and health requirements at nonmilitary energy laboratories beginning on January 1, 2000. Assuming the appropriation of all amounts specifically authorized in the bill for research and development activities, CBO estimates that implementing H.R. 1656 would cost about \$1.4 billion over the 2000-2004 period.

Additional civil penalties under current law could be collected as a result of implementing this bill, and new civil penalties that would be established by the legislation could also affect receipts; therefore, pay-as-you-go procedures would apply. However, CBO estimates any such collections would total less than \$500,000 annually. H.R. 1656 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no significant costs on state, local, or tribal governments.

In addition to the research and development spending authorized by the bill, CBO estimates enactment of the bill would increase the need for appropriated funds at the Nuclear Regulatory Commission (NRC) and the Occupational Safety and Health Administration (OSHA) to pay for new efforts that would be necessary because the bill would end DOE's authority to regulate health and safety at its nonmilitary laboratories (this activity by DOE is known as self-regulation). While the cost of this provision of the bill is uncertain, and would depend on many future decisions made by DOE and these regulatory agencies, CBO estimates that ending self-regulation of health and safety at DOE nonmilitary laboratories would cost about \$14 million annually over the 2000-2004 period. This estimate does not include the cost to implement corrective actions that are required at nonmilitary laboratories today because these facilities do not comply with DOE health and safety standards. In addition, this estimate assumes that NRC and OSHA regulation of nonmilitary laboratories

will not reveal significant new corrective actions that must be undertaken, beyond those already known to DOE.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of H.R. 1656 is shown in the following table. The costs of this legislation fall within budget functions 270 (energy) and 550 (health).

	By Fiscal Year, in Millions of Dollars				
	2000	2001	2002	2003	2004
SPENDING SUBJECT TO APPROPRIATION					
Specified Authorization Level	703	712	0	0	0
Estimated Outlays	481	696	223	13	3
Estimated Authorization Level	15	14	13	13	12
Estimated Outlays	13	14	13	13	13
Total Spending					
Authorization Level	718	726	13	13	12
Estimated Outlays	494	710	236	26	16

BASIS OF ESTIMATE

Most of H.R. 1656's budgetary impact would stem from its authorization of \$1.4 billion over the next two years. CBO expects that implementing the bill would require additional appropriations averaging about \$13 million a year. Enacting the bill could also affect governmental receipts, but any such effects would not be significant.

Research and Development Spending

Section 3 would authorize the appropriation of \$703 million in 2000 and \$712 million in 2001 for the commercial application of energy technology and related civilian energy and scientific programs, projects, and activities of the DOE. For purposes of this estimate, CBO assumes the full amounts authorized will be appropriated each year and that spending will occur at historical rates for these programs and activities.

Costs of External Regulation

Section 17 would end DOE's authority to regulate or enforce environmental, safety, and health requirements at any federally owned or operated nonmilitary energy laboratory after January 1, 2000. The bill does not define the term "nonmilitary energy laboratory;" but for the purposes of this estimate, CBO assumes that the bill intends to include all DOE laboratories except for Sandia, Los Alamos, and Lawrence Livermore National Laboratories. In addition, based on information from DOE, we assume that the Environmental Protection Agency, and state and local governments are already the primary enforcers of environmental laws at DOE laboratories. Over the next five years, CBO estimates that moving to external regulation of DOE nonmilitary laboratories would require additional appropriations averaging about \$14 million annually for the NRC and OSHA, and that this sum would not initially be offset by reduced expenditures at DOE.

Department of Energy. Based on information from DOE, CBO estimates that the DOE laboratories received appropriations of about \$3.2 billion in 1999, and that \$285 million (or 9 percent) of these funds were allocated to ongoing health and safety activities. In 1996, DOE compared its own health and safety spending to regulatory compliance costs at nuclear power reactors and other private-sector industries licensed by the NRC and found that such costs usually accounted for 10 percent or less of facility operating costs. This comparison suggests there is no compelling basis for estimating significantly higher (or lower) compliance costs at DOE nonmilitary facilities under external regulation. Furthermore, any future savings in health and safety oversight costs to DOE as a result of enacting this bill could be applied to the existing backlog of corrective actions needed at the nonmilitary laboratories.

Many DOE facilities do not comply with the department's current health and safety standards, in most cases corrective actions have not been taken because sufficient funds have not been allocated to these projects. DOE estimates that full funding of identified corrective actions necessary at its nonmilitary laboratories would total about \$0.25 billion over the next five years. DOE, NRC, and OSHA have conducted limited pilot studies of external regulation at DOE laboratories and some former DOE facilities are now regulated by NRC and OSHA. Based on these experiences, CBO assumes that external regulation would not significantly increase the cost of needed health and safety corrective actions at nonmilitary DOE facilities, nor change the timing of these costs in the short term. We assume DOE will be able to negotiate compliance agreements with NRC and OSHA for implementing corrective actions at facilities that do not comply with agency standards. If compliance agreements between these agencies cannot be reached, it is possible that the imposition of external regulation at DOE facilities could change the future funding profile for identified corrective action projects by accelerating the timing of such spending by DOE or by revealing the need for additional spending. CBO has no information to predict whether or

not additional funds for corrective actions would be required as a result of enacting this bill, but any increase in such spending would be subject to the availability of appropriated funds.

Nuclear Regulatory Commission and Occupation Safety and Health Administration.

Over the next five years, CBO estimates that moving to external regulation of DOE nonmilitary laboratories would require about \$13 million annually of additional appropriated funds for the NRC and OSHA.

Based on information from the NRC and DOE, we estimate NRC would incur additional regulatory oversight costs at DOE nonmilitary laboratories of about \$10 million annually. The DOE facilities that were selected for pilot studies of NRC regulation are not considered representative of all DOE nonmilitary laboratories. NRC estimated that its annual oversight costs for the pilot studies of external regulation at three DOE facilities ranged from less than \$100,000 to nearly \$400,000. NRC does not have experience with regulating particle accelerators which are found at several DOE laboratories and would require significantly more resources to oversee. We estimate that some of the nonmilitary laboratories with accelerators, nuclear fuel storage facilities, or areas that handle transuranic materials could cost the NRC between \$1 million and \$2 million annually to regulate.

CBO estimates that transferring the responsibility of enforcing safety and health regulations at DOE nonmilitary laboratories to OSHA would cost \$5 million in 2000, and an average of about \$3 million per year thereafter. This estimate is based on information from OSHA concerning the cost to the agency of transferring enforcement of health and safety laws for all DOE facilities to OSHA. We estimate that during the first two years following enactment of H.R. 1656 OSHA would hire additional inspectors and health physicists, purchase radiation monitoring equipment, and perform an initial inspection and evaluation at each nonmilitary laboratory. Following these initial inspections, OSHA would continue to monitor the DOE labs to verify that identified hazards are corrected. OSHA anticipates that it would implement an enhanced compliance program at the DOE labs and would reinspect most of these facilities once every two years initially, then gradually decrease to an inspection rate of once every four years. For purposes of comparison, high hazard industrials in the private sector are inspected about once every six years.

Civil Penalties

Section 19 would amend the Atomic Energy Act to establish a monetary penalty for violations of DOE regulations concerning the security of classified or sensitive information. Civil penalties are recorded in the budget as governmental receipts, thus this provision could result in additional collections; however, CBO estimates any amounts collected under this provision would not be significant.

Under H.R. 1656, private contractors who operate DOE's nonmilitary laboratories would be liable for any enforcement penalties imposed by OSHA. The bill would give the NRC the option to issue licenses (and impose penalties) under the Atomic Energy Act to either DOE, or the private operating contractors who operate the laboratories, or both. Any penalties that would be collected from private contractors would increase governmental revenues, but CBO estimates additional collections would be less than \$500,000 annually.

PAY-AS-YOU-GO CONSIDERATIONS

The Balanced Budget and Emergency Deficit Control Act sets up pay-as-you-go procedures for legislation affecting direct spending or receipts. Imposing the new civil penalties contained in H.R. 1656, and subjecting private operating contractors to penalties under the Atomic Energy Act and the Occupational Safety and Health Act could result in an increase in governmental receipts, but CBO estimates that any such changes would be less than \$500,000 a year.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

H.R. 1656 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments. Some of the funds authorized in the bill would be used for research at academic institutions, including public universities.

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