

Senate Matches NSF Request, Reverses House Cuts

AAAS R&D Funding Update on R&D in FY 2005 NSF Senate Appropriations

Highlights

- In sharp contrast to a House proposal to cut the National Science Foundation (NSF) budget next year, the Senate Appropriations Committee would match the request for an NSF budget of \$5.7 billion in FY 2005, 3.0 percent more than the current year (see Table). In contrast to the House proposal to cut most research directorate budgets, the Senate would allow for modest increases in the research directorates.
- The Senate allocation of \$5.7 billion would still be far short of the \$7.4 billion FY 2005 authorization signed into law 19 months ago as part of a plan to double the NSF budget in the five years to FY 2007.
- **NSF's R&D funding would total \$4.2 billion in FY 2005 in the Senate plan, a 2.9 percent increase** (see Table). Within the same overall budget, the Senate R&D allocation would be lower than the request because the Senate would shift R&D facilities funding to non-R&D education and human resources programs.
- Major Research Equipment and Facilities Construction (MREFC) would fall \$25 million down to \$130 million, far less than the \$213 million request.
- Both the House and now the Senate would move funding for the **Math and Science Partnerships** back to its traditional home in Education and Human Resources (E.H.R) instead of the NSF proposal to move it to the Research and Related Activities (R&RA) account. But total funding would fall from \$140 million this year down to \$82.5 million in the House and \$110 million in the Senate.

NSF R&D in FY 2005 Senate Appropriations

On September 21, the Senate Appropriations Committee drafted its version of an FY 2005 VA/HUD appropriations bill (S 2825) that would match the budget request for the National Science Foundation (NSF) in FY 2005. The Senate would give NSF a total budget of \$5.7 billion, \$167 million or 3.0 percent more than FY 2004. This proposal stands in sharp contrast to the House's proposal from July, which would cut the NSF budget by \$111 million or 2.0 percent. An NSF authorization bill calling for a doubling of the NSF budget between FY 2002 and FY 2007 was signed into law in December 2003, but both the House and Senate FY 2005 appropriations would fall well short of the \$7.4 billion authorized funding level for FY 2005. (For details of R&D in the FY 2005 request, please see Chapter 7 of *AAAS Report XXIX: R&D FY 2005* or the February 26 AAAS R&D Funding Update. For details of R&D in the House appropriation, see the July 26 AAAS R&D Funding Update.)

The Senate FY 2005 VA-HUD bill would provide \$93 billion for discretionary programs, almost \$1 billion more than the President's request and \$2 billion more than this year's funding level. The bill funds science agencies including NSF, the National Aeronautics and Space Administration (NASA), the Environmental Protection Agency (EPA), and non-R&D programs for veterans and housing. Although the Senate total appears to be the same as the House, the Senate is able to provide more funds for R&D in NSF, NASA, and EPA than the House because the Senate bill contains an additional \$2 billion in emergency spending for NASA and veterans programs, freeing up resources for other programs. The House was forced to cut NSF funding in its VA-HUD bill because both the House and Senate are working with a total of \$822 billion for all discretionary programs in FY 2005 that is \$1 billion lower than the President's request, but the House did not resort to designating funds as emergency (and thus outside the budget totals).

An NSF authorization bill calling for a doubling of the NSF budget between FY 2002 and FY 2007 was signed into law in December 2002, but this year's NSF budget falls \$1 billion short of the authorized \$6.6 billion funding level for FY 2004. **The gap widens in the FY 2005 request and Senate appropriation to \$1.6 billion, the distance between the \$5.7 billion request and the \$7.4 billion authorized level.**

NSF's R&D funding, which excludes overhead costs and NSF's education programs, would total \$4.2 billion in FY 2005 in the Senate plan, an increase of 2.9 percent (see Table). Within the same overall \$5.7 billion budget, the Senate R&D allocation would be \$30 million lower than the request because the Senate would shift R&D facilities funding to non-R&D education and human resources programs.

The Senate would allow for modest increases in the **Research and Related Activities (R&RA)** account, which funds most of NSF's R&D. R&RA funding would rise \$151 million or 3.6 percent to \$4.4 billion, slightly more than the request. **The budgets of the research directorates would increase between 1.9 and 4.2 percent**, except for Social, Behavioral, and Economic (SBE) Sciences with a 10.3 percent increase and Integrative Activities (IA), which would increase 14.5 percent (see Table). The House plan would cut funding for the R&RA directorates.

Both the **House and Senate would reject the Administration proposal to transfer the Math and Science Partnerships (MSP) from Education and Human Resources (E.H.R) to IA**. The House would keep the Partnerships in E.H.R. at a level of \$82.5 million, down substantially from \$139 million this year but \$2.5 million more than the request, while the Senate would also keep MSP in E.H.R. at \$110 million. The MSP program, run jointly by NSF and the Department of Education, encourages academic institutions and schools to work together to improve math and science education. The House and Senate would agree, however, with the Bush Administration's desire to shift the emphasis of the program toward ED, even as it keeps the NSF share in E.H.R. The FY 2005 budget requested \$269 million for the Department of Education's (ED) share of the program, up dramatically from \$149 million this year; the House would go along with the ED request while the Senate would give \$200 million. Combined, the MSP programs would receive \$351.5 million in FY 2005 from the House and \$310 million from the Senate, up from \$288 million this year.

NSF's **Education and Human Resources (EHR)** programs would receive \$929 million in the Senate VA-HUD bill, more than the request but still slightly less than this year. Most of the decline is due to the shift in **Math and Science Partnerships (MSP)** funding to the Department of Education. The FY 2005 Senate appropriation contains \$95 million for the Experimental Program to Stimulate Competitive Research (EPSCoR), \$1 million more than the House and this year's level. EPSCoR assists research institutions and states that have traditionally been underrepresented in federal R&D funding to build research capacity. The program is currently open to 24 states, Puerto Rico, and the U.S. Virgin Islands.

Unlike the House, the Senate would cut NSF's support of R&D facilities. While R&D facilities would be the one bright spot in the House plan, in the Senate there would be only \$130 million for the **Major Research Equipment and Facilities Construction (MREFC)** account, down from \$155 million this year and \$208 million in the House plan. The House would agree to two of the three proposed starts (the Scientific Ocean Drilling Vessel and Rare Symmetry Violating Processes (RSVP)), with the other proposed start (the National Ecological Observatory Network (NEON)) a casualty of tight budget constraints. But the Senate would fund none of the three proposed starts.

Outlook and Historical Trends

NSF has enjoyed mostly steady budget growth over the past 15 years, as shown in Figure 1. After declines in the mid-1990s in the push toward a balanced budget, growth resumed after FY 1998 and momentum began to build to double the NSF budget over five years, culminating in the NSF authorization bill of December 2002. But NSF budget growth slowed down to just ahead of the inflation rate in FY 2004, and would slow down further in the FY 2005 request and Senate plan, and would reverse in the House plan. As noted earlier, these smaller increases put the NSF budget further and further behind the authorized

doubling path and have created downward pressures on NSF grant sizes and success rates. While there is strong political pressure for Congress to approve a budget more consistent with the authorized funding track, lawmakers have been stymied by tight restraints on overall domestic discretionary spending.

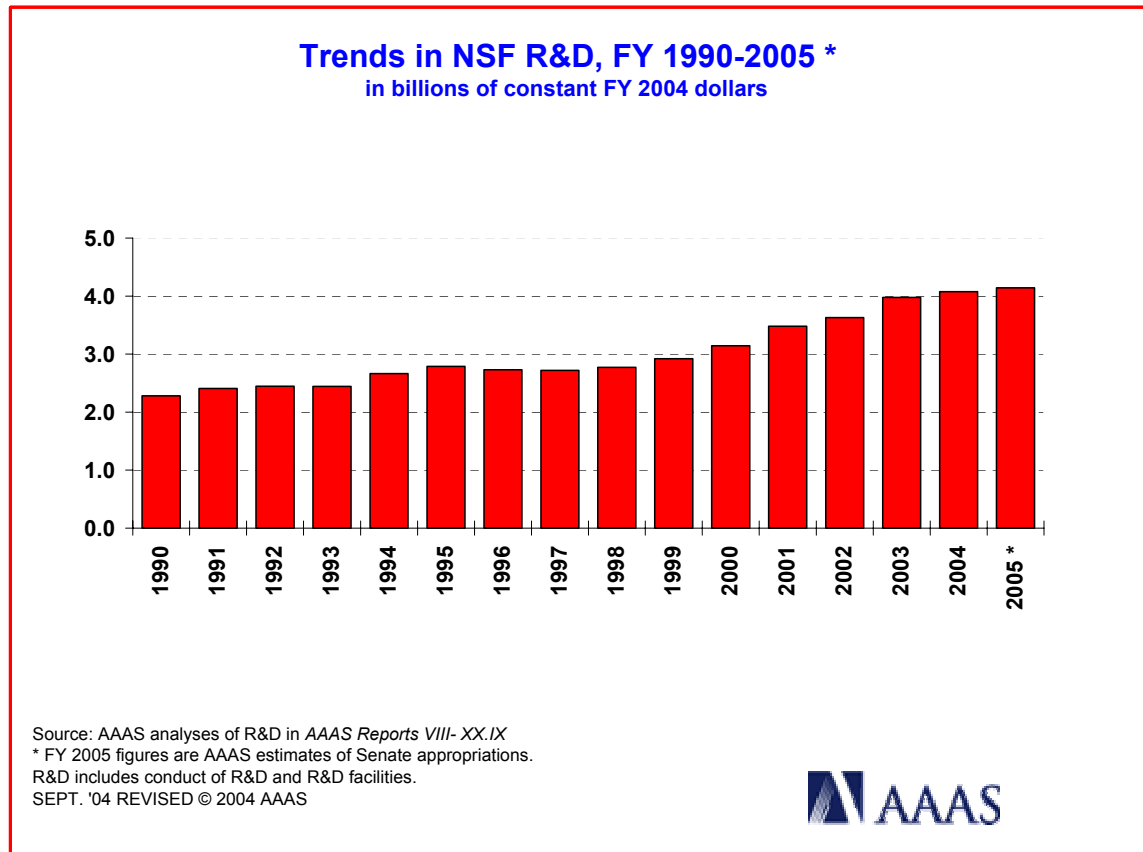


Figure 1. (click on the image to view or download a color, full-page PDF version of the chart)

Next Steps

The House VA-HUD bill's proposed cuts to NSF, NASA, and EPA look so steep, especially in an election year, that the bill has not reached the House floor and may never see a vote as a stand-alone bill. The Senate VA-HUD bill, cushioned by \$2 billion in emergency funds, may be approved by the full Senate by the end of the month. But without a House-approved counterpart, the bill is almost certain to be included in a year-end omnibus appropriations bill that will be delayed until well after the October 1 start of FY 2005.

(This analysis is one of a series of AAAS R&D Funding Updates on the FY 2005 congressional appropriations process. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D by agency in FY 2005 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/rd>) in the "FY 2005 R&D" or the "What's New" sections.)

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Table. NSF R&D in FY 2005 Senate Appropriations

**Table. National Science Foundation
Senate Appropriations Committee Action on R&D in the FY 2005 Budget
(budget authority in millions of dollars)**

	FY 2004 Estimate	FY 2005 Request	FY 2005 House	Action by Senate				
				FY 2005 Senate	Chg. from Request Amount	Percent	Chg. from FY 2004 Amount	Percent
Research and Related Activities ¹ :								
Mathematical and Physical Sciences	1,092	1,116	1,064	1,123	8	0.7%	32	2.9%
Engineering	565	576	549	576	0	0.0%	11	1.9%
Biological Sciences	587	600	573	605	6	0.9%	19	3.2%
Geosciences	713	729	696	729	0	0.0%	15	2.2%
Computer and Info. Science and Eng.	605	618	588	630	12	1.9%	25	4.2%
Social, Behavioral and Econ. Scis.	204	225	215	225	0	0.0%	21	10.3%
US Polar Programs	342	350	350	350	0	0.0%	8	2.2%
Integrative Activities ²	144	160	118	165	5	3.1%	21	14.5%
Total Research and Related Activities ¹	4,251	4,372	4,152	4,402	30	0.7%	151	3.6%
Major Research Equipment	155	213	208	130	-83	-38.8%	-25	-15.8%
Education and Human Resources R&D	137	132	133	143	11	8.4%	5	3.8%
Less Non-R&D in R&RA ¹	-467	-491	-454	-480	11	-2.3%	-13	2.8%
TOTAL NSF R&D	4,077	4,226	4,038	4,195	-30	-0.7%	118	2.9%
Non-R&D Programs and Activities:								
Non-R&D in R&RA ¹	467	491	454	480	-11	-2.3%	13	2.8%
Other Education and Human Res. ²	802	720	710	787	67	9.3%	-15	-1.9%
(Total E.H.R. Budget) ²	939	851	843	929	78	9.1%	-10	-1.0%
Salaries and Expenses ³	219	294	250	269	-25	-8.5%	50	23.0%
National Science Board	4	4	4	4	0	1.3%	0	3.1%
Inspector General	10	10	10	10	0	0.0%	0	1.7%
Total NSF Non-R&D Activities	1,501	1,519	1,429	1,550	30	2.0%	49	3.3%
Total NSF Budget	5,578	5,745	5,467	5,745	0	0.0%	167	3.0%

AAAS estimates based on FY 2005 appropriations bills. Includes conduct of R&D and R&D facilities.

FY 2004 and FY 2005 request figures based on OMB R&D data and supplemental agency budget data.

Figures are rounded to the nearest million. Changes calculated from unrounded figures.

¹ R&RA funds are not appropriated by directorate. The FY 2005 House and Senate directorate figures are AAAS estimates based on report language in the FY 2005 VA-HUD appropriations bills.

² The FY 2005 request proposes to move funding for the Math and Science Partnerships from E.H.R. to Integrative Activities in R&RA; the House and Senate would reject the proposal. The table keeps funding in E.H.R. for all years for comparability.

³ The House would transfer \$26 million from R&RA and \$5.5 mil. from E.H.R. to Salaries and Expenses for administrative costs in FY 2005.

September 22, 2004 - Senate Appropriations Committee-approved funding levels.

These funding levels may be amended or rejected by the full Senate.