

PRESIDENT'S FY 2006 BUDGET REQUESTS LEVEL R&D FUNDING

by Ronald L. Meeks

The Bush administration has proposed a total budget authority of \$127.6 billion¹ for federally supported research and development (R&D) in fiscal year (FY) 2006, about the same (up slightly by 0.2 percent in current dollars, down 1.7 percent in constant FY 2000 dollars) as the preliminary FY 2005 R&D total of \$127.3 billion (table 1). Defense R&D is slated to remain relatively unchanged (up 0.1 percent in current dollars, down 1.8 percent in constant FY 2000 dollars) from the FY 2005 level. In constant FY 2000 dollars, R&D for nondefense programs is expected to decrease 1.6 percent.

Pending congressional action will determine the final budget authority for R&D in FY 2006. As of this writing, only two of the FY 2006 appropriations bills have become public law. Details on the President's requested federal funding of the R&D components of agency programs for FY 2004–06 are in the forthcoming annual National Science Foundation (NSF) report *Federal R&D Funding by Budget Function: Fiscal Years 2004–06*. Unless indicated otherwise, all references to dollar amounts or percents for the remainder of this InfoBrief are for current dollars.

Proposed Defense R&D Funding

The defense component of the federal R&D budget authority is expected to be \$74.8 billion, a slight increase of \$91 million over FY 2005 amounts. This small growth represents a change to the recent trend of strong growth,

the result of which the defense share of federal R&D budget authority increased each year from 52.7 percent in FY 2001 to 58.6 percent in FY 2005. The proposed defense R&D budget would keep the defense R&D share of the federal R&D total level with the FY 2005 share.

About 93 percent (\$69.4 billion) of the FY 2006 defense dollars are funded from the Department of Defense's (DoD's) military research, development, test, and evaluation (RDT&E) programs (table 2). The Air Force, Navy, Army, and two defense agencies (the Missile Defense Agency and the Defense Advanced Research Projects Agency) will account for 88.3 percent (\$61.2 billion) of the RDT&E account.

The Air Force is slated to get the largest piece of the defense R&D funding (\$22.6 billion), up \$1.9 billion over the FY 2005 level. The Navy is expected to receive \$18.0 billion in R&D funding, which is \$1.3 billion more than the FY 2005 level. The Army is expected to receive fewer R&D dollars, down \$0.8 billion to \$9.7 billion. The Defense Advanced Research Projects Agency will receive an increase in R&D funding, up \$0.1 billion to \$3.1 billion, while the Missile Defense Agency will get \$7.8 billion for R&D funding, down \$1.0 billion from FY 2005.

A 3.0 percent drop in R&D funding, to \$3.5 billion in FY 2006, is expected in the Department of Energy's (DOE's) atomic energy defense activities, mainly for support of weapons programs (\$2.5 billion) (table 2).

¹ Total budget authority for federally supported R&D and R&D plant is \$132.2 billion in FY 2006.



TABLE 1. Federal R&D budget authority, by budget function: FY 2001–06

Funding category	FY 2001 actual	FY 2002 actual	FY 2003 actual	FY 2004 actual	FY 2005 preliminary	FY 2006 proposed	Percent change, FY 2005–06
Billions of current dollars							
Total	86.756	97.624	112.544	121.867	127.336	127.621	0.2
National defense	45.713	53.016	63.048	69.593	74.668	74.759	0.1
Nondefense	41.043	44.608	49.495	52.274	52.668	52.862	0.4
Health	20.758	23.560	26.517	28.251	28.746	28.984	0.8
Space research and technology	6.126	6.270	7.355	7.612	7.686	8.089	5.2
General science	5.468	5.753	6.129	6.466	6.482	6.423	-0.9
Natural resources and environment	2.096	2.160	2.151	2.168	2.108	1.990	-5.6
Transportation	1.640	1.838	1.869	1.863	1.828	1.640	-10.3
Agriculture	1.657	1.606	1.708	1.750	1.803	1.575	-12.7
Other functions ^a	3.298	3.421	3.767	4.164	4.015	4.161	3.6
Billions of constant FY 2000 dollars							
Total	84.756	93.635	106.034	112.579	115.288	113.330	-1.7
National defense	44.659	50.850	59.401	64.289	67.603	66.388	-1.8
Nondefense	40.097	42.785	46.632	48.290	47.685	46.943	-1.6
Health	20.279	22.597	24.983	26.098	26.026	25.738	-1.1
Space research and technology	5.985	6.014	6.930	7.032	6.959	7.183	3.2
General science	5.342	5.518	5.774	5.973	5.869	5.704	-2.8
Natural resources and environment	2.048	2.072	2.027	2.003	1.909	1.767	-7.4
Transportation	1.602	1.763	1.761	1.721	1.655	1.456	-12.0
Agriculture	1.619	1.540	1.609	1.617	1.632	1.399	-14.3
Other functions ^a	3.222	3.281	3.549	3.847	3.635	3.695	1.6

^a Other functions include energy; veterans benefits and services; education, training, employment, and social services; income security; commerce and housing credit; international affairs; administration of justice; and community and regional development.

NOTES: Data reflect budget information collected through April 2005. Data for FY 2001–04 reflect final budget authorization. Preliminary budget authority for FY 2005 reflects all past congressional actions but may be revised, since at the time of table preparation, FY 2005 had not yet been completed. Proposed budget authority for FY 2006 from the Bush administration will be revised to reflect congressional appropriation and actual program-funding decisions. Details may not add to totals because of rounding. Percent change is derived from unrounded data.

SOURCES: Agencies' submissions to the Office of Management and Budget; agencies' budget documents; and supplemental data obtained from agencies' budget offices.

Proposed defense R&D at the Department of Homeland Security (DHS) is about \$0.3 billion in FY 2006, an increase of 4.3 percent over FY 2005 funding, thus returning to the FY 2003 funding level.

Total R&D in Support of the Department of Homeland Security – Defense and Nondefense

The R&D activities of DHS are classified in three budget-function categories: national defense, administration of justice, and transportation. While showing signs of growth between FY 2004 and FY 2006, DHS R&D funding would account for less than 1 percent of the total federal R&D budget authority in FY 2006. R&D funding for the combined DHS activities is

proposed to increase by 3.9 percent, from \$1.2 billion in FY 2005 to \$1.3 billion in FY 2006. About 74 percent of these funds are slated for the nondefense category administration of justice (table 3).

Proposed Nondefense R&D Funding

Total nondefense R&D budget authority is expected to increase by \$0.2 billion, to \$52.9 billion in FY 2006. The nondefense share of federal R&D budget authority has decreased, from 47.3 percent in FY 2001 to 41.4 percent in both FY 2005 and 2006. The six functions accounting for most (92.1 percent) of the federal budget proposed for nondefense-related R&D activities (table 1) are discussed below.

TABLE 2. Federal research and development budget authority for national defense: FY 2003–06

Funding category and agency	FY 2003	FY 2004	FY 2005	FY 2006	Percent change, FY 2005–06
	actual	actual	preliminary	proposed	
	Millions of dollars				
Total	63,048	69,593	74,668	74,759	0.1
Department of Defense-military (DoD)	59,251	65,896	70,774	70,959	0.3
Research, development, test, and evaluation (RDT&E)	58,103	64,643	68,797	69,356	0.8
Defense agencies	17,801	18,910	20,474	18,803	-8.2
Defense Advanced Research Projects Agency	2,655	2,815	2,977	3,084	3.6
Missile Defense Agency	6,687	7,567	8,783	7,775	-11.5
Other defense agencies	8,459	8,528	8,714	7,944	-8.8
Department of the Air Force	18,825	20,291	20,754	22,612	9.0
Department of the Army	7,572	10,219	10,528	9,734	-7.5
Department of the Navy	13,666	14,921	16,731	18,038	7.8
Operational test and evaluation	239	302	310	168	-45.7
Other military funding ^a	1,148	1,253	1,977	1,603	-18.9
Department of Energy-atomic energy defense activities (DOE)	3,467	3,519	3,577	3,470	-3.0
Environmental restoration and waste management	70	43	56	61	8.9
Naval reactors development ^b	628	681	712	687	-3.6
Nonproliferation ^b	181	164	148	196	32.4
Weapons activities ^b	2,562	2,623	2,659	2,524	-5.1
Other defense activities	26	8	2	2	0.0
Department of Homeland Security	331	177	317	331	4.3

^aThis item includes appropriate personnel costs in direct support of conduct of research and development, other appropriations funding certain DoD programs, and medical research funded outside RDT&E accounts.

^bThese accounts are now part of the National Nuclear Security Administration within DOE.

NOTES: Data reflect budget information collected through April 2005. Data for FY 2003–04 reflect final budget authorization. Preliminary budget authority for FY 2005 reflects all past congressional actions but may be revised, since at the time of table preparation, FY 2005 had not yet been completed. Proposed budget authority for FY 2006 from the Bush administration will be revised to reflect congressional appropriation and actual program-funding decisions. Details may not add to totals because of rounding. Percent change derived from unrounded data.

SOURCES: DoD, DOE, and DHS submissions to Office of Management and Budget; supplemental data obtained from agencies' budget offices; and DoD, RDT&E Programs (R-1).

Health. R&D funding for health is expected to increase \$0.2 billion from the FY 2005 level. R&D funding for health primarily includes programs of the National Institutes of Health (NIH) and are to reach \$29.0 billion in FY 2006, making it the second largest funded budget function after national defense. The health share of the total federal R&D budget authority reached 24.1 percent in FY 2002; then, it dropped each year down to 22.6 percent in FY 2005. In FY 2006, health is expected to account for 22.7 percent of the total federal R&D budget authority.

Space. The Bush administration has proposed a 5.2 percent increase in R&D budget authority, to \$8.1 billion, for space research and technology, an increase of \$0.4 billion from FY 2005. National Aeronautics and

Space Administration (NASA) programs account for the entire space research and technology budget. The share of R&D funding for space research and technology fell from 7.1 percent of the total federal R&D budget authority in FY 2001 to 6.0 percent in FY 2005. This function category accounts for 6.3 percent of the proposed total federal R&D budget authority in FY 2006.

General Science. Research funding for general science is proposed to decrease 0.9 percent, or by \$59 million in FY 2006, to a total of \$6.4 billion. NSF accounts for 58.2 percent (\$3.7 billion) of these general-science funds; DOE accounts for the remaining portion (\$2.7 billion). The share of general science has been dropping since FY 2001 when it was

TABLE 3. Federal R&D budget authority for the Department of Homeland Security, by budget function: FY 2003–06

Funding category	FY 2003 actual	FY 2004 actual	FY 2005 preliminary	FY 2006 proposed	Percent change, FY 2005–06
Billions of current dollars					
Total	0.688	0.941	1.208	1.255	3.9
National defense	0.331	0.177	0.317	0.331	4.3
Nondefense	0.357	0.764	0.891	0.924	3.7
Administration of justice ^a	0.173	0.604	0.695	0.924	33.1
Transportation ^a	0.184	0.160	0.196	0.000	-100.0
Billions of constant FY 2000 dollars					
Total	0.648	0.869	1.094	1.114	1.9
National defense	0.312	0.164	0.287	0.294	2.4
Nondefense	0.336	0.706	0.807	0.821	1.7
Administration of justice ^a	0.163	0.558	0.629	0.821	30.4
Transportation ^a	0.173	0.148	0.177	0.000	-100.0

^aBeginning in FY 2006, the Department of Homeland Security proposes to reclassify its transportation R&D at the Transportation Security Administration and U.S. Coast Guard to its administration of justice R&D.

NOTES: Data reflect budget information collected through April 2005. Data for FY 2003–04 reflect final budget authorization. Preliminary budget authority for FY 2005 reflect all past congressional actions but may be revised, since at the time of table preparation, FY 2005 had not yet been completed. Proposed budget authority for FY 2006 from the Bush administration will be revised to reflect congressional appropriation and actual program-funding decisions. Details may not add to totals because of rounding. Percent change derived from unrounded data.

SOURCES: Agencies' submissions to the Office of Management and Budget; agencies' budget documents; and supplemental data obtained from agencies' budget offices.

6.3 percent of the total federal R&D budget authority. Under the proposed budget, general science would account for 5.0 percent of the total federal R&D budget authority.

Environment. Natural resources and environment R&D is budgeted at \$2.0 billion in FY 2006, down 5.6 percent from the FY 2005 level. Four agencies provide nearly all of the support for R&D in this area: Department of the Interior, Department of Commerce, Environmental Protection Agency, and Department of Agriculture (USDA). The natural resources and environment R&D share of the total federal R&D budget authority has declined somewhat each year since FY 2001 when the share was 2.4 percent. This budget function would account for 1.6 percent of the total federal R&D budget authority under the proposed budget for FY 2006.

Transportation. Expected funding in FY 2006 for transportation R&D is \$1.6 billion, down by \$188 million from FY 2005. NASA and the Department of Transportation account for nearly all of these funds with their air and ground transportation projects. Under

the proposed budget, transportation R&D would account for 1.3 percent of the total federal R&D budget authority, continuing a downward trend from FY 2001 when the transportation share was 1.9 percent.

Agriculture. Agriculture R&D is expected to be \$1.6 billion in FY 2005, down by 12.7 percent from the FY 2005 funding level. USDA would receive all of these funds for its projects, with the bulk of the dollars going to the Agricultural Research Service and to the Cooperative State Research, Education, and Extension Service. Under the proposed budget, agriculture R&D would account for 1.2 percent of the total federal R&D budget authority, continuing a downward trend from 1.9 percent share in FY 2001.

Data Collection Notes

The data in the forthcoming report, *Federal R&D Funding by Budget Function: Fiscal Years 2004–06*, represent agencies' best estimates of actual and proposed federal funding for R&D as reported during the February–April 2005 period. These data are based primarily on information that agencies provide to the Office of Management and Budget and account for

nearly all federally sponsored R&D activities. The report also contains R&D information that became available from the individual agencies after the administration's budget was prepared and reported. Such information consists of agency budget-justification documents submitted to Congress and supplemental, program-specific information obtained from agency budget and program staff through April 2005. Budget numbers for individual activities, programs, or agencies may therefore differ from those published in the President's budget or agency budget documents.

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