

**Table 2E. Federal obligations for basic research, by detailed field of science  
& engineering: Department of Energy,  
fiscal years 1970-2003**

[Dollars in thousands]

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Field of science & engineering	1970	1971	1972	1973	1974	1975	1976
Total, all fields .....	286,669	276,897	268,289	275,156	269,504	312,758	345,790
Life sciences, total .....	37,599	35,927	35,314	37,076	14,152	21,039	24,381
Biol & agricultural, total .....	37,599	35,927	35,314	37,076	14,152	21,039	24,381
Biol (excl environmental) .....	NA	NA	NA	NA	NA	NA	NA
Environmental biology .....	NA	NA	NA	NA	NA	NA	NA
Agricultural .....	NA	NA	NA	NA	NA	NA	NA
Medical sciences, total .....	0	0	0	0	0	0	0
Clinical medical .....	0	0	0	0	0	0	0
Other medical .....	0	0	0	0	0	0	0
Life sciences, n.e.c. ....	0	0	0	0	0	0	0
Psychology, total .....	0	0	0	0	0	0	0
Biological aspects .....	0	0	0	0	0	0	0
Social aspects .....	0	0	0	0	0	0	0
Psychological sciences, n.e.c. ....	0	0	0	0	0	0	0
Physical sciences, total .....	230,966	223,443	216,505	220,892	237,204	242,892	267,401
Astronomy .....	0	0	0	0	0	0	0
Chemistry .....	39,016	36,735	34,652	38,949	47,836	49,194	53,818
Physics .....	191,950	186,708	181,853	181,943	185,604	191,248	213,583
Physical sciences, n.e.c. ....	0	0	0	0	3,764	2,450	0
Environmental sciences, total .....	0	0	0	0	493	2,369	2,874
Atmospheric sciences .....	0	0	0	0	147	0	0
Geological sciences .....	0	0	0	0	0	2,369	2,874
Oceanography .....	0	0	0	0	346	0	0
Environmental sciences, n.e.c. ....	0	0	0	0	0	0	0
Math & computer sciences, total .....	5,779	5,309	4,809	4,634	4,018	5,532	5,952
Mathematics .....	NA	NA	NA	NA	NA	NA	3,862
Computer sciences .....	NA	NA	NA	NA	NA	NA	2,090
Math & computer sciences, n.e.c. ....	NA	NA	NA	NA	NA	NA	0
Engineering, total .....	12,325	12,218	11,661	12,554	13,637	40,926	45,182
Aeronautical .....	0	0	0	0	0	0	0
Astronautical .....	0	0	0	0	0	0	0
Chemical .....	239	225	217	1,074	76	0	0
Civil .....	0	0	0	0	0	0	0
Electrical .....	0	0	0	0	375	0	0
Mechanical .....	0	0	0	0	0	0	0
Metallurgy & materials .....	12,086	11,993	11,444	11,480	12,909	40,926	45,182
Engineering, n.e.c. ....	0	0	0	0	277	0	0
Social sciences, total .....	0	0	0	0	0	0	0
Anthropology .....	0	0	0	0	0	0	0
Economics .....	0	0	0	0	0	0	0
Political science .....	0	0	0	0	0	0	0
Sociology .....	0	0	0	0	0	0	0
Social sciences, n.e.c. ....	0	0	0	0	0	0	0
History .....	0	0	0	0	0	0	NA
Linguistics .....	0	0	0	0	0	0	NA
Other social sciences .....	0	0	0	0	0	0	NA
Other sciences, n.e.c. ....	0	0	0	0	0	0	0

See explanatory information, if any, and SOURCE at end of table.

**Table 2E. Federal obligations for basic research, by detailed field of science  
& engineering: Department of Energy,  
fiscal years 1970-2003**

[Dollars in thousands]

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Field of science & engineering	1977	1978	1979	1980	1981	1982	1983
Total, all fields .....	389,450	440,534	462,968	523,136	586,340	642,211	767,718
Life sciences, total .....	25,821	29,744	27,458	29,377	31,642	36,646	29,495
Biol & agricultural, total .....	25,821	29,744	27,458	29,177	31,442	36,446	29,495
Biol (excl environmental) .....	NA	29,744	27,458	29,177	31,442	36,446	29,495
Environmental biology .....	NA	0	0	0	0	0	0
Agricultural .....	NA	0	0	0	0	0	0
Medical sciences, total .....	0	0	0	0	0	0	0
Clinical medical .....	0	NA	NA	NA	NA	NA	NA
Other medical .....	0	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	0	0	0	200	200	200	0
Psychology, total .....	0	0	0	0	0	0	0
Biological aspects .....	0	0	0	0	0	0	0
Social aspects .....	0	0	0	0	0	0	0
Psychological sciences, n.e.c. ....	0	0	0	0	0	0	0
Physical sciences, total .....	293,823	325,387	345,607	432,140	480,222	530,849	639,212
Astronomy .....	0	0	0	0	0	0	0
Chemistry .....	61,742	47,933	57,711	62,108	69,984	75,528	104,293
Physics .....	232,081	277,454	287,746	369,232	409,738	454,821	534,919
Physical sciences, n.e.c. ....	0	0	150	800	500	500	0
Environmental sciences, total .....	3,540	3,960	6,193	8,226	9,394	9,432	11,587
Atmospheric sciences .....	0	0	0	0	0	0	0
Geological sciences .....	3,540	3,960	6,143	7,726	9,094	9,432	11,587
Oceanography .....	0	0	0	0	0	0	0
Environmental sciences, n.e.c. ....	0	0	50	500	300	0	0
Math & computer sciences, total .....	6,839	7,398	8,634	10,196	11,221	11,560	13,811
Mathematics .....	4,445	4,809	5,612	7,176	8,173	8,209	9,821
Computer sciences .....	2,394	2,589	3,022	3,020	3,048	3,351	3,990
Math & computer sciences, n.e.c. ....	0	0	0	0	0	0	0
Engineering, total .....	59,427	69,241	75,062	42,567	53,861	53,724	72,696
Aeronautical .....	0	0	0	0	0	0	0
Astronautical .....	0	0	0	0	0	0	0
Chemical .....	1,073	1,290	1,531	211	2,183	0	13,493
Civil .....	0	0	0	0	0	0	0
Electrical .....	0	0	496	377	0	500	512
Mechanical .....	0	0	384	2,158	3,400	3,901	5,339
Metallurgy & materials .....	58,354	67,951	72,440	34,816	39,309	40,604	44,375
Engineering, n.e.c. ....	0	0	211	5,005	8,969	8,719	8,977
Social sciences, total .....	0	0	0	0	0	0	0
Anthropology .....	0	0	0	0	0	0	0
Economics .....	0	0	0	0	0	0	0
Political science .....	0	0	0	0	0	0	0
Sociology .....	0	0	0	0	0	0	0
Social sciences, n.e.c. ....	0	0	0	0	0	0	0
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	0	4,804	14	630	0	0	917

See explanatory information, if any, and SOURCE at end of table.

**Table 2E. Federal obligations for basic research, by detailed field of science  
& engineering: Department of Energy,  
fiscal years 1970-2003**

[Dollars in thousands]

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Field of science & engineering	1984	1985	1986	1987	1988	1989	1990
Total, all fields .....	830,432	942,592	959,668	1,068,465	1,184,808	1,410,902	1,504,796
Life sciences, total .....	33,487	58,666	58,140	71,732	81,096	165,626	169,874
Biol & agricultural, total .....	28,873	58,438	55,963	68,315	76,488	150,852	154,929
Biol (excl environmental) .....	28,873	58,221	55,558	68,315	75,923	150,350	154,699
Environmental biology .....	0	217	405	0	170	502	230
Agricultural .....	0	0	0	0	395	0	0
Medical sciences, total .....	0	0	0	0	0	380	0
Clinical medical .....	NA	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	4,614	228	2,177	3,417	4,608	14,394	14,945
Psychology, total .....	0	0	0	0	0	0	0
Biological aspects .....	0	0	0	0	0	0	0
Social aspects .....	0	0	0	0	0	0	0
Psychological sciences, n.e.c. ....	0	0	0	0	0	0	0
Physical sciences, total .....	688,379	736,080	737,133	815,062	897,559	1,008,385	1,029,007
Astronomy .....	0	0	0	0	0	0	0
Chemistry .....	108,424	102,332	110,612	119,199	125,647	135,109	128,733
Physics .....	579,890	633,656	626,272	695,863	771,912	873,276	899,362
Physical sciences, n.e.c. ....	65	92	249	0	0	0	912
Environmental sciences, total .....	13,235	20,077	21,770	27,394	25,523	81,748	115,779
Atmospheric sciences .....	0	312	1,243	414	172	28,809	55,802
Geological sciences .....	13,170	17,171	17,873	23,178	22,425	45,873	53,563
Oceanography .....	0	1,432	1,940	2,146	2,487	6,559	5,990
Environmental sciences, n.e.c. ....	65	1,162	714	1,656	439	507	424
Math & computer sciences, total .....	14,639	20,976	37,841	38,527	42,359	42,127	48,719
Mathematics .....	9,519	10,231	13,216	28,060	31,216	29,877	30,714
Computer sciences .....	5,120	10,745	24,544	10,360	11,143	12,250	18,005
Math & computer sciences, n.e.c. ....	0	0	81	107	0	0	0
Engineering, total .....	79,736	105,669	103,918	114,823	136,999	111,778	140,160
Aeronautical .....	0	0	34	0	0	0	0
Astronautical .....	0	0	0	64	0	0	0
Chemical .....	11,562	21,826	18,999	23,727	36,168	1,190	28,099
Civil .....	0	467	703	558	0	0	0
Electrical .....	469	841	1,137	776	300	300	400
Mechanical .....	7,581	15,555	13,796	18,115	17,873	15,274	15,606
Metallurgy & materials .....	49,018	51,044	53,309	56,050	60,237	58,325	61,445
Engineering, n.e.c. ....	11,106	15,936	15,940	15,533	22,421	36,689	34,610
Social sciences, total .....	0	0	0	0	0	0	0
Anthropology .....	0	0	0	0	0	0	0
Economics .....	0	0	0	0	0	0	0
Political science .....	0	0	0	0	0	0	0
Sociology .....	0	0	0	0	0	0	0
Social sciences, n.e.c. ....	0	0	0	0	0	0	0
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	956	1,124	866	927	1,272	1,238	1,257

See explanatory information, if any, and SOURCE at end of table.

**Table 2E. Federal obligations for basic research, by detailed field of science  
& engineering: Department of Energy,  
fiscal years 1970-2003**

[Dollars in thousands]

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Field of science & engineering	1991	1992	1993	1994	1995	1996	1997
Total, all fields .....	1,686,453	1,736,404	1,754,831	1,603,223	1,634,353	1,929,656	1,970,861
Life sciences, total .....	161,078	169,376	185,555	169,112	175,609	170,799	168,598
Biol & agricultural, total .....	147,939	156,275	174,168	160,019	170,977	163,521	163,701
Biol (excl environmental) .....	147,572	155,976	173,293	160,019	170,645	162,521	162,701
Environmental biology .....	189	0	875	0	332	1,000	1,000
Agricultural .....	178	299	0	0	0	0	0
Medical sciences, total .....	0	0	0	0	0	0	0
Clinical medical .....	NA	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	13,139	13,101	11,387	9,093	4,632	7,278	4,897
Psychology, total .....	0	0	0	0	0	0	0
Biological aspects .....	0	0	0	0	0	0	0
Social aspects .....	0	0	0	0	0	0	0
Psychological sciences, n.e.c. ....	0	0	0	0	0	0	0
Physical sciences, total .....	1,167,187	1,172,771	1,209,731	1,067,332	1,080,936	1,184,952	1,192,381
Astronomy .....	0	0	337	0	0	0	0
Chemistry .....	126,687	128,981	139,685	114,604	129,766	142,359	130,414
Physics .....	1,039,085	1,043,578	1,063,809	946,397	951,082	1,042,525	1,059,170
Physical sciences, n.e.c. ....	1,415	212	5,900	6,331	88	68	2,797
Environmental sciences, total .....	124,909	132,083	148,111	148,623	148,234	207,119	201,547
Atmospheric sciences .....	68,302	76,394	83,912	94,617	88,684	88,275	88,941
Geological sciences .....	50,378	47,040	55,643	46,017	51,600	54,896	57,374
Oceanography .....	4,808	6,217	7,047	6,783	6,748	8,242	7,095
Environmental sciences, n.e.c. ....	1,421	2,432	1,509	1,206	1,202	55,706	48,137
Math & computer sciences, total .....	59,958	88,310	89,018	96,819	113,599	89,545	112,246
Mathematics .....	37,048	63,547	68,183	80,160	0	0	86,759
Computer sciences .....	22,910	24,763	20,835	16,659	16,783	13,725	19,612
Math & computer sciences, n.e.c. ....	0	0	0	0	96,816	75,820	5,875
Engineering, total .....	172,177	172,481	120,382	119,057	114,843	276,299	294,487
Aeronautical .....	0	0	0	0	0	0	0
Astronautical .....	0	0	0	0	5,860	0	1,600
Chemical .....	37,737	35,985	26,409	30,607	22,506	17,108	23,443
Civil .....	0	308	0	0	262	199	14
Electrical .....	400	400	430	500	648	0	0
Mechanical .....	16,607	16,532	16,302	15,744	15,713	17,088	16,472
Metallurgy & materials .....	66,737	61,718	63,784	61,798	59,543	230,967	241,837
Engineering, n.e.c. ....	50,696	57,538	13,457	10,408	10,311	10,937	11,121
Social sciences, total .....	0	0	0	0	0	0	0
Anthropology .....	0	0	0	0	0	0	0
Economics .....	0	0	0	0	0	0	0
Political science .....	0	0	0	0	0	0	0
Sociology .....	0	0	0	0	0	0	0
Social sciences, n.e.c. ....	0	0	0	0	0	0	0
History .....	NA	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	1,144	1,383	2,034	2,280	1,132	942	1,602

See explanatory information, if any, and SOURCE at end of table.

**Table 2E. Federal obligations for basic research, by detailed field of science & engineering: Department of Energy, fiscal years 1970-2003**

[Dollars in thousands]

Field of science & engineering	1998	1999	2000	2001	Preliminary	
					2002	2003
Total, all fields .....	2,028,805	2,131,823	2,175,837	2,295,537	2,429,851	2,542,524
Life sciences, total .....	192,810	192,741	203,298	206,017	246,170	266,306
Biol & agricultural, total .....	188,319	187,962	197,992	201,242	NA	NA
Biol (excl environmental) .....	186,819	186,462	196,492	199,697	NA	NA
Environmental biology .....	1,500	1,500	1,500	1,545	NA	NA
Agricultural .....	0	0	0	0	NA	NA
Medical sciences, total .....	0	0	0	0	NA	NA
Clinical medical .....	NA	NA	NA	NA	NA	NA
Other medical .....	NA	NA	NA	NA	NA	NA
Life sciences, n.e.c. ....	4,491	4,779	5,306	4,775	NA	NA
Psychology, total .....	0	0	0	0	0	0
Biological aspects .....	0	0	0	0	NA	NA
Social aspects .....	0	0	0	0	NA	NA
Psychological sciences, n.e.c. ....	0	0	0	0	NA	NA
Physical sciences, total .....	1,229,268	1,297,186	1,359,927	1,427,957	1,512,547	1,506,205
Astronomy .....	0	0	0	0	NA	NA
Chemistry .....	137,786	137,043	146,249	166,212	NA	NA
Physics .....	1,089,581	1,160,143	1,213,678	1,261,169	NA	NA
Physical sciences, n.e.c. ....	1,901	0	0	576	NA	NA
Environmental sciences, total .....	225,585	231,529	232,966	227,363	244,505	255,826
Atmospheric sciences .....	90,544	94,793	108,190	107,910	NA	NA
Geological sciences .....	84,298	87,173	84,135	76,033	NA	NA
Oceanography .....	4,004	4,868	9,300	7,353	NA	NA
Environmental sciences, n.e.c. ....	46,739	44,695	31,341	36,067	NA	NA
Math & computer sciences, total .....	120,490	124,884	112,167	146,682	149,071	160,040
Mathematics .....	93,586	102,332	93,926	119,326	NA	NA
Computer sciences .....	21,674	22,552	18,241	26,859	NA	NA
Math & computer sciences, n.e.c. ....	5,230	0	0	497	NA	NA
Engineering, total .....	259,207	284,508	266,007	286,567	276,558	353,127
Aeronautical .....	0	0	0	0	NA	NA
Astronautical .....	0	0	0	0	NA	NA
Chemical .....	4,605	3,922	0	0	NA	NA
Civil .....	0	0	0	0	NA	NA
Electrical .....	0	0	0	0	NA	NA
Mechanical .....	16,782	16,692	13,638	16,549	NA	NA
Metallurgy & materials .....	230,547	261,568	252,369	269,893	NA	NA
Engineering, n.e.c. ....	7,273	2,326	0	125	NA	NA
Social sciences, total .....	0	0	0	0	0	0
Anthropology .....	0	0	0	0	NA	NA
Economics .....	0	0	0	0	NA	NA
Political science .....	0	0	0	0	NA	NA
Sociology .....	0	0	0	0	NA	NA
Social sciences, n.e.c. ....	0	0	0	0	NA	NA
History .....	NA	NA	NA	NA	NA	NA
Linguistics .....	NA	NA	NA	NA	NA	NA
Other social sciences .....	NA	NA	NA	NA	NA	NA
Other sciences, n.e.c. ....	1,445	975	1,472	951	1,000	1,020

**KEY:** NA = Not applicable (indicates that the data collected for this table were not recorded at that level in that particular fiscal year, or that the agency or subagency did not exist as such or in that organization in that year)  
n.e.c. = Not elsewhere classified

**NOTE:** Data shown for fiscal years 1970-74 and 1975-76 represent obligations of the Atomic Energy Commission and the Energy Research & Development Administration, respectively. In fiscal year 1982 the Bonneville Power Administration became part of the Department of Energy.

**SOURCE:** National Science Foundation/Division of Science Resources Statistics, Survey of Federal Funds for Research and Development: Fiscal Years 2001, 2002, and 2003