



## CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

August 24, 2011

### **H.R. 2096** **Cybersecurity Enhancement Act of 2011**

*As ordered reported by the House Committee on Science, Space, and Technology  
on July 21, 2011*

#### **SUMMARY**

H.R. 2096 would reauthorize several National Science Foundation (NSF) programs that aim to enhance cybersecurity (the protection of computers and computer networks from unauthorized access). The bill also would require the National Institute of Standards and Technology (NIST) to continue a cybersecurity awareness program and to develop standards for managing personal identifying information stored on computer systems. Finally, the bill would establish a task force to recommend actions to the Congress for improving cybersecurity research and development.

Based on information from NSF and NIST and assuming appropriation of the necessary amounts, CBO estimates that implementing H.R. 2096 would cost \$382 million over the 2012-2016 period and \$39 million after 2016. Enacting the legislation would not affect direct spending or revenues; therefore, pay-as-you-go procedures do not apply.

H.R. 2096 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

#### **ESTIMATED COST TO THE FEDERAL GOVERNMENT**

The estimated budgetary impact of H.R. 2096 is shown in the following table. The costs of this legislation fall within budget function 250 (general science, space, and technology).

	By Fiscal Year, in Millions of Dollars					2012- 2016
	2012	2013	2014	2015	2016	
<b>CHANGES IN SPENDING SUBJECT TO APPROPRIATION</b>						
NSF Cybersecurity Research Grants						
Authorization Level	90	90	90	0	0	270
Estimated Outlays	12	48	71	73	41	245
NSF Cybersecurity Research Centers						
Authorization Level	5	5	5	0	0	14
Estimated Outlays	1	2	4	4	2	12
NSF Cybersecurity Capacity Building Grants						
Authorization Level	19	19	19	0	0	57
Estimated Outlays	2	10	15	15	9	52
NSF Science and Advanced Technology Grants						
Authorization Level	3	3	3	0	0	8
Estimated Outlays	*	1	2	2	1	7
NSF Cybersecurity Graduate Traineeships						
Authorization Level	24	24	24	0	0	72
Estimated Outlays	3	13	19	19	11	65
Cybersecurity Task Force						
Estimated Authorization Level	1	0	0	0	0	1
Estimated Outlays	1	0	0	0	0	1
Total Changes under H.R. 2096						
Estimated Authorization Level	141	140	140	0	0	421
Estimated Outlays	19	74	111	113	64	382

Notes: NSF = National Science Foundation; \* = less than \$500,000.

Amounts may not sum to totals because of rounding.

## **BASIS OF ESTIMATE**

For this estimate, CBO assumes that H.R. 2096 will be enacted near the end of 2011 and that the authorized and necessary amounts will be appropriated each fiscal year. Estimated outlays are based on historical spending patterns for NSF and NIST programs.

H.R. 2096 would authorize appropriations for several NSF grant programs aimed at enhancing cybersecurity. The bill would authorize appropriations totaling \$270 million over the 2012-2014 period to improve research on cybersecurity. H.R. 2096 would

authorize \$14 million in grants to establish centers of cybersecurity research. The bill also would authorize \$57 million in grants for universities to improve cybersecurity programs and increase the number students in the fields related to cybersecurity. This includes a program to offer scholarships to students who pursue higher education related to cybersecurity and commit to public service after graduating. H.R. 2096 would authorize the appropriation of \$72 million for grants to higher education institutions to establish cybersecurity traineeship programs for graduate students. The bill also would authorize \$8 million in grants for associate-degree-granting institutions to develop cybersecurity programs and establish centers of excellence.

H.R. 2096 would establish a task force of academic and industry experts to advise the Office of Science and Technology Policy on issues related to cybersecurity. Based on information regarding the cost of funding similar activities, CBO estimates that carrying out this provision would cost \$1 million over the 2012-2016 period.

H.R. 2096 also would direct NIST to establish standards and protocols to enhance cybersecurity, to develop a strategy for the government to adopt cloud computing services (the use of servers and network storage to provide remote, on-demand access to shared computer applications and services), and to promote cybersecurity awareness and education. Based on information from NIST, CBO estimates that these activities would have no significant impact on the federal budget.

**PAY-AS-YOU-GO CONSIDERATION:** None.

## **INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT**

H.R. 2096 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments.

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