

Senate Proposes Increases for NSF

(The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D by agency in FY 2000 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/R&D>) in the "FY 2000 R&D" or the "What's New" sections.)

The Senate Appropriations Committee has drafted an FY 2000 VA-HUD appropriations bill (S 1596) that would give increases to R&D programs in the National Science Foundation (NSF) and provide the requested amounts for most programs in the National Aeronautics and Space Administration (NASA) and the Environmental Protection Agency (EPA). Unlike the companion House bill, which would impose cuts on NSF, **the Senate would boost NSF's budget by \$211 million or 5.7 percent to the Administration's requested level of \$3.9 billion.** The House would provide only \$3.6 billion. NSF's directorates would receive increases of at least 2.5 percent in the Senate plan, and total **NSF R&D would climb 6.1 percent to \$2.9 billion** (see Table). While the Senate would deny requested funds for the Administration's Information Technology for the Twenty-First Century (IT²) initiative, it would increase funding for similar information technology research by almost 40 percent.

As the October 1 start of FY 2000 approaches, Congress is struggling to draft the 13 appropriations bills within discretionary spending caps that are forcing sharp cuts to domestic discretionary programs. The discretionary spending caps, enacted in 1997, require FY 2000 discretionary spending to be nearly \$20 billion below FY 1999 funding levels. The **FY 2000 VA-HUD bill**, the 12th bill to be drafted by the Senate, totals only \$70 billion in discretionary budget authority, nearly \$3 billion below the FY 1999 level and \$5 billion below the amount needed to keep pace with inflation. The total was originally even lower, but the Appropriations Committee added funds to the VA-HUD bill by raiding the Labor-HHS bill's allocation. As a result, the unlucky Labor-HHS bill, the only bill yet to be drafted in both the House and the Senate, now has an allocation that is nearly \$12 billion below the FY 1999 funding level, a level that could require cuts of almost 20 percent for its programs. Even the revised allocation of \$70 billion was insufficient for the Senate, and an extra \$4.2 billion was found at the last minute by funding some housing programs with FY 2001 rather than FY 2000 funds.

Within the \$70 billion total for the House VA-HUD bill, the House made clear its priority for veterans' programs and increased funding by nearly \$2 billion, putting even more pressure on other programs in the bill. As a result, the other agencies funded in the bill, including EPA, NASA, and NSF, face steep cuts (see the August 6 R&D Funding Updates for information on House appropriations for these three agencies). The Senate, although faced with the same total, put a higher priority on science programs and, aided by the extra \$4 billion in FY 2001 funds, managed to meet the President's request for all three agencies. (Please see the NASA and EPA Funding Updates for information on proposed Senate appropriations for R&D in these agencies.) The Senate would fund NSF at the requested level of \$3.9 billion, an increase of \$211 million or 5.7 percent over FY 1999. **NSF's R&D funding, which excludes NSF's education and training activities and overhead costs, would total \$2.9 billion in the Senate plan, an increase of \$165 million or 6.1 percent (see Table).** The House would cut both NSF's total budget and NSF's R&D.

The **Research and Related Activities (R&RA)** account, which funds most of NSF's R&D, would receive \$3.0 billion, 7.1 percent or \$198 million above the FY 1999 funding level and \$3 million above the request. Each directorate would receive an increase of at least 2.5 percent.

The Senate would dramatically scale back requests for the Administration's proposed **Information Technology for the 21st Century (IT²)** initiative but would provide extra funds for similar research.

The IT² initiative is proposed to be a multi-agency effort in fundamental computing and information technology (IT) research with a \$366 million budget for FY 2000, of which \$146 million would come from NSF. Of that amount, NSF requested \$110 million for IT² research in the **Computer and Information Science and Engineering (CISE)** Directorate, funded within R&RA. The Senate would provide no money for IT² within CISE, citing its doubts about creating a new structure within NSF to perform research that could duplicate NSF's existing IT activities. The Senate bill, however, would support NSF's existing basic research efforts in IT and would provide \$417 million to CISE, an increase of \$118 million or nearly 40 percent that would nearly match CISE's \$423 million request. Although the Senate bill specifically denies funds for IT², it designates the additional CISE funds for fundamental research on software, scalable information infrastructure, and high-end computing, all areas that IT² proposes to address. The remaining \$36 million of NSF's proposed contribution to IT² would come from the Major Research Equipment account to fund Terascale Computing Systems, a facilities project to build a five-teraflop (trillions of computing operations a second) computing site. The Senate plan would provide \$21 million for this project, leaving NSF with only \$21 million for its contribution to IT² instead of the proposed \$146 million. The House would provide \$35 million for IT².

The other participating agencies in IT² would see similar cutbacks under both the House and Senate appropriations bills. The House and the Senate provided no funds for DOE's proposed role in the initiative, in contrast to the request for \$70 million, and approximately \$60 million (House) and \$75 million (Senate) instead of the \$100 million proposed for DOD. Of the \$316 million proposed for the above three lead agencies in IT², the House would provide only \$95 million while the Senate would provide \$96 million.

The Biological Sciences (BIO) Directorate would receive \$418 million, \$27 million or 6.9 percent more than FY 1999. The Senate bill would boost funding for the third year of the Plant Genome Research Program from a requested \$50 million to \$60 million. NSF's new **Integrative Activities** account, which supports emerging cross-disciplinary research and major research instrumentation, would receive the requested \$161 million in FY 2000, the same as FY 1999. The Senate would provide the requested \$50 million for the new **Biocomplexity** initiative, and would provide \$50 million (the same as FY 1999 and the FY 2000 request) for Major Research Instrumentation. The Senate would also provide the requested \$32 million for the Opportunity Fund, a fund designed to support innovative, cross-disciplinary research taking advantage of emerging scientific opportunities. In FY 1999, the Fund received \$24 million.

The **Major Research Equipment** account would decline from \$90 million in FY 1999 to \$70 million in FY 2000. **Education and Human Resources** would receive \$689 million, \$27 million more than FY 1999, including \$55 million for **the Experimental Program to Stimulate Competitive Research** (EPSCoR; up from \$48 million), a program to improve the research competitiveness of states traditionally underrepresented as recipients of federal research funding. The Senate bill notes that the top 50 universities in the nation receive 60 percent of all federal R&D funds to universities and colleges, and the bill appears to recommend a shift in focus from underrepresented states to underrepresented institutions. The bill would transfer the EPSCoR program and its funds to a new office of innovation partnerships to create "a focal point for support and outreach to institutions that do not normally fall in the top 50 in federal research and development support." The new office would receive \$10 million in addition to the \$55 million in EPSCoR funds.

The Senate VA-HUD bill is scheduled for floor debate this week. The House approved its version of the bill on September 9. If the Senate approves the bill this week, the two versions will head to a House-Senate conference, but the conference report is unlikely to be completed and approved by both chambers before October 1. Continuing resolutions are likely to provide temporary FY 2000 funding for NSF and the other agencies until the final VA-HUD bill is signed by the President. The

Clinton Administration has issued a veto threat over the funding levels in the House bill, so the ultimate fate of the bill may depend on whether its funding levels are closer to the House or the Senate figures. If the conference report is delayed, or if the President vetoes the final bill, the final funding levels for VA-HUD, and therefore for NSF programs, will most likely be determined in an omnibus appropriations bill.

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AAAS R&D Budget and Policy Program
American Association for the Advancement of Science
1200 New York Ave, NW
Washington, DC 20005
(202) 326-6607; -6600
science_policy@aaas.org
www.aaas.org/spp/R&D

**Table. National Science Foundation
Senate Appropriations Committee Action on R&D in the FY 2000 Budget
(budget authority in millions of dollars)**

	FY 1999 Estimate	FY 2000 Request	FY 2000 House	Action by Senate				
				FY 2000 Senate	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 1999 Amount	Chg. from FY 1999 Percent
Research and Related Activities ^{1 2} :								
Mathematical and Physical Sciences	734	754	735	753	-1	-0.2%	18	2.5%
Engineering	369	379	369	378	-1	-0.2%	9	2.5%
Biological Sciences	391	409	391	418	9	2.3%	27	6.9%
Geosciences	473	485	473	485	-1	-0.2%	12	2.5%
Computer and Info. Science and Eng.	299	423	313	417	-6	-1.3%	118	39.6%
- <i>Information Tech. Initiative (IT²)</i>	0	110	35	0	-110	-100.0%	--	--
Social, Behavioral and Econ. Scis.	137	143	138	143	0	-0.2%	6	4.0%
US Polar Programs	245	251	236	253	3	1.0%	8	3.3%
Integrative Activities ¹	161	161	114	161	0	-0.2%	0	-0.3%
Total Res. & Related Activities ^{1 2}	2,809	3,004	2,769	3,007	3	0.1%	198	7.1%
Major Research Equipment	90	85	57	70	-15	-17.6%	-20	-22.2%
Education and Human Resources R&D	108	108	105	110	2	1.6%	2	1.6%
Less Non-R&D in R&RA ²	-293	-307	-289	-308	0	0.1%	-15	5.0%
Total NSF R&D	2,714	2,890	2,641	2,880	-10	-0.4%	165	6.1%
Non-R&D Programs and Activities:								
Non-R&D in R&RA ²	293	307	289	308	0	0.1%	15	5.0%
Other Education and Human Res.	554	570	555	579	9	1.6%	25	4.5%
Salaries and Expenses	144	149	147	150	1	0.7%	6	4.2%
Inspector General	5	5	5	6	0	1.8%	0	6.7%
Total NSF Non-R&D Activities	996	1,032	996	1,042	10	1.0%	46	4.6%
Total NSF Budget	3,710	3,921	3,637	3,921	0	0.0%	211	5.7%

AAAS estimates. Includes conduct of R&D and R&D facilities.

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

¹ R&RA figures includes funding derived from the Intellectual Infrastructure fund in FY 1999.

² R&RA funds are not appropriated by directorate. The FY 2000 Approved directorate figures are AAAS estimates based on language in the FY 2000 appropriations bill.

FY 2000 Senate figures represent Senate Appropriations Committee-approved funding levels.

These figures may be amended on the Senate floor.

FY 2000 House figures represent House-approved funding levels.