

PRESIDENT'S PROPOSED FY 2007 BUDGET SHOWS MODEST INCREASE IN R&D FUNDING

by Ronald L. Meeks

In its fiscal year (FY) 2007 budget, the Bush administration proposed a total budget authority of \$136.9 billion for research and development (R&D) and R&D plant programs, an increase of 1.2 percent over the preliminary FY 2006 R&D and R&D plant total of \$135.2 billion (table 1).¹ After adjusting for expected inflation, the FY 2007 R&D and R&D plant budget authority represents a decrease of 1.0 percent over the FY 2006 figure.²

This *InfoBrief* contains information on the overall distribution and changing patterns of federal funding of these R&D components, as proposed by the Bush administration for FY 2007. The discussion follows on the eight largest mission area budget functions³ with respect to R&D and R&D plant funding: national defense, health, space research and technology, general science, natural resources and environment, agriculture, transportation, and energy. These R&D and R&D plant activities cut across agency lines and account for 97.8

¹ Budget authority is what the law authorizes, or allows, the federal government to spend for programs, projects, or activities. Proposed FY 2007 funding levels are for budget authority, which is the basis for initial congressional action. In future *InfoBriefs*, these data will be revised to reflect congressional appropriation and actual program-funding decisions.

Preliminary FY 2006 funding levels are for budget authority, which reflects all past congressional actions but may be revised, since at the time of *InfoBrief* preparation, FY 2006 had not been completed.

² Details on federal funding of the R&D components of agency programs for FY 2005–07 will be available in the forthcoming National Science Foundation report, *Federal R&D Funding by Budget Function: Fiscal Years 2005–07*.

³ The budget functions used in this *InfoBrief* are the same budget functions used in the President's report, *Budget of the United States Government, Fiscal Year 2007*.

percent of the total R&D and R&D plant budget authority for FY 2007.

Proposed Defense R&D and R&D Plant

The Bush administration proposed a 1.0 percent increase in national defense R&D and R&D plant budget authority in FY 2007. With this increase, defense would account for 57.3 percent (\$78.4 billion) of the federal R&D and R&D plant total (tables 1 and 2). Most—93.3 percent, or \$73.2 billion—of the FY 2007 national defense R&D budget authority is vested in the Department of Defense's (DOD's) military research, development, test, and evaluation programs (RDT&E) (table 3). R&D funding for the Department of Energy's (DOE's) atomic energy defense activities accounts for another 5.1 percent (\$4.0 billion) of the proposed FY 2007 national defense R&D budget. Most of the DOE defense funding for R&D is for weapons activities (\$2.9 billion). The remaining money for this budget function is for other military funding (\$0.9 billion), which includes DOD military funding for personnel costs in direct support of conduct of R&D, medical research funding outside RDT&E accounts, and other DOD programs, as well as for the Department of Homeland Security funding for defense programs (\$0.3 billion).

Proposed Nondefense R&D and R&D Plant

The nondefense share of federal R&D and R&D plant budget authority accounts for 42.7 percent of the total in FY 2007 (table 2). The President's budget contains a \$0.9 billion increase in total nondefense R&D and R&D plant budget authority. The resulting \$58.5 billion total represents a 1.5 percent increase over preliminary FY 2006 funding.



TABLE 1. Federal R&D and R&D plant budget authority, by budget function: FY 2005–07

Budget function	Agencies' budget submissions			2006–07 % change
	2005 actual	2006 preliminary	2007 proposed	
	Current \$ millions			
All functions conducting R&D	131,259	135,205	136,850	1.2
National defense	74,641	77,630	78,388	1.0
Nondefense	56,618	57,575	58,462	1.5
Health	29,129	29,088	29,025	-0.2
Space research and technology	9,656	10,411	11,478	10.2
General science	7,477	7,495	8,321	11.0
Natural resources and environment	2,245	2,202	2,043	-7.2
Agriculture	2,094	2,128	1,711	-19.6
Transportation	1,866	1,741	1,507	-13.5
Energy	1,324	1,419	1,363	-3.9
Other functions ^a	2,827	3,091	3,014	-2.5
	2000 constant \$ millions ^b			
All functions conducting R&D	117,314	117,838	116,707	-1.0
National defense	66,711	67,658	66,850	-1.2
Nondefense	50,603	50,180	49,857	-0.6
Health	26,034	25,352	24,753	-2.4
Space research and technology	8,630	9,074	9,789	7.9
General science	6,683	6,532	7,069	8.2
Natural resources and environment	2,006	1,919	1,742	-9.2
Agriculture	1,872	1,855	1,459	-21.3
Transportation	1,668	1,517	1,285	-15.3
Energy	1,183	1,237	1,162	-6.0
Other functions ^a	2,527	2,694	2,570	-4.6

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

^b Gross domestic product implicit price deflators were used to convert current dollars to constant FY 2000 dollars.

NOTES: Data reflect budget information collected through April 2006. Data for FY 2005 reflect final budget authorization. Preliminary budget authority for FY 2006 reflects all past congressional actions but may be revised, because at the time of table preparation, FY 2006 had not yet been completed. Proposed budget authority for FY 2007 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 OMB via Circular No. A-11, Max Schedule C; agency budget justification documents; and supplemental data obtained from agencies' budget offices in FY 2006.

Among individual budget functions, health accounts for the largest share of the total nondefense R&D and R&D plant budget authority at 49.6 percent (\$29.0 billion) and the second largest share of the total R&D and R&D plant budget authority at 21.2 percent (tables 1 and 2). Health, however, is budgeted to decrease slightly (down \$63 million) below the FY 2006 level. The National Institutes of Health programs make up the bulk of the health R&D and R&D plant account (\$27.8 billion).

Space research and technology makes up 8.4 percent (\$11.5 billion) of the total R&D and R&D plant budget authority (tables 1 and 2). The Bush administration proposed a 10.2 percent increase in R&D and R&D plant budget authority for space research and technology activities, up \$1.1 billion from the FY 2006 level. The entire space research and technology account is covered by National Aeronautical and Space Administration programs.

TABLE 2. Distribution of total federal R&D and R&D plant budget authority, by budget function: FY 2005–07
(Percent distribution)

Budget function	2005 actual	2006 preliminary	2007 proposed
All functions conducting R&D	100.0	100.0	100.0
National defense	56.9	57.4	57.3
Nondefense	43.1	42.6	42.7
Health	22.2	21.5	21.2
Space research and technology	7.4	7.7	8.4
General science	5.7	5.5	6.1
Natural resources and environment	1.7	1.6	1.5
Agriculture	1.6	1.6	1.3
Transportation	1.4	1.3	1.1
Energy	1.0	1.0	1.0
Administration of justice	0.6	0.7	0.7
Veterans benefits and services	0.6	0.6	0.6
Education, training, employment, and social services	0.4	0.4	0.4
Commerce and housing credit	0.4	0.3	0.4
International affairs	0.2	0.2	0.2
Community and regional development	*	*	*
Income security	*	*	*

* = less than 0.05 percent.

NOTE: Detail may not add to total because of rounding.

SOURCES: Agencies' submissions to Office of Management and Budget, MAX Schedule C; agency budget justification documents; and supplemental data obtained from agencies' budget offices in FY 2006.

General science accounts for 6.1 percent of the proposed total federal R&D and R&D plant budget authority, and is proposed to increase 11.0 percent—or \$826 million—in FY 2007, to a total of \$8.3 billion (tables 1 and 2). National Science Foundation accounts for 54.4 percent (\$4.5 billion) of these dollars, with DOE providing the rest (\$3.8 billion) of the general science funds.

Natural resources and environment R&D and R&D plant is budgeted at \$2.0 billion in FY 2007, down 7.2 percent from the FY 2006 level (table 1). Five agencies provide support for R&D activities in natural resources and environment: Department of Agriculture, Department of Commerce, DOD's Army Corps of Engineers, Department of the Interior, and the Environmental Protection Agency. Natural resources and environment R&D account for 1.5 percent of the total federal R&D and R&D plant budget authority under the proposed budget (table 2).

Agriculture R&D and R&D plant is slated to get \$1.7 billion for R&D and R&D plant activities in FY 2007,

down 19.6 percent from the FY 2006 level (table 1). Agriculture would account for 1.3 percent of the total federal R&D and R&D plant budget authority in FY 2007 (table 2).

Transportation R&D and R&D plant is expecting \$1.5 billion for R&D and R&D plant activities in FY 2007, down 13.5 percent from FY 2006 (table 1). Under the proposed budget, transportation would account for 1.1 percent of the total federal R&D and R&D plant budget authority in FY 2007 (table 2).

Energy R&D and R&D plant is slated to get \$1.4 billion for R&D and R&D plant activities in FY 2007, down 3.9 percent from FY 2006 (table 1). Under the proposed budget, energy would account for 1.0 percent of the total federal R&D and R&D plant budget authority in FY 2007 (table 2).

Historical Accuracy

The data in this *InfoBrief* represent agencies' best estimates of actual and proposed federal funding for R&D collected during the period February through

TABLE 3. Federal R&D and R&D plant budget authority for national defense: FY 2005–07

Funding category and agency	2005	2006	2007	2006–07 % change
	actual	preliminary	proposed	
	\$ millions			
Total	74,641	77,630	78,388	1.0
Department of Defense-military (DOD)	70,269	73,215	74,076	1.2
RDT&E	68,826	71,776	73,156	1.9
Defense agencies	20,608	19,704	20,810	5.6
Defense Advanced Research Projects Agency	2,947	2,979	3,294	10.6
Missile Defense Agency	8,827	7,682	9,310	21.2
Other defense agencies	8,834	9,044	8,205	-9.3
Department of the Air Force	20,550	21,998	24,397	10.9
Department of the Army	10,456	11,071	10,855	-1.9
Department of the Navy	16,901	18,837	16,912	-10.2
Operational test and evaluation	311	166	182	9.6
Other military funding ^a	1,443	1,439	920	-36.1
Department of Energy-atomic energy defense activities (DOE)	4,009	4,062	3,975	-2.1
Environmental restoration and waste management	53	19	20	5.3
Naval reactors development	772	759	771	1.6
Nonproliferation	220	322	272	-15.5
Weapons activities	2,962	2,959	2,908	-1.7
Other defense activities	2	3	4	33.3
Department of Homeland Security (DHS)	363	353	337	-4.5

RDT&E = research, development, test, and evaluation.

^a This 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.

NOTES: Detail may not add to total because of rounding. Percent change derived from unrounded data.

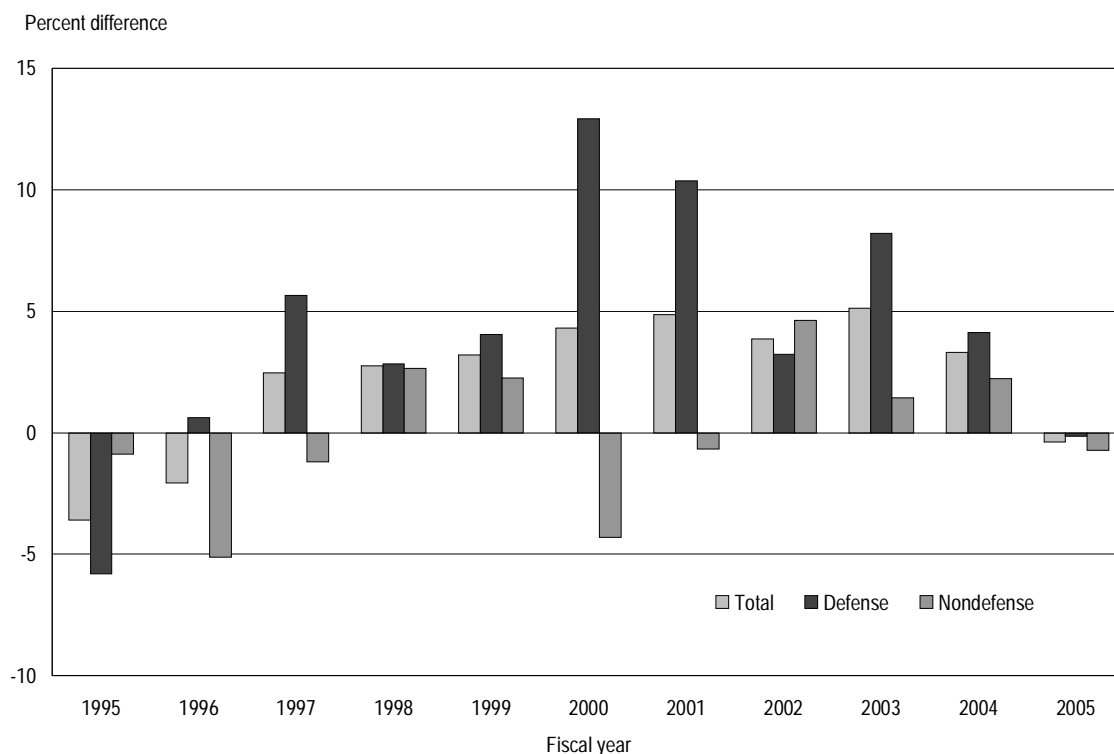
SOURCES: DOD, DOE, and DHS submissions to Office of Management and Budget, MAX Schedule C; and DOD, RDT&E Programs (R-1) in FY 2006.

April 2006. Agencies later revise their proposed data to reflect actual changes in R&D program funding levels. Agencies may also provide changes to prior-year data to reflect program reclassifications or other corrections. Therefore, actual data for a given year may differ from the proposed data for the same year. As an example, when first proposed by the Administration in January 2004, the proposed FY 2005 R&D (excluding R&D plant) budget authority was \$127.1 billion. After congressional actions and agency funding decisions, actual R&D budget authority for FY 2005 was reported at \$126.6 billion, a downward revision of 0.4 percent (\$487 million) from earlier expectations (figure 1). Actual R&D funding for defense (\$74.0 billion) and for nondefense (\$52.6 billion) activities were lower than the proposed R&D funding for defense (down 0.2 percent, or \$112 million) and for nondefense (down 0.7 percent, or \$375 million) in FY 2005.

More pronounced differences between the proposed R&D funding and the actual R&D funding occurred in FY 2000 and in FY 2001, when actual defense R&D funding was above the proposed defense R&D funding by 12.9 percent in FY 2000 and 10.4 percent in FY 2001. In FY 2000 and in FY 2001, actual nondefense R&D funding was below the proposed nondefense R&D funding by 4.3 percent and 0.7 percent, respectively.

For at least the past 11 years, total actual R&D funding differed narrowly (by 5 percent or less) from the total amounts initially proposed by the administration (figure 1). In each of the years from FY 1996 to FY 2004, actual defense R&D funding was more than the amounts initially proposed. By contrast, in about half those years actual nondefense funding has been greater than the amounts initially proposed, and in about half those years has fared worse.

FIGURE 1. Difference in actual federal R&D budget authority from proposed funding, as a percentage of proposed funding: FY 1995–2005



SOURCE: National Science Foundation, Federal R&D Funding by Budget Function: FY 2005–07 and earlier reports.

Data Collection Notes

These data are based primarily on information agencies provide to the Office of Management and Budget and account for nearly all federally sponsored R&D activities. The annual report, *Federal R&D Funding by Budget Function: Fiscal Years 2005–07*, and this *InfoBrief*, also contain 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. Therefore, budget numbers for individual activities, programs, or agencies may differ

from those published in the President’s budget or agency budget documents. Pending congressional action will determine the final budget authority for R&D in FY 2007.

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