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CRS Report for Congress

Federal Research and Development Funding: Possible Impacts of Operating under a Continuing Resolution

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Summary

On September 30, 2008, President Bush signed into law the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (P.L. 110-329). Division A of this law is a continuing resolution and provides funding (through March 6, 2009, unless superseded by further congressional action) for agencies and programs normally funded by nine of the 12 regular appropriations bills. The same law also includes the other three FY2009 appropriations acts: one funding the Department of Defense (Division C of P.L. 110-329), one funding the Department of Homeland Security (Division D of P.L. 110-329), and one funding military construction, the Department of Veterans Affairs, and related agencies (Division E of P.L. 110-329). The continuing resolution funds most other agencies and programs at FY2008 pre-supplemental levels. The continuing resolution generally prohibits agencies from beginning or resuming programs that did not receive appropriations in FY2008. Thus new civilian research and development programs and funding increases for existing activities will be delayed until further appropriations bills have passed. For many research and development programs, FY2008 funding was provided under the Consolidated Appropriations Act, 2008 (P.L. 110-161), which largely extended FY2007 funding levels. FY2007 funding was provided under a continuing resolution (P.L. 110-5) based on FY2006 appropriations. Therefore, some programs are operating in FY2009 with budgets similar to those of FY2006.

Federal funding for research and development (R&D) is generally supported by both Congress and the Administration, though programmatic priorities often differ.[1] The Bush Administration states that it has requested $147 billion in federal R&D funding for FY2009, approximately 2.7% more than the estimated FY2008 appropriation of $143

[1] In the context of this report, research and development funding includes funding for research and development facilities.

billion.[2] The bulk of the proposed increase would come from continuing the American Competitiveness Initiative (ACI) and treating the new availability of previously appropriated funds for purchasing biodefense countermeasures through Project BioShield as research and development funding.[3]

The President proposed the ACI in response to growing concerns about America's ability to compete technologically in the global marketplace. As part of the ACI, the President called for doubling, over 10 years, the aggregate funding of the National Science Foundation (NSF), the Department of Energy (DOE) Office of Science, and the core programs of the National Institute of Standards and Technology (NIST). The main focus of the increases would be to support basic research in the physical sciences and engineering. The FY2009 request would increase R&D funding for NSF by $701 million, for the DOE Office of Science by $749 million, and for NIST core programs by $33 million relative to FY2008 appropriated levels.[4]

The President's request shifts the funding balance between research and development. Despite the President's continued support for the ACI, total funding for basic and applied research would decrease by 0.3% in 2009 compared to 2008. While some specific agency basic and applied research budgets would increase, these increases are more than offset by decreases at other agencies. In contrast, funds for development would increase by 1.9%. This increase in support for development more than offsets the decrease in support for research, thus total R&D funding would increase under the President's proposal.

The Current Status of FY2009 R&D Appropriations

The 110th Congress has passed three appropriations acts, the Department of Defense Appropriations Act, 2009 (Division C of P.L. 110-329), the Department of Homeland Security Appropriations Act, 2009 (Division D of P.L. 110-329), and the Military Construction and Veterans Affairs Appropriations Act, 2008 (Division E of P.L. 110-329). Since the beginning of FY2009 on October 1, 2008, funding for all other agencies and programs has been provided through a continuing resolution (Division A of P.L. 110-329). The continuing resolution maintains current funding levels through March 6, 2009, or until superseded by subsequent appropriations law, for the agencies covered under the nine regular appropriations bills still outstanding.

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[2] Office of Management and Budget, The White House, *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2009* (Government Printing Office: Washington, DC), 2008, pp. 45-55. Different sources give somewhat different figures for federal R&D expenditures, largely because of methodological differences in identifying which programs and activities are considered to be R&D. For example, the totals cited in *Analytical Perspectives* are not precisely comparable with those in **Table 1** of this report.

[3] For more information on the American Competitiveness Initiative and related efforts, see CRS Report RL34396, *The America COMPETES Act and the FY2009 Budget*, by Deborah D. Stine. For more information on Project BioShield, see CRS Report RS21507, *Project BioShield: Purposes and Authorities*, by Frank Gottron.

[4] When calculating funding for the ACI, the White House includes the entire budget of NSF, not just R&D funds. The entire FY2009 budget of NSF is increased by $821 million over the F2008 budget.

For all agencies that have not had an appropriations bill for FY2009 signed into law, the continuing resolution provides funding at the same level they received in FY2008. Funds are provided on a prorated basis for the duration of the continuing resolution. The continuing resolution also generally prohibits agencies from using these funds to "initiate or resume any project or activity for which appropriations, funds, or other authority were not available during fiscal year 2008."[5] The current status of FY2009 funding for R&D is summarized by agency in **Table 1**.

The three major crosscutting multiagency R&D initiatives are all funded largely by agencies operating under the continuing resolution:

- The FY2009 request for the National Nanotechnology Initiative (NII) is $1.532 billion, a 2% increase from $1.497 billion in FY2008. Approximately 72% of this request is at agencies operating under the continuing resolution.

- The FY2009 request for the Networking and Information Technology R&D (NITRD) program is $3.566 billion, a 6% increase from $3.372 billion in FY2008. Approximately 65% of this request is at agencies operating under the continuing resolution.

- The FY2009 request for the Climate Change Science Program (CCSP) is $2.105 billion, a 10% increase from $1.838 billion in FY2008. More than 99% of this request is at agencies operating under the continuing resolution.[6]

Issues for Congress

If the federal government continues to operate under a continuing resolution, most existing nondefense R&D programs would continue to receive funding at the FY2008 level. To some extent, this funding mechanism is likely to cause federal agencies to continue to support existing R&D priorities, rather than shifting to new ones, since only existing programs retain funding. In addition, because of inflation, even funds provided at the FY2008 level represent a reduction in actual purchasing power.[7] For R&D programs in some agencies, FY2008 funding is close to the level appropriated in FY2006. For these programs, the loss of purchasing power and the difficulty of adjusting policy goals and priorities may be especially challenging.

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[5] P.L. 110-329, Sec. 104.

[6] Office of Management and Budget, The White House, *Analytical Perspectives, Budget of the United States Government, Fiscal Year 2009* (Government Printing Office: Washington, DC), 2008, Table 5-3. For more information on these three initiatives, see CRS Report RL34401, *The National Nanotechnology Initiative: Overview, Reauthorization, and Appropriations Issues*, by John F. Sargent; CRS Report RL33586, *The Federal Networking and Information Technology Research and Development Program: Funding Issues and Activities*, by Patricia Moloney Figliola; and CRS Report RL33817, *Climate Change: Federal Funding and Tax Incentives*, by Jane A. Leggett.

[7] For example, P.L. 110-329 contains a provision (Sec. 142) mandating a 3.9% increase in civil service employee pay rates.

Most new nondefense R&D programs planned for FY2009 would not be allowed to start. Even once regular appropriations for FY2009 become law, allowing new programs to begin, agencies may have difficulty meeting their projected R&D milestones and goals because of the shortened time frame for obligating funds for these programs. Expected completion times for research programs may need to be revised and new research performers identified. Also, agency plans for purchase of major instruments and other capital equipment may be delayed or prevented under the continuing resolutions. For new R&D programs, milestones planned to occur in the first half of FY2009 are unlikely to be met, since, if the continuing resolution extends through March 6, 2009, the first half of the fiscal year will be almost completed. Another issue for new programs is whether agencies will be able to obligate whatever new appropriations they receive. Most agency appropriations for R&D expire at the end of the fiscal year for which they are appropriated. Because most new programs cannot be started under a continuing resolution, even if appropriations for them are eventually received, agencies will have less time than the full fiscal year to establish these programs and obligate the funds for them.

Table 1. Estimated Federal R&D Appropriations for FY2009

($ in millions)

Department/Agency	FY2008 Estimate	FY2009 Request	FY2009 House	FY2009 Senate	FY2009 Appropriation
Department of Energy	9,903	10,535	10,903	11,010	—
Department of Defense[a]	76,905	79,616	—	—	80,302
National Aeronautics and Space Administration	12,212	12,857	12,967	13,044	—
National Institutes of Health	29,321	29,165	30,316	30,191	—
National Science Foundation	6,032	6,854	6,854	6,854	—
Department of Agriculture	2,591	2,280	—	2,543	—
Department of Homeland Security[b]	1,340	1,449	1,447	1,476	1,465
National Institute of Standards and Technology	756	636	817	814	—
National Oceanic and Atmospheric Administration	581	577	—	633	—
Department of Transportation	823	901	—	912	—
Department of the Interior	671	628	—	—	—
Environmental Protection Agency	713	726	—	—	—

Source: Compiled by CRS from various sources. For details, see CRS Report RL34448, *Federal Research and Development Funding: FY2009*, coordinated by John F. Sargent.

Note: Agencies for which no FY2009 appropriations act has been signed into law are funded under the continuing resolution (P.L. 110-329) at FY2008 levels.

a. This line consists of Title IV funding in the Department of Defense appropriations act and does not include research, development, testing, and evaluation funds associated with the Defense Health Program, the Chemical Agents and Munitions Destruction Program, and the Mine Resistant Ambush Protected Vehicle program. It also does not include R&D funds from supplemental or additional appropriations acts.

b. This line does not include the $2.175 billion newly available from prior appropriations for Project BioShield.