



**CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE**

June 19, 2006

S. 2802

American Innovation and Competitiveness Act of 2006

*As ordered reported by the Senate Committee on Commerce, Science, and Transportation
on May 18, 2006*

SUMMARY

S. 2802 would address the competitiveness of the United States in science, mathematics, and technology. For this purpose, the bill would authorize appropriations for the National Institutes of Standards and Technology (NIST) and the National Science Foundation (NSF) for fiscal years 2007 through 2011. It also would direct the President to convene a national summit on United States science and technology enterprises and establish a council on innovation and competitiveness.

Assuming appropriation of the amounts authorized by the bill and estimated to be necessary for required studies and other activities, CBO estimates that implementing S. 2802 would cost \$32.4 billion over the 2007-2011 period. We also estimate that enacting this legislation would increase direct spending by \$1 million in 2007 and by about \$10 million over the 2007-2016 period. Enacting S. 2802 would not affect revenues.

S. 2802 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA); any costs to state, local, or tribal governments would be incurred voluntarily.

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary impact of S. 2802 is shown in the following table. The costs of this legislation fall within budget functions 250 (general science, space, and technology), 370 (commerce and housing credit), and 800 (general government).

	By Fiscal Year, in Millions of Dollars					
	2006	2007	2008	2009	2010	2011
SPENDING SUBJECT TO APPROPRIATION						
NIST and NSF Spending Under Current Law						
Budget Authority ^a	6,457	0	0	0	0	0
Estimated Outlays	5,877	4,189	1,812	649	164	25
Proposed Changes						
National Science Foundation						
Authorization Level	0	6,440	7,433	8,577	9,898	11,422
Estimated Outlays	0	1,444	4,397	6,444	7,881	9,247
National Institutes of Standards and Technology						
Authorization Level	0	640	704	774	851	937
Estimated Outlays	0	276	478	615	739	840
Other Spending						
Estimated Authorization Level	0	4	1	1	1	1
Estimated Outlays	0	4	1	1	1	1
Total Changes						
Estimated Authorization Level	0	7,084	8,138	9,352	10,750	12,360
Estimated Outlays	0	1,724	4,876	7,060	8,621	10,088
Spending Under S. 2802						
Estimated Authorization Level ^{ab}	6,457	7,084	8,138	9,352	10,750	12,360
Estimated Outlays	5,877	5,913	6,688	7,709	8,785	10,113

CHANGES IN DIRECT SPENDING

Spending of NIST Fees for Facilities						
Estimated Budget Authority	0	1	1	1	1	1
Estimated Outlays	0	1	1	1	1	1

a. The 2006 level is the amount appropriated for that year for NIST and NSF.

b. The estimate does not include the costs of the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration programs addressed by titles IV and VI because such activities are already being carried out under existing authority.

BASIS OF ESTIMATE

For this estimate, CBO assumes that S. 2802 will be enacted by the end of fiscal year 2006 and that the entire amounts authorized and estimated to be necessary will be appropriated for each fiscal year. Estimated outlays are based on historical spending patterns for NSF and NIST programs.

Spending Subject to Appropriation

S. 2802 would specifically authorize the appropriation of nearly \$47.7 billion over the 2007-2011 period. In addition to those amounts, CBO estimates that other federal agencies such as the National Academy of Science would need about \$8 million over that period for studies and others activities required under title I and title II. Assuming appropriation of those amounts, CBO estimates that implementing S. 2802 would cost \$1.7 billion in fiscal year 2007 and \$32.4 billion over the 2007-2011 period. As described below, most of those amounts would be used for federal research programs and grants.

National Science Foundation. Title III would authorize the appropriation of between \$6.4 billion and \$11.4 billion a year over the 2007-2011 period for the NSF, which supports research in science, mathematics, and engineering, primarily through competitive grants. By comparison, NSF received an appropriation of \$5.7 billion for 2006. The bill would earmark a portion of the authorized amounts to increase graduate research fellowships, expand the graduate education and research trainee program, and create pilot programs to stimulate competitive research. CBO estimates that appropriation of the authorized amounts for NSF would result in discretionary spending of \$1.4 billion in 2007 and \$29.4 billion through 2011.

National Institutes of Standards and Technology. Title V would authorize the appropriation of between \$640 million and \$937 million a year over the 2007-2011 period for NIST, which sets industry and scientific standards, makes grants, and conducts research related to technology. In 2006, NIST received an appropriation of \$0.7 billion. Appropriation of the specified amounts would result in discretionary spending of \$276 million in 2007 and \$2.9 billion over the 2007-2011 period.

Other Provisions. CBO estimates that carrying out other provisions of the bill would cost about \$8 million over the 2007-2011 period, assuming appropriation of the authorized or necessary amounts. Of that amount, \$1 million would be specifically authorized for 2007 for the National Academy of Science to conduct a study on barriers to innovation in United States industries. Based on information provided by the Office of Science and Technology Policy, we estimate that \$7 million would be used to prepare other required studies, to generate reports on federal regulations that inhibit scientific innovation, to conduct the

national science and technology summit meeting, and to establish a council on innovation and competitiveness.

We estimate that other provisions of the bill would have no budgetary effect because the programs they authorize would duplicate existing efforts. Specifically, title II would direct the President to set aside 8 percent of each federal agency's annual research budget for grants that emphasize innovative technologies. CBO estimates that implementing this provision would have no net impact on the spending of these agencies because it would require them to set new priorities on how they use their existing research resources rather than expand their research programs.

Similarly, titles IV and VI would direct the National Aeronautics and Space Administration and the National Oceanic and Atmospheric Administration to coordinate research and development activities within their jurisdictions to emphasize innovation and economic competitiveness. CBO estimates that implementing these titles would have no significant effect on the federal budget because most of the activities that would be required are already being carried out under existing authority.

Direct Spending

Section 506 would authorize NIST to spend certain fees collected from nonfederal and private-sector entities for the use of its facilities. Under current law, these fees are deposited in the general fund of the U.S. Treasury. CBO estimates that allowing NIST to spend them would increase direct spending by about \$1 million in 2007 and by about \$10 million over the 2007-2016 period.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

S. 2802 contains no intergovernmental or private-sector mandates as defined in UMRA. Funding authorized in the bill may benefit institutions of higher education that participate in research activities authorized in the bill. Any costs they might incur would result from complying with conditions for receiving federal assistance.

PREVIOUS CBO ESTIMATE

On May 11, 2005, CBO transmitted a cost estimate for H.R. 250, the Manufacturing Technology Competitiveness Act of 2005, as ordered reported by the House Committee on Science on May 4, 2005. H.R. 250 would authorize appropriations for NIST and for certain NSF activities over the 2006-2008 period. In contrast, S. 2802 would authorize appropriations for all NIST and NSF programs over the 2007-2011 period. The CBO estimates for these bills reflect the different authorization periods and the fact that S. 2802 would cover additional NSF programs beyond those addressed by H.R. 250.

ESTIMATE PREPARED BY:

Federal Costs: Deborah Reis and Leigh Angres
Impact on State, Local, and Tribal Governments: Lisa Ramirez-Branum
Impact on the Private Sector: Fatimot Ladipo

ESTIMATE APPROVED BY:

Peter H. Fontaine
Deputy Assistant Director for Budget Analysis