



Federal R&D Funding, by Budget Function: Fiscal Years 2011–13

Detailed Statistical Tables | NSF 13-308 | Ubi Ufm&\$%

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General Notes

This report contains data on the budget authority (see “Definitions,” below) of U.S. federal agencies to fund the research and development and R&D plant components of their programs in FYs 2011, 2012, and 2013. All activities covered by the federal budget, including R&D, are classified by the Office of Management and Budget (OMB) into 20 broad functional categories (see “Budget Functions and Classifying R&D,” below). At present, R&D activities are present in 15 of these categories.

Data tables in this report provide R&D budget authority detail, by agency and major programs, for each of these categories. Several concluding tables also include budget authority figures for R&D in FY 2010 and earlier years.

The figures for FY 2011 are actual budget authority received by the federal agencies for R&D that year. Those for FY 2012 are preliminary, reflecting agency estimates of the final appropriations for the year. The FY 2013 figures are the administration’s proposed funding levels, based chiefly on the President’s *Budget of the United States Government, Fiscal Year 2013*, but also reflecting agency documents and other OMB data available through July 2012. These proposed figures for FY 2013 are the basis for subsequent legislative activity in the U.S. Congress to enact the federal government’s annual budget.

Data reported here as “proposed” or “preliminary” will be revised in subsequent editions of this report to reflect the later congressional appropriation actions and agency program-funding decisions.

Definitions

R&D and R&D Plant

In this report, *R&D* refers to basic research, applied research, and development activities in the sciences and engineering.

Research is systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objective of the sponsoring agency:

Basic research is defined as systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.

Applied research is defined as systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met.

Development is defined as systematic application of knowledge or understanding directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements. Development excludes quality control, routine product testing, and production.

Funds for conducting R&D include those for personnel, program supervision, and administrative support directly associated with R&D activities. Expendable or movable equipment needed to conduct R&D—for example, microscopes or spectrometers—is also included.

R&D plant includes such R&D facilities as reactors, wind tunnels, or particle accelerators or the construction, repair, or alteration of such facilities.

The data exclude all non-R&D activities performed within budget functions that conduct R&D and all functions in which no R&D is conducted.

Budget Authority, Obligations, and Outlays

The federal R&D funding data presented here (with a few noted exceptions) are provided in terms of budget authority. Budget authority is used because it is the initial budget stage for congressional action on the President’s proposed budget. Budget authority imposes a ceiling on obligations and outlays; obligations and outlays flow from budget authority.

Budget authority is the primary source of legal authorization to enter into obligations that will result in outlays. Budget authority is most commonly granted in the form of appropriations by the congressional committees assigned to determine the budget for each function.

Obligations represent the amounts for orders placed, contracts awarded, services received, and similar transactions during a given period, regardless of when the funds were appropriated and when the future payment of money is required.

Outlays represent the amounts for checks issued and cash payments made during a given period, regardless of when the funds were appropriated or obligated.

Budget Functions and Classifying R&D

The federal budget total is the sum of funding across the 20 broad functional categories, identified by OMB. These categories are National defense (function 050); International affairs (150); General science, space, and technology (250); Energy (270); Natural resources and environment (300); Agriculture (350); Commerce and housing credit (370); Transportation (400); Community and regional development (450); Education, training, employment, and social services (500); Health (550); Medicare (570); Income security (600); Social Security (650); Veterans benefits and services (700); Administration of justice (750); General government (800); Net interest (900); Allowances (920); and Undistributed offsetting receipts (950).

- R&D has never been reported in 4 of these 20 functions: Social Security (650), Net interest (900), Allowances (920), and Undistributed offsetting receipts (950). As such, data on these categories are not present in this report—except indirectly, where R&D is described as a proportion of total federal budget authority.
- Through FY 2002, small amounts of R&D were reported in the General government (800) category. But R&D has not been reported in this category since then and thus does not appear in this report.
- To better highlight R&D areas of high interest, the data tables in this report split the General science, space, and technology (250) category into its two subfunctions:

General science and basic research (251), and Space flight, research, and supporting activities (252).

Thus, this report's data tables separately cover 16 functional categories: 14 at the broad functional category level, and 2 at the subcategory level.

Each specific R&D activity is assigned to only one functional category that is consistent with the official codes used in budget documents, even though the R&D activity may address the objectives of several functions. For example, all R&D activities sponsored by the Department of Defense (except for those of the U.S. Army Corps of Engineers) are classified as National defense (050), even though some of these have secondary objectives, such as Space flight, research, and supporting activities (252) or Health (550). Nonetheless, an agency's overall R&D effort can involve multiple activities spread across several functional categories, which means that a functional category can show the presence of several agencies. For example, the federal funding for the past national project to map the human genome, which involved the activities of several agencies and a number of R&D programs, appeared in both the Health (550) and the General science and basic research (251) categories.

Finally, not all federally sponsored basic research is categorized in the General science and basic research (251) subfunction. Some basic research is included in many of the other functional categories. Also, not all of R&D included in subfunction 251 is basic research; some is applied research.

The appendix maps the mix of agency funding of R&D activities across the 16 budget functions.

Data Sources

The federal budget does not include a separately identified R&D account. Additionally, most appropriations for R&D are not directly labeled as such (except in certain program areas, e.g., National defense, Energy, Health, and National resources and environment). Most funds for R&D are not line items in agency budget submissions but, rather, are included as part of general program funding.

To provide information on federal R&D funding, OMB requires all agencies with annual R&D funding levels greater than \$10 million to submit data on their R&D programs as part of their annual budget submissions. Each such agency is requested to provide data on funding levels for basic research, applied research, development, R&D facilities, and capital equipment for R&D, in accordance with OMB's Circular A-11, MAX Schedule C, "Research and Development Activities" (see http://www.whitehouse.gov/sites/default/files/omb/assets/a11_current_year/s84.pdf).

The data in this report were collected between February and July 2012 and represent the agencies' best estimates of actual and proposed federal funding for R&D over the FY 2011–13 period. The data are based primarily on information provided to OMB by 26 agencies and account for an estimated 99% of all federally sponsored R&D activities. The data reflect R&D funding information that became available from individual agencies after the administration's budget was prepared and released in the February 2012 publication of the *Budget of the United States Government, Fiscal Year 2013*. This later information consists of budget justification documents that agencies submit to Congress and of supplemental, program-specific information obtained from agency budget and program staff collected through July 2012. Therefore, the budget numbers reported for individual activities, programs, or agencies may differ slightly from those published in the President's budget or in agency budget documents.

Data Tables

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- 3 R&D and R&D plant as % of total budget authority
- 4 basic research

Specific budget function: FY 2011–13

National defense (050)

- 5 R&D and R&D plant
- 6 obligational authority for DOD research, development, test, and evaluation

International affairs (150)

- 7 R&D and R&D plant

General science and basic research (251)

- 8 R&D and R&D plant

Space flight, research, and supporting activities (252)

- 9 R&D and R&D plant

Energy (270)

- 10 R&D and R&D plant

Natural resources and environment (300)

- 11 R&D and R&D plant

Agriculture (350)

- 12 R&D and R&D plant

Commerce and housing credit (370)

- 13 R&D and R&D plant

Transportation (400)

- 14 R&D and R&D plant

Community and regional development (450)

- 15 R&D and R&D plant

Education, training, employment, and social services (500)

- 16 R&D and R&D plant

Health (550)

- 17 R&D and R&D plant

National Institutes of Health

- 18 R&D and R&D plant

Medicare (570)

- 19 R&D and R&D plant

Income security (600)

- 20 R&D and R&D plant

Veterans benefits and services (700)

- 21 R&D and R&D plant
Administration of justice (750)
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TABLE 1. Federal budget authority for R&D and R&D plant, by budget function, ordered by FY 2011 R&D and R&D plant total: FY 2011–13

(Millions of dollars)

Budget function	2011 actual	2012 preliminary	2013 proposed	2011–12 % change	2012–13 % change
R&D and R&D plant	144,379	140,568	142,235	-2.6	1.2
National defense	83,226	78,778	77,296	-5.3	-1.9
Health	30,990	31,188	31,480	0.6	0.9
General science and basic research	10,581	10,610	10,440	0.3	-1.6
Space flight, research, and supporting activities	8,658	8,924	9,134	3.1	2.4
Natural resources and environment	2,314	2,291	2,431	-1.0	6.1
Energy	2,265	2,398	2,734	5.9	14.0
Agriculture	1,768	1,957	1,961	10.7	0.2
Transportation	1,420	1,446	1,593	1.8	10.2
Veterans benefits and services	1,160	1,164	1,166	0.3	0.2
Commerce and housing credit	651	739	2,082	13.5	181.8
Education, training, employment, and social services	636	650	656	2.2	0.9
International affairs	196	196	196	0.0	0.0
Administration of justice	184	113	858	-38.6	659.3
Medicare	180	23	30	-87.2	30.4
Community and regional development	83	57	104	-31.3	82.5
Income security	68	34	74	-50.0	117.6
R&D	142,457	138,146	139,554	-3.0	1.0
National defense	82,972	78,471	77,007	-5.4	-1.9
Health	30,903	31,024	31,317	0.4	0.9
General science and basic research	9,483	9,372	9,433	-1.2	0.7
Space flight, research, and supporting activities	8,398	8,642	8,884	2.9	2.8
Natural resources and environment	2,171	2,137	2,272	-1.6	6.3
Energy	2,233	2,367	2,702	6.0	14.2
Agriculture	1,916	1,875	1,878	-2.1	0.2
Transportation	1,395	1,421	1,569	1.8	10.4
Veterans benefits and services	1,160	1,164	1,166	0.3	0.2
Commerce and housing credit	548	654	1,583	19.3	142.1
Education, training, employment, and social services	578	609	620	5.4	1.8
International affairs	196	196	196	0.0	0.0
Administration of justice	172	99	717	-42.4	624.2
Medicare	180	23	30	-87.2	30.4
Community and regional development	83	57	104	-31.3	82.5
Income security	68	34	74	-50.0	117.6
R&D plant	1,923	2,422	2,681	26.0	10.7
National defense	254	307	289	20.9	-5.9
Health	87	164	163	88.5	-0.6
General science and basic research	1,098	1,238	1,007	12.7	-18.7
Space flight, research, and supporting activities	260	282	250	8.5	-11.3
Natural resources and environment	142	154	159	8.0	3.2
Energy	32	31	32	-3.1	3.2
Agriculture ^a	-148	82	83	-	1.2
Transportation	24	25	23	0.2	-5.1
Veterans benefits and services	0	0	0	-	-
Commerce and housing credit	102	85	498	-17.1	487.9
Education, training, employment, and social services	58	41	36	-29.3	-12.2
International affairs	0	0	0	-	-
Administration of justice	12	14	141	16.7	907.1

TABLE 1. Federal budget authority for R&D and R&D plant, by budget function, ordered by FY 2011 R&D and R&D plant total: FY 2011–13

(Millions of dollars)

Budget function	2011 actual	2012 preliminary	2013 proposed	2011–12 % change	2012–13 % change
Medicare	0	0	0	-	-
Community and regional development	0	0	0	-	-
Income security	0	0	0	-	-

^a The Agricultural Research Service received \$82 million for R&D plant in FY 2011, but this was offset by \$230 million for rescissions in prior year R&D plant funding.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 2. Distribution of federal budget authority for R&D and R&D plant, by budget function: FY 2011–13
(Percent distribution)

Budget function	2011 actual	2012 preliminary	2013 proposed
R&D and R&D plant	100.0	100.0	100.0
National defense	57.6	56.0	54.3
Health	21.5	22.2	22.1
General science and basic research	7.3	7.5	7.3
Space flight, research, and supporting activities	6.0	6.3	6.4
Natural resources and environment	1.6	1.6	1.7
Energy	1.6	1.7	1.9
Agriculture	1.2	1.4	1.4
Transportation	1.0	1.0	1.1
Veterans benefits and services	0.8	0.8	0.8
Commerce and housing credit	0.5	0.5	1.5
Education, training, employment, and social services	0.4	0.5	0.5
International affairs	0.1	0.1	0.1
Administration of justice	0.1	0.1	0.6
Medicare	0.1	*	*
Community and regional development	0.1	*	0.1
Income security	*	*	*
R&D	100.0	100.0	100.0
National defense	58.2	56.8	55.2
Health	21.7	22.5	22.4
General science and basic research	6.7	6.8	6.8
Space flight, research, and supporting activities	5.9	6.3	6.4
Natural resources and environment	1.5	1.5	1.6
Energy	1.6	1.7	1.9
Agriculture	1.3	1.4	1.3
Transportation	1.0	1.0	1.1
Veterans benefits and services	0.8	0.8	0.8
Commerce and housing credit	0.4	0.5	1.1
Education, training, employment, and social services	0.4	0.4	0.4
International affairs	0.1	0.1	0.1
Administration of justice	0.1	0.1	0.5
Medicare	0.1	*	*
Community and regional development	0.1	*	0.1
Income security	*	*	0.1
R&D plant	100.0	100.0	100.0
National defense	13.2	12.7	10.8
Health	4.5	6.8	6.1
General science and basic research	57.1	51.1	37.5
Space flight, research, and supporting activities	13.5	11.6	9.3
Natural resources and environment	7.4	6.3	5.9
Energy	1.7	1.3	1.2
Agriculture	-7.7	3.4	3.1
Transportation	1.3	1.0	0.9
Veterans benefits and services	*	*	*
Commerce and housing credit	5.3	3.5	18.6
Education, training, employment, and social services	3.0	1.7	1.3
International affairs	*	*	*
Administration of justice	0.6	0.6	5.3

TABLE 2. Distribution of federal budget authority for R&D and R&D plant, by budget function: FY 2011–13
(Percent distribution)

Budget function	2011 actual	2012 preliminary	2013 proposed
Medicare	*	*	*
Community and regional development	*	*	*
Income security	*	*	*

* = less than 0.05%.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data. Budget functions ordered as in table 1, budget authority for R&D and R&D plant.

SOURCES: Agencies' submissions to Office of Management and Budget per MAX Schedule C, agencies' budget

TABLE 3. Federal budget authority for R&D and R&D plant as percentage of total budget authority, by budget function: FY 2011–13

Budget function	2011 actual	2012 preliminary	2013 proposed
All functions conducting R&D	5.5	5.0	5.4
National defense	11.6	11.6	11.9
Health	8.6	8.6	8.6
General science and basic research	90.1	88.9	84.2
Space flight, research, and supporting activities	48.3	51.9	53.2
Natural resources and environment	6.5	6.2	7.0
Energy	33.9	26.0	17.4
Agriculture	8.2	11.5	8.2
Transportation	1.6	1.0	1.8
Veterans benefits and services	0.9	0.9	0.8
Commerce and housing credit ^a	NA	NA	NA
Education, training, employment, and social services	0.8	0.4	0.7
International affairs	0.4	0.3	0.3
Administration of justice	0.3	0.2	1.6
Medicare	*	*	*
Community and regional development	0.6	0.1	0.6
Income security	*	*	*

* = less than 0.05%; NA = not available.

^a Budget authority for R&D and R&D plant in Commerce and housing credit budget function increases each fiscal year, notably so in FY 2013 (see table 1). However, large budget authority declines in this budget function, primarily in subfunctions for federal mortgage credit programs and Troubled Assets Relief Program, make trend in this function's R&D and R&D plant as a percentage of total category budget authority difficult to interpret.

NOTES: Total budget authority includes discretionary and mandatory budget authority, less offsets. Budget functions ordered as in table 1, budget authority for R&D and R&D plant.

SOURCES: Agencies' submissions to Office of Management and Budget (OMB) per MAX Schedule C, agencies' budget justification documents, supplemental data obtained from agencies' budget offices, and OMB, *Budget of the U.S. Government, Fiscal Year 2013* (Washington, DC: U.S. Government Printing Office, 2012).

TABLE 4. Federal budget authority for basic research, by budget function: FY 2011–13

Budget function	2011 actual	2012 preliminary	2013 proposed	2011–12	2012–13
	Millions of dollars			% change	
All functions conducting R&D	29,888	30,193	30,738	1.0	1.8
National defense	1,940	2,172	2,185	12.0	0.6
Health	16,002	16,037	15,999	0.2	-0.2
General science and basic research	8,738	8,677	8,975	-0.7	3.4
Space research and technology	1,199	1,342	1,379	11.9	2.7
Natural resources and environment	218	219	227	0.7	3.6
Energy	47	59	18	25.5	-69.5
Agriculture	823	811	883	-1.5	8.9
Transportation	0	0	0	-	-
Veterans benefits and services	438	444	446	1.4	0.5
Commerce and housing credit	154	166	193	8.0	16.6
Education, training, employment, and social services	207	208	213	0.5	2.4
International affairs	0	0	0	-	-
Administration of justice	122	58	219	-52.6	277.4
Medicare	0	0	0	-	-
Community and regional development	0	0	0	-	-
Income security	0	0	0	-	-

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data. Budget functions ordered as in table 1, budget authority for R&D and R&D plant.

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

TABLE 5. Federal budget authority for National defense (050) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	83,226	78,778	77,296	-5.3	-1.9
Department of Defense, military (051)	79,112	74,464	72,572	-5.9	-2.5
Research, development, test, and evaluation (RDT&E)	76,688	71,902	69,654	-6.2	-3.1
Defense agencies	21,130	19,101	18,095	-9.6	-5.3
Defense Advanced Research Projects Agency	2,835	2,816	2,817	-0.7	0.0
Missile Defense Agency	7,367	6,495	6,225	-11.8	-4.2
Other defense agencies	10,928	9,790	9,053	-10.4	-7.5
Department of the Air Force	27,481	26,482	25,481	-3.6	-3.8
Department of the Army	9,954	8,403	8,950	-15.6	6.5
Department of the Navy	17,931	17,728	16,943	-1.1	-4.4
Operational Test and Evaluation	192	188	185	-2.1	-1.6
Other military funding ^a	2,424	2,562	2,918	5.7	13.9
Department of Energy, atomic energy defense activities (053)	4,081	4,281	4,691	4.9	9.6
Defense environmental cleanup	70	21	20	-70.0	-4.8
Naval reactors development	933	1,040	1,046	11.5	0.6
Nonproliferation	343	322	514	-6.1	59.6
Weapons activities	2,733	2,896	3,109	6.0	7.4
Other defense activities	2	2	2	0.0	0.0
Department of Justice, Federal Bureau of Investigation (054)	33	33	33	0.0	0.0
R&D	82,972	78,471	77,007	-5.4	-1.9
Department of Defense, military (051)	79,022	74,359	72,493	-5.9	-2.5
Research, development, test, and evaluation (RDT&E)	76,688	71,902	69,654	-6.2	-3.1
Defense agencies	21,130	19,101	18,095	-9.6	-5.3
Defense Advanced Research Projects Agency	2,835	2,816	2,817	-0.7	0.0
Missile Defense Agency	7,367	6,495	6,225	-11.8	-4.2
Other defense agencies	10,928	9,790	9,053	-10.4	-7.5
Department of the Air Force	27,481	26,482	25,481	-3.6	-3.8
Department of the Army	9,954	8,403	8,950	-15.6	6.5
Department of the Navy	17,931	17,728	16,943	-1.1	-4.4
Operational Test and Evaluation	192	188	185	-2.1	-1.6
Other military funding ^a	2,334	2,457	2,839	5.3	15.5
Department of Energy, atomic energy defense activities (053)	3,917	4,079	4,481	4.1	9.9
Defense environmental cleanup	70	21	20	-70.0	-4.8
Naval reactors development	890	984	981	10.6	-0.3
Nonproliferation	343	322	514	-6.1	59.6
Weapons activities	2,612	2,750	2,964	5.3	7.8
Other defense activities	2	2	2	0.0	0.0
Department of Justice, Federal Bureau of Investigation (054)	33	33	33	0.0	0.0

^a This item includes appropriate personnel costs in direct support of conduct of R&D, other appropriations funding certain Department of Defense programs, and medical research funded outside RDT&E accounts.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 6. Department of Defense, total obligational authority for research, development, test, and evaluation, by DOD budget activity: FY 2011–13
(Millions of dollars)

Budget activity ^a	Funding category and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
	RDT&E total budget authority	76,688	71,902	69,654	-6.2	-3.1
	RDT&E total obligational authority ^b	76,135	72,837	69,653	-4.3	-4.4
1	Basic research	1,877	2,112	2,117	12.6	0.2
	Defense Agencies	473	520	552	9.9	6.1
	Department of the Air Force	476	531	516	11.4	-2.8
	Department of the Army	389	456	444	17.4	-2.7
	Department of the Navy	539	605	605	12.4	0.0
2	Applied research	4,329	4,739	4,478	9.5	-5.5
	Defense Agencies	1,623	1,750	1,704	7.8	-2.7
	Department of the Air Force	1,176	1,219	1,109	3.7	-9.0
	Department of the Army	825	947	875	14.8	-7.6
	Department of the Navy	704	823	790	16.9	-4.0
3	Advanced technology development	5,340	5,411	5,266	1.3	-2.7
	Defense Agencies	3,263	2,901	3,194	-11.1	10.1
	Department of the Air Force	503	686	597	36.4	-13.0
	Department of the Army	805	1,133	891	40.8	-21.4
	Department of the Navy	769	692	584	-10.0	-15.6
4	Advanced component development and prototypes	14,142	13,462	12,433	-4.8	-7.6
	Defense Agencies	7,671	7,041	6,282	-8.2	-10.8
	Department of the Air Force	1,568	1,445	1,181	-7.9	-18.2
	Department of the Army	931	544	630	-41.5	15.7
	Department of the Navy	3,972	4,432	4,340	11.6	-2.1
5	System development and demonstration	14,346	14,140	14,697	-1.4	3.9
	Defense Agencies	882	776	694	-12.0	-10.6
	Department of the Air Force	3,185	3,851	4,967	20.9	29.0
	Department of the Army	3,969	3,239	3,287	-18.4	1.5
	Department of the Navy	6,310	6,274	5,749	-0.6	-8.4
6	RDT&E management support	5,661	4,584	4,268	-19.0	-6.9
	Defense Agencies	1,492	1,110	888	-25.6	-20.0
	Department of the Air Force	1,396	1,350	1,190	-3.3	-11.9
	Department of the Army	1,400	1,097	1,154	-21.6	5.2
	Department of the Navy	1,180	839	850	-28.9	1.4
	Operational test and evaluation	192	188	185	-2.1	-1.5
7	Operational system development	30,441	28,388	26,394	-6.7	-7.0
	Defense Agencies	5,491	5,257	4,780	-4.3	-9.1
	Department of the Air Force	19,116	17,659	15,921	-7.6	-9.8
	Department of the Army	1,442	1,344	1,669	-6.8	24.2
	Department of the Navy	4,392	4,128	4,024	-6.0	-2.5
	Adjustment for RDT&E budget authority ^b	553	-935	1	na	na

na = not applicable.

DOD = Department of Defense; RDT&E = research, development, test, and evaluation.

^a RDT&E budget activity codes are broad categories reflecting different types of RDT&E efforts, as specified in DOD Financial Management Regulation.

^b Detailed budget information on DOD RDT&E activities is available only in total obligational authority (TOA), which is sum of new budget authority, unobligated budget authority from previous years, and other authorized credits. Adjustment converts TOA to budget authority by subtracting unobligated budget from authority from previous years and other authorized credits from TOA.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

SOURCES: Agencies' submissions to Office of Management and Budget (OMB) per MAX Schedule C, agencies' budget justification documents, supplemental data obtained from agencies' budget offices, and OMB, *Budget of the U.S. Government, Fiscal Year 2013* (Washington, DC: U.S. Government Printing Office, 2012).

TABLE 7. Federal budget authority for International affairs (150) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	196	196	196	0.0	0.0
Agency for International Development (151)	120	120	120	0.0	0.0
Department of State (151)	75	75	75	0.0	0.0
International Security Assistance (152)	1	1	1	0.0	0.0
R&D	196	196	196	0.0	0.0
Agency for International Development (151)	120	120	120	0.0	0.0
Department of State (151)	75	75	75	0.0	0.0
International Security Assistance (152)	1	1	1	0.0	0.0

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 8. Federal budget authority for General science and basic research (251) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	10,581	10,610	10,440	0.3	-1.6
Department of Energy					
Office of Science	4,461	4,463	4,568	0.0	2.4
Department of Homeland Security ^a	626	533	na	-14.9	-
National Science Foundation ^b	5,494	5,614	5,872	2.2	4.6
Arctic Research Commission	2	1	1	-8.2	-4.1
Biological Sciences	712	712	734	0.0	3.0
Computer and Information Science and Engineering	636	654	710	2.8	8.6
Education and Human Resources	861	829	876	-3.7	5.6
Engineering	763	826	876	8.2	6.1
Geosciences	885	885	906	0.0	2.4
Integrative Activities	260	350	432	34.7	23.4
International Science and Engineering	49	50	51	1.7	2.9
Major Research Equipment and Facilities	125	197	196	57.2	-0.5
Mathematical and Physical Sciences	1,312	1,309	1,345	-0.3	2.8
Office of Cyberinfrastructure	301	212	218	-29.6	3.1
Social, Behavioral, and Economic Sciences	247	254	260	2.8	2.1
U.S. Polar Research Programs	441	436	450	-1.1	3.2
Budget authority adjustment ^c	-1,101	-1,101	-1,183	na	na
R&D	9,483	9,372	9,433	-1.2	0.7
Department of Energy					
Office of Science	3,899	3,839	4,010	-1.5	4.5
Department of Homeland Security ^a	486	356	na	-26.7	-
National Science Foundation ^d	5,098	5,177	5,423	1.6	4.8
Arctic Research Commission	2	1	1	-8.2	-4.1
Biological Sciences	712	712	734	0.0	3.0
Computer and Information Science and Engineering	636	654	710	2.8	8.6
Education and Human Resources	861	829	876	-3.7	5.6
Engineering	763	826	876	8.2	6.1
Geosciences	885	885	906	0.0	2.4
Integrative Activities	260	350	432	34.7	23.4
International Science and Engineering	49	50	51	1.7	2.9
Mathematical and Physical Sciences	1,312	1,309	1,345	-0.3	2.8
Office of Cyberinfrastructure	301	212	218	-29.6	3.1
Social, Behavioral, and Economic Sciences	247	254	260	2.8	2.1
U.S. Polar Research Programs	441	436	450	-1.1	3.2
Budget authority adjustment ^e	-1,372	-1,341	-1,436	na	na

na = not applicable.

^a Office of Management and Budget (OMB) reclassified Department of Homeland Security Science and Technology Directorate as subfunction 751 (Justice) beginning in FY 2013.

^b Total National Science Foundation (NSF) budget shown here includes only R&D and R&D plant; however, subaccount budgets (Arctic Research Commission, Biological Sciences, etc.) include some non-R&D and non-R&D plant funding.

^c Budget authority adjustment subtracts non-R&D and non-R&D plant spending (such as support and overhead) from subaccount budgets.

^d Total NSF budget shown here includes funding for only R&D; however, subaccount budgets (Arctic Research Commission, Biological Sciences, etc.) include some non-R&D funding.

^e Budget authority adjustment subtracts non-R&D spending (such as support, overhead, and R&D plant) from subaccount budgets.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data. Not all federally sponsored basic research is categorized in subfunction 251.

SOURCES: Agencies' submissions to OMB per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 9. Federal budget authority for Space flight, research, and supporting activities (252) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	8,658	8,924	9,134	3.1	2.4
National Aeronautics and Space Administration					
Cross-agency support	172	na	na	-	-
Innovative partnerships	172	na	na	-	-
Exploration	2,844	3,421	3,421	20.3	0.0
Advanced capabilities	286	na	na	-	-
Constellation systems	2,559	na	na	-	-
Exploration research and development	na	258	309	-	19.9
Human exploration capabilities	na	3,163	3,112	-	-1.6
Science	3,401	3,284	3,403	-3.4	3.6
Astrophysics	753	305	310	-59.5	1.7
Earth science	1,184	1,200	1,238	1.3	3.1
Heliophysics	420	387	374	-7.9	-3.4
James Webb Space Telescope ^a	na	519	628	-	21.0
Planetary science	1,044	873	854	-16.3	-2.2
Space operations	1,980	1,703	1,723	-14.0	1.2
International space station	1,980	1,703	1,723	-14.0	1.2
Space technology	152	386	484	153.3	25.4
Construction, environmental compliance, and remediation	108	130	103	20.4	-20.8
R&D	8,398	8,642	8,884	2.9	2.8
National Aeronautics and Space Administration					
Cross-agency support	172	na	na	-	-
Innovative partnerships	172	na	na	-	-
Exploration	2,844	3,421	3,421	20.3	0.0
Advanced capabilities	286	na	na	-	-
Constellation systems	2,559	na	na	-	-
Exploration research and development	na	258	309	-	19.9
Human exploration capabilities	na	3,163	3,112	-	-1.6
Science	3,401	3,284	3,403	-3.4	3.6
Astrophysics	753	305	310	-59.5	1.7
Earth science	1,184	1,200	1,238	1.3	3.1
Heliophysics	420	387	374	-7.9	-3.4
James Webb Space Telescope ^a	na	519	628	-	21.0
Planetary science	1,044	873	854	-16.3	-2.2
Space operations	1,828	1,551	1,576	-15.2	1.6
International space station	1,828	1,551	1,576	-15.2	1.6
Space technology	152	386	484	153.3	25.4
Construction, environmental compliance, and remediation	0	0	0	-	-

na = not applicable.

^a National Aeronautics and Space Administration separated funding for the James Webb Space Telescope from astrophysics in FY 2012.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 10. Federal budget authority for Energy (270) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	2,265	2,398	2,734	5.9	14.0
Department of Energy (271)	2,118	2,260	2,628	6.7	16.3
Energy programs	1,952	2,013	2,303	3.1	14.4
Energy efficiency and renewable energy	875	1,041	1,411	19.0	35.5
Electricity delivery and energy reliability	103	108	100	4.9	-7.4
Fossil energy	400	329	326	-6.8	-12.9
Nuclear energy	574	535	466	-	-
ARPA-E	166	247	325	48.8	31.6
Nuclear Regulatory Commission (276)	99	83	91	-16.2	9.6
Tennessee Valley Authority (271)	18	15	15	-16.7	0.0
U.S. Department of Agriculture (271)					
National Institute of Food and Agriculture-Biomass R&D ^a	30	40	na	33.3	-
R&D	2,233	2,367	2,702	6.0	14.2
Department of Energy (271)	2,086	2,229	2,596	6.9	16.5
Energy programs	1,920	1,982	2,271	3.2	14.6
Energy efficiency and renewable energy	863	1,027	1,396	19.0	35.9
Electricity delivery and energy reliability	103	108	100	4.9	-7.4
Fossil energy	380	312	309	-17.9	-1.0
Nuclear energy	574	535	466	-6.8	-12.9
ARPA-E	166	247	325	48.8	31.6
Nuclear Regulatory Commission (276)	99	83	91	-16.2	9.6
Tennessee Valley Authority (271)	18	15	15	-16.7	0.0
U.S. Department of Agriculture (271)					
National Institute of Food and Agriculture-Biomass R&D ^a	30	40	na	33.3	-

na = not applicable.

ARPA-E = Advanced Research Projects Agency-Energy.

^a Biomass R&D program is mandatory spending authorized in Farm Bill. Its last authorized year is FY 2012, and it is up for reauthorization in 2012 Farm Bill.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 11. Federal budget authority for Natural resources and environment (300) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	2,314	2,291	2,431	-1.0	6.1
Conservation and land management (302)	408	412	422	1.0	2.4
Department of the Interior ^a	75	78	92	4.0	17.9
U.S. Department of Agriculture	333	334	330	0.3	-1.2
Forest Service	346	334	330	-3.5	-1.2
Natural Resources Conservation Service ^b	-13	na	na	-	-
Pollution control and abatement (304)	584	570	578	-2.4	1.4
Environmental Protection Agency	582	568	576	-2.4	1.4
Leaking underground storage tanks	*	*	1	0.0	23.8
Oil spill response research	1	1	1	-12.0	-5.8
Science and technology	554	544	551	-1.9	1.4
Superfund	27	23	23	-14.3	0.9
U.S. Coast Guard (DHS)	2	2	2	0.0	0.0
Recreational resources (303)	27	31	31	14.8	0.0
National Park Service (DOI)	27	31	31	14.8	0.0
Water resources (301)	26	23	24	-11.5	4.3
Army Corps of Engineers (DOD)	11	11	11	0.0	0.0
Bureau of Reclamation (DOI)	15	12	13	-20.0	8.3
Other natural resources (306)	1,269	1,255	1,376	-1.1	9.6
National Oceanic and Atmospheric Administration (DOC)	629	580	650	-7.9	12.1
National Environmental Satellite, Data, and Information Service	29	27	35	-7.3	32.7
National Marine Fisheries Service	55	52	60	-6.1	14.8
National Ocean Service	72	63	79	-11.3	24.5
National Weather Service	22	20	22	-5.4	6.3
Office of Oceanic and Atmospheric Research	390	348	379	-10.7	8.8
Office of Marine and Aviation Operations	62	69	75	11.5	8.8
U.S. Geological Survey (DOI) ^c	640	675	727	5.5	7.6
Administration and enterprise information	1	1	0	-11.4	-47.9
Climate and land use change	108	105	116	-2.4	10.0
Core science systems	51	80	93	58.8	16.2
Ecosystems	161	161	178	0.3	10.3
Energy, minerals, and environmental health	99	96	97	-3.2	0.9
Facilities	na	na	na	-	-
National land imaging	na	na	na	-	-
Natural hazards	110	109	120	-1.0	10.7
Water resources	111	123	122	11.0	-0.9
R&D	2,171	2,137	2,272	-1.6	6.3
Conservation and land management (302)	407	399	410	-2.0	2.8
Department of the Interior ^a	73	75	89	2.7	18.7
U.S. Department of Agriculture	334	324	321	-3.0	-0.9
Forest Service	334	324	321	-3.0	-0.9
Natural Resources Conservation Service	0	na	na	-	-
Pollution control and abatement (304)	579	565	573	-2.5	1.4
Environmental Protection Agency	577	563	571	-2.5	1.4
Leaking underground storage tanks	*	*	1	0.0	23.8
Oil spill response research	1	1	1	-12.0	-5.8
Science and technology	549	539	547	-1.9	1.4
Superfund	27	23	23	-14.6	0.9
U.S. Coast Guard (DHS)	2	2	2	0.0	0.0
Recreational resources (303)	27	31	31	14.8	0.0
National Park Service (DOI)	27	31	31	14.8	0.0

TABLE 11. Federal budget authority for Natural resources and environment (300) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
Water resources (301)	26	23	24	-11.5	4.3
Army Corps of Engineers (DOD)	11	11	11	0.0	0.0
Bureau of Reclamation (DOI)	15	12	13	-20.0	8.3
Other natural resources (306)	1,132	1,119	1,234	-1.2	10.3
National Oceanic and Atmospheric Administration (DOC)	492	443	508	-9.9	14.5
National Environmental Satellite, Data, and Information Service	29	27	35	-7.3	32.7
National Marine Fisheries Service	55	52	60	-6.1	14.8
National Ocean Service	72	63	79	-11.3	24.5
National Weather Service	22	19	21	-10.0	6.6
Office of Oceanic and Atmospheric Research	315	282	313	-10.5	10.9
Office of Marine and Aviation Operations	0	0	0	-	-
U.S. Geological Survey (DOI) ^c	640	675	727	5.5	7.6
Administration and enterprise information	1	1	0	-11.4	-47.9
Climate and land use change	108	105	116	-2.4	10.0
Core science systems	51	80	93	58.8	16.2
Ecosystems	161	161	178	0.3	10.3
Energy, minerals, and environmental health	99	96	97	-3.2	0.9
Facilities	na	na	na	-	-
National land imaging	na	na	na	-	-
Natural hazards	110	109	120	-1.0	10.7
Water resources	111	123	122	11.0	-0.9

* = less than \$0.5 million; na = not applicable.

DHS = Department of Homeland Security; DOC = Department of Commerce; DOD = Department of Defense; DOI = Department of the Interior.

^a Includes Bureau of Land Management, Office of Surface Mining and Reclamation, Fish and Wildlife Service, Bureau of Ocean Energy Management, and Bureau of Safety and Environmental Enforcement.

^b Figure for Natural Resources Conservation Service in FY 2011 reflects rescission to R&D plant funding.

^c U.S. Geological Survey reorganized its divisions for FY 2012.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 12. Federal budget authority for Agriculture (350) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	1,768	1,957	1,961	10.7	0.2
Agricultural research and services (352)					
Department of Agriculture	1,768	1,957	1,961	10.7	0.2
Agricultural Marketing Service	1	1	1	0.0	0.0
Agricultural Research Service ^a	934	1,126	1,131	20.6	0.4
Animal and Plant Health Inspection Service	29	28	28	-3.4	0.0
Economic Research Service	82	78	78	-4.9	0.0
Federal Grain Inspection Service	6	6	6	0.0	0.0
Foreign Agricultural Service	1	1	1	0.0	0.0
National Agricultural Statistics Service	7	7	7	0.0	0.0
National Institute of Food and Agriculture	708	710	709	0.3	-0.1
R&D	1,916	1,875	1,878	-2.1	0.2
Agricultural research and services (352)					
Department of Agriculture	1,916	1,875	1,878	-2.1	0.2
Agricultural Marketing Service	1	1	1	0.0	0.0
Agricultural Research Service	1,082	1,044	1,048	-3.5	0.4
Animal and Plant Health Inspection Service	29	28	28	-3.4	0.0
Economic Research Service	82	78	78	-4.9	0.0
Federal Grain Inspection Service	6	6	6	0.0	0.0
Foreign Agricultural Service	1	1	1	0.0	0.0
National Agricultural Statistics Service	7	7	7	0.0	0.0
National Institute of Food and Agriculture	708	710	709	0.3	-0.1

^a Agricultural Research Service received \$82 million for R&D plant in FY 2011, but this was offset by \$230 million of rescissions for prior-year R&D plant funding.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 13. Federal budget authority for Commerce and housing credit (370) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	651	739	2,082	13.5	181.8
Other advancement of commerce (376)					
Department of Commerce	644	735	2,082	14.2	183.3
Bureau of the Census	48	123	132	156.3	7.3
National Institute of Standards and Technology	532	555	1,885	4.2	239.7
Construction of research facilities	70	55	60	-20.7	8.3
Industrial technology services	30	0	21	-100.0	-
Scientific and technical research and services	432	499	574	15.5	14.9
National manufacturing network ^a	na	na	930	-	-
Wireless innovation fund ^a	na	na	300	-	-
National Oceanic and Atmospheric Administration	55	52	60	-6.1	14.8
National Marine Fisheries Service	55	52	60	-6.1	14.8
National Telecommunications and Information Administration	8	5	5	-37.5	0.0
Telecommunications Development Fund	7	4	na	-42.9	-
R&D	548	654	1,583	19.3	142.1
Other advancement of commerce (376)					
Department of Commerce	548	654	1,583	19.3	142.1
Bureau of the Census	48	123	132	156.3	7.3
National Institute of Standards and Technology	437	474	1,387	8.5	192.5
Construction of research facilities	0	0	0	-	-
Industrial technology services	30	0	21	-100.0	-
Scientific and technical research and services	407	474	549	16.5	15.7
National manufacturing network ^a	na	na	517	-	-
Wireless innovation fund ^a	na	na	300	-	-
National Oceanic and Atmospheric Administration	55	52	60	-6.1	14.8
National Marine Fisheries Service	55	52	60	-6.1	14.8
National Telecommunications and Information Administration	8	5	5	-37.5	0.0
Telecommunications Development Fund	0	0	na	-	-

na = not applicable.

^a Reflects proposed legislation for one-time funding of mandatory programs in FY 2013.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

SOURCES: Agencies' submission to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget office.

TABLE 14. Federal budget authority for Transportation (400) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	1,420	1,446	1,593	1.8	10.2
Air transportation (402)	777	840	821	8.0	-2.3
Federal Aviation Administration (DOT)	335	367	354	9.4	-3.6
National Aeronautics and Space Administration					
Aeronautics research	442	473	467	7.0	-1.3
Ground transportation (401) (DOT)	593	553	720	-6.7	30.1
Federal Highway Administration	448	411	528	-8.1	28.4
Federal Motor Carrier Safety Administration	6	7	7	6.4	3.3
Federal Railroad Administration	40	40	40	0.4	1.4
Federal Transit Administration	29	27	34	-6.8	27.7
National Highway Traffic Safety Administration	71	69	110	-2.8	60.1
Water transportation (403)	24	28	20	16.7	-28.6
U.S. Coast Guard (DHS)	24	28	20	16.7	-28.6
Other transportation (407) (DOT) ^a	26	25	32	-3.8	30.8
R&D	1,395	1,421	1,569	1.8	10.4
Air transportation (402)	756	817	800	8.1	-2.1
Federal Aviation Administration (DOT)	314	344	333	9.7	-3.3
National Aeronautics and Space Administration					
Aeronautics research	442	473	467	7.0	-1.3
Ground transportation (401) (DOT)	590	551	717	-6.6	30.0
Federal Highway Administration	448	411	528	-8.1	28.4
Federal Motor Carrier Safety Administration	6	7	7	6.4	3.3
Federal Railroad Administration	37	38	38	3.2	-0.5
Federal Transit Administration	29	27	34	-6.8	27.7
National Highway Traffic Safety Administration	71	69	110	-2.8	60.1
Water transportation (403)	24	28	20	16.7	-28.6
U.S. Coast Guard (DHS)	24	28	20	16.7	-28.6
Other transportation (407) (DOT) ^a	26	25	32	-3.8	28.0

DHS = Department of Homeland Security; DOT = Department of Transportation.

^a Includes Office of the Secretary, Pipeline and Hazardous Materials Safety Administration, and Research and Innovative Technology Administration.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 15. Federal budget authority for Community and regional development (450) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	83	57	104	-31.3	82.5
Department of Housing and Urban Development (451)	79	57	98	-27.8	71.9
Department of Agriculture (452)	4	0	6	-100.0	-
Rural Business-Cooperative Service	4	0	6	-100.0	-
R&D	83	57	104	-31.3	82.5
Department of Housing and Urban Development (451)	79	57	98	-27.8	71.9
Department of Agriculture (452)	4	0	6	-100.0	-
Rural Business-Cooperative Service	4	0	6	-100.0	-

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

SOURCES: Agencies' submission to Office of Management and Budget per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget office.

TABLE 16. Federal budget authority for Education, training, employment, and social services (500) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	636	650	656	2.2	0.9
Research and general education aids (501, 502, 503)	546	560	566	2.6	1.1
Department of Education programs	287	317	323	10.5	1.9
Smithsonian Institution programs	259	243	243	-6.2	0.0
Social services (506)	90	90	90	0.0	0.0
Administration for children and families (HHS)	15	15	15	0.0	0.0
Rehabilitation services (ED)	75	75	75	0.0	0.0
R&D	578	609	620	5.4	1.8
Research and general education aids (501, 502, 503)	488	519	530	6.4	2.1
Department of Education programs	287	317	323	10.5	1.9
Smithsonian Institution programs	201	202	207	0.5	2.5
Social services (506)	90	90	90	0.0	0.0
Administration for children and families (HHS)	15	15	15	0.0	0.0
Rehabilitation services (ED)	75	75	75	0.0	0.0

ED = Department of Education; HHS = Department of Health and Human Services.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 17. Federal budget authority for Health (550) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	30,990	31,188	31,480	0.6	0.9
Consumer and occupational health and safety (554)	260	271	272	4.2	0.4
Consumer Product Safety Commission	2	2	2	0.0	0.0
Food and Drug Administration (HHS)	254	265	266	4.3	0.4
Occupational Safety and Health Administration (DOL)	4	4	4	0.0	0.0
Health care services and health research and training (551, 552)	30,730	30,917	31,208	0.6	0.9
Department of Health and Human Services	30,690	30,797	30,896	0.3	0.3
Agency for Healthcare Research and Quality	398	398	363	0.0	-8.8
Centers for Disease Control and Prevention	457	319	319	-30.2	0.0
Departmental management (other)	10	39	168	290.0	330.8
Health Resources and Services Administration	12	12	12	0.0	0.0
National Institutes of Health	29,813	30,029	30,034	0.7	0.0
Patient-Centered Outcomes Research Trust Fund ^a	40	120	312	200.0	160.0
R&D	30,903	31,024	31,317	0.4	0.9
Consumer and occupational health and safety (554)	231	241	242	4.3	0.4
Consumer Product Safety Commission	2	2	2	0.0	0.0
Food and Drug Administration (HHS)	225	235	236	4.4	0.4
Occupational Safety and Health Administration (DOL)	4	4	4	0.0	0.0
Health care services and health research and training (551, 552)	30,672	30,783	31,075	0.4	0.9
Department of Health and Human Services	30,632	30,663	30,763	0.1	0.3
Agency for Healthcare Research and Quality	398	398	363	0.0	-8.8
Centers for Disease Control and Prevention	457	319	319	-30.2	0.0
Departmental management (other)	10	39	168	290.0	330.8
Health Resources and Services Administration	12	12	12	0.0	0.0
National Institutes of Health	29,755	29,895	29,901	0.5	0.0
Patient-Centered Outcomes Research Trust Fund ^a	40	120	312	200.0	160.0

DOL = Department of Labor; HHS = Department of Health and Human Services.

^a Established by Patient Protection and Affordable Care Act (P.L. 111-148) to prioritize and fund comparative effectiveness research. Funds are managed by private, nonprofit Patient-Centered Outcomes Research Institute.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 18. National Institutes of Health, federal budget authority for R&D and R&D plant: FY 2011–13
(Millions of dollars)

Organization/program (by FY 2011 rank order)	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	29,813	30,029	30,034	0.7	0.0
National Cancer Institute	4,988	4,999	4,999	0.2	0.0
National Institute of Allergy and Infectious Diseases	4,421	4,433	4,438	0.3	0.1
National Heart, Lung, and Blood Institute	2,968	2,978	2,976	0.3	-0.1
National Institute of Diabetes and Digestive and Kidney Diseases	1,881	1,886	1,880	0.2	-0.3
National Institute of General Medical Sciences	1,829	2,223	2,177	21.5	-2.1
National Institute of Neurological Disorders and Stroke	1,589	1,592	1,591	0.2	-0.1
National Institute of Mental Health	1,432	1,435	1,434	0.2	0.0
National Institute of Child Health and Human Development	1,280	1,283	1,283	0.2	0.0
National Center for Research Resources ^a	1,251	na	na	-	-
National Center for Advancing Translation Sciences ^a	na	560	624	-	11.4
Office of the Director	1,155	1,441	1,411	24.7	-2.0
National Institute on Aging	1,075	1,077	1,077	0.3	0.0
National Institute on Drug Abuse	1,025	1,028	1,029	0.2	0.1
National Institute of Environmental Health Sciences ^b	743	744	743	0.2	-0.2
National Eye Institute	691	691	683	0.1	-1.2
National Institute of Arthritis and Musculoskeletal and Skin Diseases	518	519	519	0.2	0.0
National Human Genome Research Institute	502	503	502	0.3	-0.3
National Institute on Alcohol Abuse and Alcoholism	446	447	444	0.2	-0.5
National Institute on Deafness and Other Communication Disorders	401	402	403	0.2	0.3
National Institute of Dental and Craniofacial Research	393	394	391	0.2	-0.6
National Library of Medicine	337	338	373	0.2	10.4
National Institute of Biomedical Imaging and Bioengineering	302	326	324	7.8	-0.4
National Center for Minority Health and Health Disparities	210	276	279	31.8	1.1
National Institute of Nursing Research	134	134	134	0.3	-0.5
National Center for Complementary and Alternative Medicine	125	125	125	0.2	-0.1
John E. Fogarty International Center	69	70	70	0.2	0.2
Buildings and facilities	50	125	125	151.1	0.0
R&D	29,755	29,895	29,901	0.5	0.0
National Cancer Institute	4,980	4,991	4,991	0.2	0.0
National Institute of Allergy and Infectious Diseases	4,421	4,433	4,438	0.3	0.1
National Heart, Lung, and Blood Institute	2,968	2,978	2,976	0.3	-0.1
National Institute of Diabetes and Digestive and Kidney Diseases	1,881	1,886	1,880	0.2	-0.3
National Institute of General Medical Sciences	1,829	2,223	2,177	21.5	-2.1
National Institute of Neurological Disorders and Stroke	1,589	1,592	1,591	0.2	-0.1
National Institute of Mental Health	1,432	1,435	1,434	0.2	0.0
National Institute of Child Health and Human Development	1,280	1,283	1,283	0.2	0.0
National Center for Research Resources ^a	1,251	na	na	-	-
National Center for Advancing Translation Sciences ^a	na	560	624	-	11.4
Office of the Director	1,155	1,441	1,411	24.7	-2.0
National Institute on Aging	1,075	1,077	1,077	0.3	0.0
National Institute on Drug Abuse	1,025	1,028	1,029	0.2	0.1
National Institute of Environmental Health Sciences ^b	743	744	743	0.2	-0.2
National Eye Institute	691	691	683	0.1	-1.2
National Institute of Arthritis and Musculoskeletal and Skin Diseases	518	519	519	0.2	0.0
National Human Genome Research Institute	502	503	502	0.3	-0.3
National Institute on Alcohol Abuse and Alcoholism	446	447	444	0.2	-0.5
National Institute on Deafness and Other Communication Disorders	401	402	403	0.2	0.3
National Institute of Dental and Craniofacial Research	393	394	391	0.2	-0.6
National Library of Medicine	337	338	373	0.2	10.4
National Institute of Biomedical Imaging and Bioengineering	302	326	324	7.8	-0.4
National Center for Minority Health and Health Disparities	210	276	279	31.8	1.1

TABLE 18. National Institutes of Health, federal budget authority for R&D and R&D plant: FY 2011–13
(Millions of dollars)

Organization/program (by FY 2011 rank order)	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
National Institute of Nursing Research	134	134	134	0.3	-0.5
National Center for Complementary and Alternative Medicine	125	125	125	0.2	-0.1
John E. Fogarty International Center	69	70	70	0.2	0.2

na = not applicable.

^a National Center for Advancing Translational Sciences was established by FY 2012 appropriations legislation, replacing National Center for Research Resources.

^b Includes funding from Superfund-related transfers and appropriations.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data. Institute totals exclude non-R&D components of institute budgets.

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

TABLE 19. Federal budget authority for Medicare (570) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	180	23	30	-87.2	30.4
Department of Health and Human Services (571)					
Centers for Medicare and Medicaid Services	180	23	30	-87.2	30.4
R&D	180	23	30	-87.2	30.4
Department of Health and Human Services (571)					
Centers for Medicare and Medicaid Services	180	23	30	-87.2	30.4

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 20. Federal budget authority for Income security (600) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	68	34	74	-50.0	117.6
Department of Health and Human Services (609)					
Administration for Children and Families	26	26	26	0.0	0.0
Social Security Administration (609)	42	8	48	-81.0	500.0
R&D	68	34	74	-50.0	117.6
Department of Health and Human Services (609)					
Administration for Children and Families	26	26	26	0.0	0.0
Social Security Administration (609)	42	8	48	-81.0	500.0

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

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

TABLE 21. Federal budget authority for Veterans benefits and services (700) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	1,160	1,164	1,166	0.3	0.2
Department of Veterans Affairs					
Medical and Prosthetic Research (703)	580	581	583	0.2	0.3
Medical Services (703)	580	583	583	0.5	0.0
R&D	1,160	1,164	1,166	0.3	0.2
Department of Veterans Affairs					
Medical and Prosthetic Research (703)	580	581	583	0.2	0.3
Medical Services (703)	580	583	583	0.5	0.0

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data. Includes administration and operating expenses related to Department of Veterans Affairs research.

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

TABLE 22. Federal budget authority for Administration of justice (750) R&D and R&D plant: FY 2011–13
(Millions of dollars)

Budget function and agency	2011 actual	2012 preliminary	2013 proposed	2011–12 (% change)	2012–13 (% change)
R&D and R&D plant	184	113	858	-38.6	659.3
Department of Homeland Security (751) ^a	108	54	791	-50.0	1,364.8
Department of Justice	76	59	67	-22.4	13.6
Federal Prison System (753)	11	11	11	0.0	0.0
Office of Justice Programs (754)	65	48	56	-26.2	16.7
R&D	172	99	717	-42.4	624.2
Department of Homeland Security (751) ^a	96	40	650	-58.3	1,525.0
Department of Justice	76	59	67	-22.4	13.6
Federal Prison System (753)	11	11	11	0.0	0.0
Office of Justice Programs (754)	65	48	56	-26.2	16.7

^a Office of Management and Budget (OMB) reclassified Department of Homeland Security (DHS) Science and Technology Directorate as subfunction 751 (Justice) beginning in FY 2013. In prior years, this DHS R&D was classified as subfunction 251 (General science and basic research), and subfunction 751 included only R&D in Domestic Nuclear Detection Office and Customs and Border Patrol.

NOTES: Detail may not add to total because of rounding. Percentage change calculated on unrounded data.

SOURCES: Agencies' submissions to OMB per MAX Schedule C, agencies' budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 23. Federal funding for R&D and basic research, by budget function: FY 1955–2013
(Millions of dollars)

Fiscal year	Budget functions	National defense (050)	International affairs (150)	General science and basic research (251)	Space flight, research, and supporting activities (252)	Energy (270)	Natural resources and environment (300)	Agriculture (350)	Commerce and housing credit (370)	Transportation (400)	Community and regional development (450)	Education, training, employment, and social services (500)	Health (550)	Medicare (570)	Income security (600)	Veterans benefits and services (700)	Administration of justice (750)	General government (800)	Other ^a
All R&D ^b																			
1955	2,533	2,151	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	67	na	NA	NA	NA	NA	315
1956	2,988	2,535	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	83	na	NA	NA	NA	NA	370
1957	3,932	3,327	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	140	na	NA	NA	NA	NA	465
1958	4,570	3,801	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	177	na	NA	NA	NA	NA	592
1959	6,694	5,556	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	233	na	NA	NA	NA	NA	904
1960	7,552	6,107	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	305	na	NA	NA	NA	NA	1,140
1961	9,059	7,005	NA	137	777	373	73	125	NA	55	NA	NA	405	na	NA	NA	NA	NA	108
1962	10,290	7,238	NA	187	1,413	448	108	136	NA	101	NA	NA	551	na	NA	NA	NA	NA	107
1963	12,495	7,764	NA	246	2,812	515	120	146	NA	142	NA	NA	626	na	NA	NA	NA	NA	125
1964	14,225	7,829	NA	277	4,241	571	134	165	NA	122	NA	NA	728	na	NA	NA	NA	NA	160
1965	14,614	7,342	NA	304	4,887	585	159	195	NA	147	NA	NA	792	na	NA	NA	NA	NA	203
1966	15,320	7,536	NA	377	4,976	575	189	201	NA	251	NA	NA	900	na	NA	NA	NA	NA	315
1967	16,529	8,566	18	409	4,778	600	320	218	43	380	37	154	915	na	48	41	*	3	na
1968	15,921	8,275	17	437	4,304	657	331	217	48	304	44	166	1,021	na	50	45	1	5	na
1969	15,641	8,356	26	433	3,799	597	323	221	54	404	32	169	1,088	na	78	50	5	5	na
1970	15,339	7,981	32	452	3,606	574	340	238	79	535	47	164	1,084	na	136	59	9	6	na
1971	15,543	8,110	32	513	3,048	556	416	259	90	728	65	215	1,288	na	145	63	10	7	na
1972	16,496	8,902	29	625	2,932	574	479	294	50	558	66	235	1,547	na	106	69	23	8	na
1973	16,800	9,002	28	658	2,824	630	554	308	50	572	78	290	1,585	na	106	74	33	7	na
1974	17,410	9,016	24	749	2,702	759	516	313	51	693	82	236	2,069	na	71	85	35	9	na
1975	19,039	9,679	29	813	2,764	1,363	624	342	65	635	93	239	2,170	na	72	95	44	12	na
1976	20,780	10,430	42	858	3,130	1,649	683	383	69	631	109	255	2,351	na	48	98	35	12	na
1977	23,450	11,864	66	974	2,832	2,562	753	457	71	708	101	230	2,629	na	55	107	30	13	na
1978	25,976	12,899	57	1,050	2,939	3,134	904	501	77	768	92	345	2,968	na	67	111	44	20	na
1979	28,208	13,791	117	1,119	3,136	3,461	1,010	552	93	798	127	354	3,401	na	57	123	47	23	na
1980	29,739	14,946	125	1,233	2,738	3,603	999	585	101	887	119	468	3,694	na	47	126	45	22	na
1981	33,735	18,413	160	1,340	3,111	3,501	1,061	659	106	869	104	298	3,871	na	43	143	34	22	na
1982	36,115	22,070	165	1,359	2,584	3,012	965	693	104	791	63	228	3,869	na	32	139	31	10	na
1983	38,768	24,936	177	1,502	2,134	2,578	952	745	107	876	44	189	4,298	na	32	157	37	6	na
1984	44,214	29,287	192	1,676	2,300	2,581	963	762	110	1,040	46	200	4,779	na	26	218	24	8	na
1985	49,887	33,698	210	1,862	2,725	2,389	1,059	836	114	1,030	50	220	5,418	na	21	193	47	17	na

TABLE 23. Federal funding for R&D and basic research, by budget function: FY 1955–2013
(Millions of dollars)

Fiscal year	Budget functions	National defense (050)	International affairs (150)	General science and basic research (251)	Space flight, research, and supporting activities (252)	Energy (270)	Natural resources and environment (300)	Agriculture (350)	Commerce and housing credit (370)	Transportation (400)	Community and regional development (450)	Education, training, employment, and social services (500)	Health (550)	Medicare (570)	Income security (600)	Veterans benefits and services (700)	Administration of justice (750)	General government (800)	Other ^a
1986	53,249	36,926	211	1,873	2,894	2,286	1,062	815	111	917	88	248	5,565	na	14	183	41	14	na
1987	57,069	39,152	223	2,042	3,398	2,053	1,133	822	110	908	99	267	6,556	na	25	215	49	17	na
1988	59,106	40,099	224	2,160	3,683	2,126	1,160	882	122	896	108	285	7,076	na	23	195	51	17	na
1989	62,115	40,642	279	2,373	4,555	2,419	1,255	907	128	1,064	74	347	7,773	na	27	212	45	15	na
1990	63,781	39,925	375	2,410	5,765	2,726	1,386	950	140	1,045	67	374	8,308	na	33	216	44	17	na
1991	65,898	39,328	378	2,635	6,511	2,953	1,582	1,052	178	1,231	88	433	9,226	na	30	219	51	4	na
1992	68,398	40,083	371	2,659	6,744	3,099	1,688	1,155	192	1,523	127	365	10,055	na	37	245	51	4	na
1993	69,884	41,249	382	2,691	6,988	2,677	1,802	1,152	220	1,703	57	348	10,280	na	36	250	49	*	na
1994	68,331	37,764	254	2,712	7,414	2,873	2,062	1,193	380	1,888	68	373	10,993	na	45	265	46	0	na
1995	68,791	37,204	287	2,794	7,916	2,844	1,988	1,194	525	1,833	70	369	11,407	na	43	257	59	1	na
1996	69,049	37,801	252	2,846	7,844	2,521	1,802	1,176	432	1,795	50	331	11,867	na	16	259	56	2	na
1997	71,653	39,591	190	2,944	7,844	2,372	1,886	1,203	409	1,785	48	373	12,670	na	9	267	59	2	na
1998	73,569	39,823	163	4,360	8,198	948	1,855	1,249	398	1,833	42	444	13,576	na	18	587	72	2	na
1999	77,637	41,306	190	4,690	8,245	1,131	1,842	1,288	432	1,725	59	403	15,553	na	38	644	88	3	na
2000	78,664	42,580	200	4,977	5,363	996	1,999	1,426	406	1,636	46	418	17,869	na	25	645	73	6	na
2001	86,756	45,713	252	5,468	6,126	1,314	2,096	1,657	429	1,640	54	411	20,758	na	30	719	88	3	na
2002	97,624	53,016	279	5,753	6,270	1,327	2,160	1,606	467	1,838	50	411	23,560	na	37	756	91	3	na
2003	112,544	63,048	269	6,129	7,355	1,403	2,151	1,708	463	1,869	48	430	26,517	na	38	817	299	0	na
2004	121,867	69,593	264	6,466	7,612	1,343	2,168	1,750	454	1,863	47	459	28,251	na	47	866	684	0	na
2005	126,601	74,047	255	6,570	7,300	1,296	2,168	1,820	423	1,847	45	470	28,824	na	35	742	758	0	na
2006	131,624	78,037	255	6,691	8,204	1,195	2,120	1,869	390	1,711	55	495	28,797	na	27	769	1,008	0	na
2007	138,087	82,272	246	7,809	9,024	1,893	1,936	1,857	428	1,361	49	536	29,461	na	27	819	369	0	na
2008	140,113	84,713	255	8,234	8,323	1,896	2,106	1,864	450	1,394	50	497	29,063	na	27	886	355	0	na
2009 ^c	156,009	85,166	255	11,840	6,891	3,318	2,245	1,935	618	1,440	62	479	40,389	30	63	943	335	0	na
Non-ARRA	140,903	84,866	255	8,885	6,205	2,014	2,171	1,935	507	1,336	62	469	30,827	30	63	943	335	0	na
ARRA	15,106	300	0	2,955	686	1,304	74	0	111	104	0	10	9,562	0	0	0	0	0	na
2010	146,596	86,517	194	9,280	8,232	2,455	2,237	2,043	550	1,496	109	535	31,488	36	77	1,034	313	0	na
2011	144,379	83,226	196	10,581	8,658	2,265	2,314	1,768	651	1,420	83	636	30,990	180	68	1,160	184	0	na
2012 preliminary	140,568	78,778	196	10,610	8,924	2,398	2,291	1,957	739	1,446	57	650	31,188	23	34	1,164	113	0	na
2013 proposed	142,235	77,296	196	10,440	9,134	2,734	2,431	1,961	2,082	1,593	104	656	31,480	30	74	1,166	858	0	na

TABLE 23. Federal funding for R&D and basic research, by budget function: FY 1955–2013

(Millions of dollars)

Fiscal year	Budget functions	National defense (050)	International affairs (150)	General science and basic research (251)	Space flight, research, and supporting activities (252)	Energy (270)	Natural resources and environment (300)	Agriculture (350)	Commerce and housing credit (370)	Transportation (400)	Community and regional development (450)	Education, training, employment, and social services (500)	Health (550)	Medicare (570)	Income security (600)	Veterans benefits and services (700)	Administration of justice (750)	General government (800)	Other ^a
Basic research																			
1978	3,665	320	*	962	412	157	207	197	9	70	8	57	1,246	0	2	9	10	0	na
1979	4,108	365	0	1,026	440	172	131	222	10	75	8	59	1,579	0	1	10	10	*	na
1980	4,716	552	0	1,152	482	200	136	246	15	79	8	61	1,761	0	1	14	9	*	na
1981	5,107	610	12	1,256	445	220	131	281	17	89	5	66	1,951	0	3	15	5	3	na
1982	5,305	696	10	1,296	434	260	139	295	17	102	7	78	1,953	0	0	13	4	2	na
1983	6,247	788	10	1,439	501	320	156	326	19	117	6	70	2,475	0	0	14	4	3	na
1984	7,072	845	3	1,606	646	365	192	353	20	125	5	77	2,813	0	0	15	5	3	na
1985	7,810	856	4	1,779	498	428	206	406	23	255	6	86	3,243	0	0	15	4	4	na
1986	8,193	960	5	1,795	737	456	204	390	26	184	6	83	3,324	0	0	15	5	5	na
1987	9,021	900	3	1,942	843	511	206	397	26	231	4	78	3,851	0	0	17	8	4	na
1988	9,553	905	3	2,061	944	571	210	428	28	197	7	83	4,087	0	0	17	8	5	na
1989	10,648	965	3	2,265	1,099	703	331	433	29	287	3	92	4,413	0	0	16	7	3	na
1990	11,288	964	4	2,306	1,389	761	336	456	31	242	3	106	4,661	0	0	16	9	3	na
1991	12,405	1,188	6	2,526	1,479	878	389	486	39	246	10	115	5,021	0	0	16	6	0	na
1992	12,973	1,147	6	2,532	1,499	921	383	528	35	266	11	118	5,506	0	0	16	5	0	na
1993	13,440	1,323	8	2,553	1,588	917	376	553	34	238	10	121	5,700	0	0	16	5	0	na
1994	13,552	1,174	6	2,542	1,796	921	224	567	38	220	9	145	5,889	0	0	16	5	0	na
1995	13,772	1,181	0	2,622	1,614	930	187	565	35	389	3	153	6,068	0	0	16	9	0	na
1996	14,442	1,165	2	2,662	1,685	1,182	147	547	37	456	0	140	6,395	0	0	13	12	0	na
1997	14,961	1,090	2	2,753	1,653	1,288	153	548	34	420	0	142	6,852	0	0	14	13	0	na
1998	15,523	1,067	1	4,121	1,610	34	145	571	35	411	0	133	7,356	0	0	23	16	0	na
1999	17,433	1,110	0	4,464	1,667	36	142	602	41	358	0	99	8,634	0	0	263	18	0	na
2000	19,470	1,184	42	4,722	1,616	36	146	651	39	542	0	107	10,099	0	0	266	20	0	na
2001	21,376	1,303	50	5,187	1,695	40	215	749	50	17	0	112	11,642	0	0	289	27	0	na
2002	23,848	1,404	53	5,561	1,912	45	471	762	56	17	0	115	12,957	0	0	465	30	0	na
2003	25,323	1,409	18	5,907	2,206	40	185	824	53	23	1	125	14,162	0	0	327	42	0	na
2004	26,529	1,380	18	6,198	2,473	32	201	780	46	20	0	125	14,850	0	0	347	58	0	na
2005	27,678	1,508	18	6,238	2,486	31	195	789	53	65	0	130	15,826	0	0	297	42	0	na
2006	27,336	1,490	18	6,406	2,299	8	195	805	66	0	0	131	15,532	0	0	318	68	0	na
2007	28,166	1,533	18	6,887	2,318	7	260	821	92	2	0	149	15,637	0	0	335	106	0	na
2008	28,740	1,631	18	7,260	2,183	16	210	790	98	0	0	146	15,909	0	0	354	125	0	na

TABLE 23. Federal funding for R&D and basic research, by budget function: FY 1955–2013
(Millions of dollars)

Fiscal year	Budget functions	National defense (050)	International affairs (150)	General science and basic research (251)	Space flight, research, and supporting activities (252)	Energy (270)	Natural resources and environment (300)	Agriculture (350)	Commerce and housing credit (370)	Transportation (400)	Community and regional development (450)	Education, training, employment, and social services (500)	Health (550)	Medicare (570)	Income security (600)	Veterans benefits and services (700)	Administration of justice (750)	General government (800)	Other ^a
2009 ^c	36,400	1,772	18	10,727	932	28	219	799	152	0	0	155	21,108	0	0	375	115	0	na
Non-ARRA	28,161	1,769	18	7,913	900	28	219	799	112	0	0	145	15,767	0	0	375	115	0	na
ARRA	8,240	3	0	2,814	32	0	0	0	40	0	0	10	5,341	0	0	0	0	0	na
2010	29,614	1,849	0	8,578	1,109	57	223	881	131	0	0	174	16,125	0	0	413	74	0	na
2011	29,888	1,940	0	8,738	1,199	47	218	823	154	0	0	207	16,002	0	0	438	122	0	na
2012 preliminary	30,193	2,172	0	8,677	1,342	59	219	811	166	0	0	208	16,037	0	0	444	58	0	na
2013 proposed	30,738	2,185	0	8,975	1,379	18	227	883	193	0	0	213	15,999	0	0	446	219	0	na

* = less than \$500,000. na = not applicable. NA = not available; data were not collected for all budget functions in all years.

ARRA = American Recovery and Reinvestment Act of 2009.

^a Includes amounts for all functions for which data were not explicitly collected.

^b Data for 1955–77 are obligations; data for 1978–2013 are budget authority.

^c For total FY 2009, sum FY 2009 non-ARRA and FY 2009 ARRA funds.

NOTES: Detail may not add to total because of rounding. In FY 2009 National Aeronautics and Space Administration (NASA) adjusted its R&D reporting to more closely match survey data reported to National Science Foundation. In FY 2007 Department of Homeland Security (DHS) changed its R&D portfolio to reclassify funding in National defense and most Administration of justice as General science and basic research; in FY 2013 this was reclassified back as Administration of justice. In FY 2004 DHS changed its R&D portfolio to reclassify funding in General science and basic research and in Agriculture as Administration of justice. In FY 2000 NASA transferred funding for international space station program from R&D to R&D plant; change is reflected in budget authority for Space flight, research, and supporting activities. In FY 2000 National Institutes of Health in Department of Health and Human Services classified all of its previous development activities as basic research or applied research, with resulting increase in Health basic research. In FY 1998 many Department of Energy programs were reclassified from Energy to General science and basic research. In FY 1998 Department of Veterans Affairs began reporting medical care support funds as part of its total research budgetary resources; change is reflected in budget authority for Veteran benefits and services.

SOURCES: Data from 1955–94 are from agencies' submissions to Office of Management and Budget (OMB), Circular No. A-11, Exhibit 44A, "Research and Development Activities," and from supplemental data obtained from agencies' budget offices. Data from 1995–2013 are from agencies' submissions to OMB per MAX Schedule C, budget justification documents, and supplemental data obtained from agencies' budget offices.

TABLE 24. Federal funding for R&D for national defense and civilian functions: FY 1955–2013

Fiscal year	Total	National defense	Civilian functions	Total	National defense	Civilian functions
	Current \$millions			% distribution		
R&D obligations						
1955	2,533	2,151	382	100.0	84.9	15.1
1956	2,988	2,535	453	100.0	84.8	15.2
1957	3,932	3,327	605	100.0	84.6	15.4
1958	4,570	3,801	769	100.0	83.2	16.8
1959	6,694	5,556	1,138	100.0	83.0	17.0
1960	7,552	6,107	1,445	100.0	80.9	19.1
1961	9,059	7,005	2,054	100.0	77.3	22.7
1962	10,290	7,238	3,052	100.0	70.3	29.7
1963	12,495	7,764	4,731	100.0	62.1	37.9
1964	14,225	7,829	6,396	100.0	55.0	45.0
1965	14,614	7,342	7,272	100.0	50.2	49.8
1966	15,320	7,536	7,784	100.0	49.2	50.8
1967	16,529	8,566	7,963	100.0	51.8	48.2
1968	15,921	8,275	7,646	100.0	52.0	48.0
1969	15,641	8,356	7,285	100.0	53.4	46.6
1970	15,339	7,981	7,358	100.0	52.0	48.0
1971	15,543	8,110	7,433	100.0	52.2	47.8
1972	16,496	8,902	7,594	100.0	54.0	46.0
1973	16,800	9,002	7,798	100.0	53.6	46.4
1974	17,410	9,016	8,394	100.0	51.8	48.2
1975	19,039	9,679	9,360	100.0	50.8	49.2
1976	20,780	10,430	10,350	100.0	50.2	49.8
1977	23,450	11,864	11,586	100.0	50.6	49.4
R&D authority						
1978	25,976	12,899	13,077	100.0	49.7	50.3
1979	28,208	13,791	14,417	100.0	48.9	51.1
1980	29,739	14,946	14,793	100.0	50.3	49.7
1981	33,735	18,413	15,322	100.0	54.6	45.4
1982	36,115	22,070	14,045	100.0	61.1	38.9
1983	38,768	24,936	13,832	100.0	64.3	35.7
1984	44,214	29,287	14,927	100.0	66.2	33.8
1985	49,887	33,698	16,189	100.0	67.5	32.5
1986	53,249	36,926	16,323	100.0	69.3	30.7
1987	57,069	39,152	17,917	100.0	68.6	31.4
1988	59,106	40,099	19,007	100.0	67.8	32.2
1989	62,115	40,642	21,473	100.0	65.5	34.5
1990	63,781	39,925	23,856	100.0	62.6	37.4
1991	65,898	39,328	26,570	100.0	59.7	40.3
1992	68,398	40,083	28,315	100.0	58.6	41.4
1993	69,884	41,249	28,635	100.0	59.0	41.0
1994	68,331	37,764	30,566	100.0	55.3	44.7
1995	68,791	37,204	31,587	100.0	54.1	45.9
1996	69,049	37,801	31,248	100.0	54.7	45.3
1997	71,653	39,591	32,062	100.0	55.3	44.7
1998	73,569	39,823	33,746	100.0	54.1	45.9
1999	77,637	41,306	36,332	100.0	53.2	46.8
2000	78,664	42,580	36,084	100.0	54.1	45.9
2001	86,756	45,713	41,043	100.0	52.7	47.3
2002	97,624	53,016	44,608	100.0	54.3	45.7
2003	112,544	63,048	49,495	100.0	56.0	44.0
2004	121,867	69,593	52,274	100.0	57.1	42.9
2005	126,601	74,047	52,554	100.0	58.5	41.5
2006	131,624	78,037	53,586	100.0	59.3	40.7
2007	138,087	82,272	55,815	100.0	59.6	40.4

TABLE 24. Federal funding for R&D for national defense and civilian functions: FY 1955–2013

Fiscal year	Current \$millions			% distribution		
	Total	National defense	Civilian functions	Total	National defense	Civilian functions
2008	140,113	84,713	55,400	100.0	60.5	39.5
2009 ^a	156,009	85,166	70,843	100.0	54.6	45.4
Non-ARRA	140,903	84,866	56,037	100.0	60.2	39.8
ARRA	15,106	300	14,806	100.0	2.0	98.0
2010	146,596	86,517	60,079	100.0	59.0	41.0
2011	144,379	83,226	61,154	100.0	57.6	42.4
2012 preliminary	140,568	78,778	61,790	100.0	56.0	44.0
2013 proposed	142,235	77,296	64,938	100.0	54.3	45.7

ARRA = American Recovery and Reinvestment Act of 2009.

^a For total FY 2009, sum FY 2009 non-ARRA and FY 2009 ARRA funds.

NOTES: National defense function includes Department of Defense military activities and Department of Energy atomic energy defense program; years also include defense-related R&D in Department of Homeland Security and Department of Justice. Civilian functions include all other federally funded R&D activities.

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

Appendix. Agency and Budget Function Crosswalk

Agency	Budget function															
	National defense (050)	International affairs (150)	General science and basic research (251)	Space flight, research, and supporting activities (252)	Energy (270)	Natural resources and environment (300)	Agriculture (350)	Commerce and housing credit (370)	Transportation (400)	Community and regional development (450)	Education, training, employment, and social services (500)	Health (550)	Medicare (570)	Income security (600)	Veterans benefits and services (700)	Administration of justice (750)
Agency for International Development		•														
Army Corps of Engineers (Civil)						•										
Consumer Product Safety Commission											•					
Department of Agriculture					•	•	•		•							
Department of Commerce						•	•									
Department of Defense (Military)	•															
Department of Education										•						
Department of Energy	•		•		•											
Department of Health and Human Services										•	•	•	•			
Department of Homeland Security			•			•		•								•
Department of Housing and Urban Development									•							
Department of the Interior						•										
Department of Justice	•															•
Department of Labor											•					
Department of State		•														
Department of Transportation								•								
Department of Veterans Affairs															•	
Environmental Protection Agency						•										
International Security Assistance		•														
National Aeronautics and Space Administration				•				•								
National Science Foundation			•													
Nuclear Regulatory Commission					•											
Patient-Centered Outcomes Research Trust Fund											•					
Smithsonian Institution										•						
Social Security Administration														•		
Telecommunications Development Fund							•									
Tennessee Valley Authority					•											

• = R&D function funded by specified agency.

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

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