

An hourglass-shaped graphic with a globe in the top bulb and another globe in the bottom bulb. The top bulb is dark blue, and the bottom bulb is light blue. The hourglass is light gray. The globe in the top bulb is dark blue, and the globe in the bottom bulb is light blue. The hourglass is centered on the page.

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Federal R&D Funding Under a Continuing Resolution

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Federal R&D Funding Under a Continuing Resolution

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Summary

On September 30, 2004 President Bush signed a continuing resolution, or CR (P.L. 108-309, H.J.Res. 107) which essentially maintains spending at FY2004 levels for those agencies lacking enacted FY2005 appropriations bills, through November 20, 2004. The House has passed 12 of its 13 appropriations bills while the Senate has passed six appropriations bills. Four of these bills have been signed into law. The FY2005 CR (H.J.Res. 107) includes the 9 appropriation bills that have not been passed by Congress. Based on the bills as passed or reported by the House, CRS estimates that the House has approved a record high of \$131.5 billion for federal R&D for FY2005. This report will be updated as events warrant.

Introduction

On September 30, 2004 President Bush signed a continuing resolution, or CR (P.L. 108-309, H.J.Res. 107), which essentially maintains spending at FY2004 levels for those agencies lacking enacted FY2005 appropriations bills through November 20, 2004. Congress reconvenes on November 16, 2004 to complete work on the remaining 9 appropriation bills that have not been enacted into law. The four bills enacted into law are the Department of Defense (DOD), the Department of Homeland Security (DHS), the District of Columbia, and Military Construction, (the last two bills contain no R&D funding).

The Bush Administration requested \$131.9 billion in federal research and development (R&D) funding for FY2005. This is \$5.7 billion above the estimated \$126.2 billion that was appropriated for federal R&D in FY2004. The President's R&D request mirrors recent proposals for large increases in defense and homeland security R&D, while the remaining agencies would receive modest increases or reductions in their respective research programs. All FY2004 civilian R&D funding figures include required rescissions.

The Current Status of FY2005 R&D Appropriations

The House of Representatives has approved all of its appropriation bills except for VA/HUD/Independent Agencies which has been reported by the House and Senate.¹ The Senate has passed six of its appropriations bills. CRS estimates that the House approved an estimated record high \$131.5 billion for federal R&D, \$365 million below the President's request. Nevertheless, this estimated amount is \$5.325 billion, or 4.2% above FY2004 R&D levels. Given the limited number of appropriations bills passed by the full Senate, CRS is unable to estimate total Senate FY2005 R&D spending levels. (See table below). All of the remaining R&D programs must maintain funding at FY2004 enacted levels until Congress approves their respective FY2005 appropriations bills.

Estimated Federal R&D Appropriations in the 108th Congress FY2005

(\$ millions)

Agency	FY2004 Est.	FY2005 Request	FY2005 House	FY2005 Senate
Department of Defense	\$64,693	\$67,773	\$69,853 a	\$69,853 a
Homeland Security	1,038	1,132	1,311 b	1,311 b
Nat. Institutes of Health	27,892	28,724	28,719 c	29,037 c
NASA	10,972	11,405	10,600 d	11,000 d
Nat. Science Foundation	5,578	5,745	5,467 d	5,745 d
EPA	781	689	729 d	758 d
NIST	610	521	525 e	785 e
NOAA	632	611	545 e	748 e
Dept. of Energy	8,677	8,482	8,625 f	f
Dept. of Transportation	701	749	669 g	719 g
Dept. of Interior	675	648	701 h	666 h
Dept. of Agriculture	2,500	2,435	2,600 i	2,540 i
Other j	1,427	1,825	1842	
Total	126,176	131,866	131,501	

a. P.L. 108-287, H.Rept. 108-622

b. P.L. 108-334, H.Rept. 108-774

c. Labor/HHS/ED, H.R. 5006, H.Rept. 108-636; S. 2810, S.Rept. 108-345

d. VA/HUD/and Independent Agencies, H.R. 4614, H.Rept. 108-674; S. 2825, S.Rept. 108-353

e. Commerce, Justice, State, H.R. 4754, H.Rept. 108-576; S. 2809, S.Rept. 108-344

f. Energy, H.R. 4614, H.Rept. 108-584; No Senate bill

g. Transportation, H.R. 5025, H.Rept. 108-671; S. 2806, S.Rept. 108-342

h. Interior, H.R. 4568, H.Rept. 108-543; S. 2804, S.Rept. 108-341

i. Agriculture, H.R. 4766, H.Rept. 108-584; S. 2803, S.Rept. 108-340

j. "Other" includes Education, Veterans, Agency for International Development, Nuclear Regulatory Commission, Smithsonian, Dept. of Justice, Dept. Treasury, TVA, and U.S. Postal Service

Defense. The projected growth for federal R&D in FY2005 can be attributed to Congress approving significant increases for defense (as well as homeland security) R&D programs. Congress approved a record \$69.853 billion for DOD's Research,

¹ The House and Senate Appropriations Committees have reported their respective VA/HUD/Independent Agencies bills. (H.R. 5041, H.Rept. 108-674, and S. 2825, S.Rept. 108-353)

Development, Test and Evaluation (RDT&E) programs, a \$5.2 billion increase over FY2004 estimated levels (P.L. 108-287). The President's proposed increase for DOD focused on development activities. The President's request for DOD had included a 5% reduction for DOD's basic research programs and a 12% reduction for its applied research programs. Congress approved a 7.8% increase for basic research and an 11.9% increase for applied research, over FY2004 funding levels.²

Homeland Security. Congress approved a large increase for DHS R&D programs. While the President had requested a 15.6% increase for R&D (\$1.2 billion), Congress approved a 26% increase over FY2004 to \$1.311 billion for R&D. Furthermore, while the President had recommended \$30 million for university R&D activities, Congress approved \$70 million, matching FY2004 funding levels. Congress rejected the Administration's request to transfer the Coast Guard's R&D programs (\$18.5 million) to the S&T Directorate in DHS. Finally, the DHS bill passed by Congress contains a provision that prohibits the department from contracting with U.S. companies that have incorporated overseas in order to avoid paying federal income taxes.³

Labor/HHS/ED. The primary R&D agency under this appropriations bill is the National Institutes of Health (NIH). Both the House and Senate have approved increased for NIH. The NIH bill passed by House (H.R. 5006) essentially matched the President's proposed 3% increase or \$28.607 billion request for NIH, while the Senate Appropriations Committee reported bill (S. 2810) approved \$29.037 billion, a 4.2% increase over FY2004. The Senate committee report, pointing to the expected 3.5% rise in the biomedical inflation index, provides full funding for commitments to existing grantees and increases the average cost of future competing grants.

VA/HUD/Independent Agencies. The primary R&D mission agencies under this appropriation bill are the National Aeronautics and Space Administration (NASA) and the National Science Foundation's (NSF). The House Committee reported bill (H.R. 5041) eliminates most of NASA's R&D associated with new projects that are part of the President's space exploration initiative. Based on current House actions, funding for NASA would decline 7% below FY2004 funding levels. The bill reported by the Senate Appropriations Committee (S. 2825) would restore most of the House cuts by labeling \$800 million as emergency spending for the new space exploration initiative. However the Senate bill includes a provision that directs the National Academies' Space Studies Board to conduct a review of the science that NASA is proposing to undertake within this new initiative. The House reported bill would cut NSF's FY2005 proposed budget by \$278 million, 2% below FY2004 levels. The Senate Appropriations Committee reported bill (S. 2825) matches the President's proposed 2.9% increase for NSF. The Senate bill includes \$4.402.3 billion for research and related activities account, \$50 million below the request, but \$251 million, or 6% above the House approved funding level. The Senate bill also rejects the Administration's proposed cuts for NSF's Education and Human

² For additional information on congressional action on the Administration's proposed FY2005 R&D Budget see, CRS Issue Brief IB10129, *Federal Research and Development Funding: FY2005*, Michael E. Davey, Coordinator.

³ Homeland Security, Making Appropriations for the Department of Homeland Security for the Fiscal year Ending September 30, 2005, and for Other Purposes. Conference Report, H.Rept. 108-774, p. 24.

Resources Directorate recommending \$929.2 million, or \$157.8 million above the request. Both the House and Senate bills contain cuts for EPA's research programs.

Commerce/Justice/State. The primary R&D mission agencies under this appropriation bill are the National Institute of Standards and Technology (NIST), and the National Oceanic and Atmospheric Administration (NOAA). The House passed appropriations bill (H.R. 4754) would cut NIST research programs by 14%, including ending federal support for the Advanced Technology Program (ATP). The House approved \$106 million for the Manufacturing Extension Program (MEP). The Senate Appropriations Committee reported bill (S. 2809) rejects the House's cuts by recommending \$784.9 million for NIST in FY2005. The majority of this increase can be attributed to the Senate Committee funding for the ATP at \$203 million for FY2005. The Committee also approved \$112 million for MEP. The House passed NOAA appropriations bill would provide about \$545 million for R&D, about \$87 million below FY2004 appropriations. The Senate Appropriations Committee reported bill recommended \$748 million for NOAA R&D, an 18% increase over FY2004.

Energy and Water. The House has approved an Appropriations bill (H.R. 4614) that cuts FY2005 funding \$42 million below FY2004 levels for DOE. However the House bill increases funding for DOE's basic science programs by \$100 million, or 2.9% above FY2004 estimated levels. The Senate has not reported a bill reportedly due to a continuing dispute over funding for Yucca Mountain a proposed site to store nuclear waste, according to Congress Daily.⁴

FY2005 Budgetary Situation. The inability of House and Senate to reach an early agreement on the FY2005 Budget Resolution (S.Con.Res. 95) has played a major role in delaying the passage of the remaining FY2005 appropriation bills. The House Appropriations Committee reached an agreement on its 13 appropriations subcommittee allocations in May. However, the Senate did not reach an agreement on its subcommittee allocations until September, 2004. How the House and Senate resolve their differences regarding R&D funding remains to be seen. One approach that legislators have traditionally used would be for the House and Senate agreeing to split the difference in their funding proposals. As indicated in the table, this approach would result in a number of civilian R&D agencies receiving no increases, or actual declines below FY2004 funding levels. To address these concerns, the Senate approved an additional \$8.1 billion in spending for three FY2005 appropriations bills.⁵ They include \$3.6 billion for health and education in Labor/HHS, \$2 billion for NASA R&D and veterans health in the VA/HUD bill, and additional \$2.5 billion for the Transportation-Treasury appropriation bill.⁶ Nevertheless given the number of appropriations bills that have not been passed, and the House's apparent insistence on maintaining discretionary spending at \$821 billion

⁴ Tough Decisions on Omnibus to be Made After the Election, CQ Today, October 25, 2004. Joseph J. Schatz, CQ Staff.

⁵ Thorny Issues, Multibillion-Dollar Gap Divide Chambers' Fiscal Spending Bills, CQ Today, October 22, 2004. Joseph J. Schatz, CQ Staff.

⁶ The Senate designated \$2 billion for veterans health care and \$800 million for NASA as *emergency spending*, and secured another \$1 billion by directing the federal public housing authorities to begin the FY2005 fiscal year on January 1, 2005.

for FY2005, the House and Senate may have a difficult time in resolving their differences. If Congress adopts the President's FY2005 requested budget for civilian R&D, funding levels for NASA, NSF, and NIH would increase, while most of the remaining civilian agencies would see their R&D budgets decline below FY2004 levels.

The President reportedly has told congressional Republicans to finish the remaining 9 appropriations bills quickly, in the lame-duck session beginning on November 16. Otherwise, according to CQ, the President is threatening a year-long continuing resolution that would fund the remaining bills, that are not completed by Thanksgiving when the special session is scheduled to end, at FY2004 levels. Some Senate aides have stated that the President wants higher discretionary spending levels than approved by Congress, including the restoration of House NASA cuts associated with his Moon-Mars initiative. Consequently, some speculate that Congress is likely to approve higher spending caps, along with across-the-board cuts, for civilian discretionary spending, that will help to bring total discretionary spending closer to \$821 billion.⁷

Limitations on R&D Activities. The current CR allows agencies, without enacted FY2005 appropriations, to fund existing R&D programs and activities at FY2004 funding levels. However, the resolution prohibits agencies from funding new research programs or new initiatives until their FY2005 appropriations bills are passed by Congress. In general, under the continuing resolution, no new projects or initiatives that had been planned for FY2005 can be funded. Further, some agencies' representatives are concerned that if the proposed 3.5% federal pay raise goes through, and R&D funding does not increase, it will have a big impact on the agencies' ability to fund additional personnel and needed infrastructure, including information technology infrastructure.⁸

The CR has forced some agencies to put off construction of new facilities or stop construction until their respective FY2005 appropriations bills are passed. Construction has moved forward with those programs that have been fully funded, but not others. For example, a representative from NSF stated that to keep major research and facilities construction on track, NSF might have to request a formal reprogramming to cover increasing costs for some ongoing projects.⁹ Further, while most civilian R&D agencies will continue their request for research proposal activities, many will have to delay or restrict the number of awards given until they know the fate of their FY2005 budget request. Representatives from NIST have indicated that they have enough FY2004 funding to maintain the ATP program until late November. If Congress does not provide FY2005 funding for ATP by the end of December, NIST would have to initiate procedures for terminating the program.¹⁰ For some agencies, like the National Science Foundation (NSF), there has been some concern that budget uncertainties might affect its ability to recruit top graduate students for their fellowship programs. If the CR is extended beyond November 20, 2004 some students might delay graduate studies or take jobs in

⁷ Speedy Wrap up Likely for Remaining Spending Bills, CQ TODAY, Joseph J. Schatz, November, 5, 2004

⁸ Based on phone discussions with a DOE official, October 18, 2004.

⁹ Based on phone discussions with a NSF officials, October 14, 2004.

¹⁰ Based on phone discussions with NIST Congressional Affairs officials, October 15, 2004.

the private sector. This could force some universities to initiate new competitions for graduate students.

The Ratio of Civilian and Defense R&D. When President Bush took office in 2001, the ratio of defense to civilian R&D was 52% to 48%. If House FY2005 actions hold, CRS estimates that defense related R&D would reach \$74.2 billion, or 58% of federal R&D spending, while civilian R&D would decline to \$55.2 billion, or to 42% of total federal R&D spending.¹¹ This represents the first decline in federal civilian R&D funding, since 1995. There is some concern that the Bush Administration may be increasing defense R&D at the expense of civilian R&D, primarily because most of the increase in defense R&D is for the development of weapons systems that arguably have little impact on the discovery of new knowledge and the transfer of technological innovation to the commercial market place. This issue was raised during the Reagan Administration when defense research reached 68% of total federal R&D spending in the late 1980s. Language in the Senate FY2005 VA/HUD/Independent Agencies report (S. 2825, S.Rept. 108-353) describes a crucial role federal civilian research funding plays in “productivity growth, powered by new knowledge and technological innovation, makes the economic benefits of a comprehensive, fundamental research and education enterprise abundantly clear.” According to the committee, NSF is at the leading edge of research and discoveries that “will create jobs and technologies of the future.”¹² The Committee report also states that it continues to support the doubling of NSF funding, over a five year period, as called for in NSF’s Authorization Act of FY2002 (P.L.107-368). If the President’s request had reflected funding levels contained in the FY2002 Authorization Act, NSF’s Research and Related Activities account (the account that funds NSF’s basic research programs) would be \$5.445 billion, or \$1 billion more than the sum recommended by House and Senate Appropriations for FY2005. Efforts to increase federal civilian R&D spending may be affected by fiscal conservatives who support reducing the federal deficit.

¹¹ Defense R&D is the sum of DOD’s RDT&E programs, the Department of Energy’s defense related R&D activities, and an estimated \$300 million in homeland security R&D.

¹² Department of Veterans Affairs and House and Urban Development, and Independent Agencies Appropriations Bill 2005. S.Rept. 108-353, p. 135.