

TABLE 1

## Federal obligations for research and development, by type of R&amp;D, and for R&amp;D plant: FYs 1951–2021

(Dollars in thousands)

Fiscal year	Total	Total R&D	Total research	Basic research	Applied research	Development	R&D plant
1951	1,851,571.0	1,521,527.0	NA	NA	NA	NA	330,044.0
1952	2,216,848.0	1,909,665.0	NA	120,945.0	NA	NA	307,183.0
1953	2,167,456.0	1,919,543.0	NA	115,997.0	NA	NA	247,913.0
1954	1,918,046.0	1,761,840.0	NA	116,033.0	NA	NA	156,206.0
1955	2,251,894.0	2,044,593.0	NA	130,068.0	NA	NA	207,301.0
1956	3,266,903.0	2,988,203.0	851,947.0	206,441.0	645,506.0	2,136,256.0	278,700.0
1957	4,389,237.0	3,932,001.0	924,547.0	262,348.0	662,199.0	3,007,454.0	457,236.0
1958	4,906,015.0	4,569,722.0	1,078,807.0	334,543.0	744,264.0	3,490,915.0	336,293.0
1959	7,122,610.0	6,693,510.0	1,340,253.0	465,981.0	874,272.0	5,353,257.0	429,100.0
1960	8,080,015.0	7,551,746.0	1,872,509.0	590,374.0	1,282,135.0	5,679,237.0	528,269.0
1961	9,607,023.0	9,058,623.0	2,477,944.0	814,513.0	1,663,431.0	6,580,679.0	548,400.0
1962	11,069,059.0	10,289,947.0	3,004,795.0	986,314.0	2,018,481.0	7,285,152.0	779,112.0
1963	13,662,879.0	12,494,611.0	3,507,903.0	1,151,753.0	2,356,150.0	8,986,708.0	1,168,268.0
1964	15,323,870.0	14,225,354.0	3,874,452.0	1,303,000.0	2,571,452.0	10,350,902.0	1,098,516.0
1965	15,745,852.0	14,614,249.0	4,247,230.0	1,435,469.0	2,811,761.0	10,367,019.0	1,131,603.0
1966	16,178,640.0	15,320,334.0	4,660,247.0	1,579,181.0	3,081,066.0	10,660,087.0	858,306.0
1967	17,149,186.0	16,529,099.0	4,631,390.0	1,845,847.0	2,785,543.0	11,897,709.0	620,087.0
1968	16,525,038.0	15,921,208.0	4,781,062.0	1,840,562.0	2,940,500.0	11,140,146.0	603,830.0
1969	16,309,900.0	15,640,888.0	4,644,890.0	1,944,773.0	2,700,117.0	10,995,998.0	669,012.0
1970	15,863,385.0	15,338,937.0	4,900,798.0	1,925,908.0	2,974,890.0	10,438,139.0	524,448.0
1971	16,153,756.0	15,542,512.0	5,123,171.0	1,980,141.0	3,143,030.0	10,419,341.0	611,244.0
1972	17,097,951.0	16,495,895.0	5,547,696.0	2,186,937.0	3,360,759.0	10,948,199.0	602,056.0
1973	17,574,486.0	16,800,153.0	5,581,429.0	2,232,006.0	3,349,423.0	11,218,724.0	774,333.0
1974	18,176,457.0	17,410,128.0	6,175,240.0	2,387,681.0	3,787,559.0	11,234,888.0	766,329.0
1975	19,859,548.0	19,038,818.0	6,729,708.0	2,588,427.0	4,141,281.0	12,309,110.0	820,730.0
1976	21,616,382.0	20,779,658.0	7,619,332.0	2,767,454.0	4,851,878.0	13,160,326.0	836,724.0
1977	24,817,577.0	23,450,377.0	8,514,115.0	3,258,640.0	5,255,475.0	14,936,262.0	1,367,200.0
1978	27,140,849.0	25,845,137.0	9,606,758.0	3,698,604.0	5,908,154.0	16,238,379.0	1,295,712.0
1979	29,620,597.0	28,145,142.0	10,535,005.0	4,192,665.0	6,342,340.0	17,610,137.0	1,475,455.0
1980	31,386,095.0	29,830,432.0	11,597,378.0	4,674,156.0	6,923,222.0	18,233,054.0	1,555,663.0
1981	34,589,634.0	33,103,924.0	12,212,780.0	5,041,295.0	7,171,485.0	20,891,144.0	1,485,710.0
1982	37,822,363.0	36,432,589.0	13,022,185.0	5,481,605.0	7,540,580.0	23,410,404.0	1,389,774.0
1983	40,009,032.0	38,711,537.0	14,253,525.0	6,260,131.0	7,993,394.0	24,458,012.0	1,297,495.0
1984	44,012,149.0	42,224,865.0	14,978,773.0	7,067,359.0	7,911,414.0	27,246,092.0	1,787,284.0
1985	50,180,369.0	48,359,565.0	16,133,421.0	7,818,682.0	8,314,739.0	32,226,144.0	1,820,804.0
1986	52,951,181.0	51,412,364.0	16,502,199.0	8,153,076.0	8,349,123.0	34,910,165.0	1,538,817.0
1987	57,099,656.0	55,253,693.0	17,940,521.0	8,942,425.0	8,998,096.0	37,313,172.0	1,845,963.0
1988	58,826,512.0	56,769,425.0	18,650,145.0	9,473,618.0	9,176,527.0	38,119,280.0	2,057,087.0
1989	63,571,605.0	61,406,484.0	20,765,531.0	10,602,011.0	10,163,520.0	40,640,953.0	2,165,121.0
1990	65,831,189.0	63,559,471.0	21,622,364.0	11,285,593.0	10,336,771.0	41,937,107.0	2,271,718.0
1991	64,147,951.0	61,295,152.0	23,968,377.0	12,170,794.0	11,797,583.0	37,326,775.0	2,852,799.0
1992	68,577,184.0	65,592,590.0	24,490,598.0	12,489,864.0	12,000,734.0	41,101,992.0	2,984,594.0
1993	70,414,697.0	67,314,025.0	26,890,497.0	13,399,121.0	13,491,376.0	40,423,528.0	3,100,672.0
1994	69,450,776.0	67,235,390.0	27,411,209.0	13,523,476.0	13,887,733.0	39,824,181.0	2,215,386.0
1995	70,442,935.0	68,186,798.0	28,434,396.0	13,877,031.0	14,557,365.0	39,752,402.0	2,256,137.0
1996	69,399,164.0	67,653,047.0	28,259,764.0	14,464,035.0	13,795,729.0	39,393,283.0	1,746,117.0
1997	71,753,430.0	69,826,779.0	29,365,289.0	14,941,892.0	14,423,397.0	40,461,490.0	1,926,651.0
1998	73,913,988.0	72,100,724.0	30,922,269.0	15,613,012.0	15,309,257.0	41,178,455.0	1,813,264.0
1999	77,386,368.0	75,340,622.0	33,527,514.0	17,443,653.0	16,083,861.0	41,813,108.0	2,045,746.0
2000	80,403,169.0	75,910,322.0	38,470,630.0	19,569,849.0	18,900,781.0	37,439,692.0	4,492,847.0

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(Dollars in thousands)

Fiscal year	Total	Total R&D	Total research	Basic research	Applied research	Development	R&D plant
2001	88,562,350.0	84,492,522.0	44,713,736.0	21,958,136.0	22,755,600.0	39,778,786.0	4,069,828.0
2002	98,013,347.0	93,708,604.0	48,006,711.0	23,668,345.0	24,338,366.0	45,701,893.0	4,304,743.0
2003	107,794,188.0	103,527,670.0	51,071,843.0	24,751,441.0	26,320,402.0	52,455,827.0	4,266,518.0
2004	116,068,604.0	112,074,452.0	53,357,811.0	26,120,663.0	27,237,148.0	58,716,641.0	3,994,152.0
2005	122,619,584.0	118,848,457.0	53,738,245.0	27,140,335.0	26,597,910.0	65,110,212.0	3,771,127.0
2006	123,854,731.0	121,729,949.0	53,535,650.0	26,584,592.0	26,951,058.0	68,194,299.0	2,124,782.0
2007	129,431,246.0	127,262,861.0	54,093,565.0	26,865,786.0	27,227,779.0	73,169,296.0	2,168,385.0
2008	129,049,945.3	127,106,084.3	53,893,678.0	27,153,966.0	26,739,712.0	73,212,406.3	1,943,861.0
2009	144,758,102.7	141,090,090.7	63,691,871.9	32,879,356.9	30,812,515.0	77,398,218.9	3,668,012.0
2010	146,967,799.9	140,354,521.1	63,727,973.3	31,795,342.2	31,932,631.1	76,626,547.9	6,613,278.8
2011	139,703,280.6	135,532,585.2	58,064,824.1	29,313,593.3	28,751,230.8	77,467,761.2	4,170,695.4
2012	140,670,243.1	138,524,567.5	61,986,309.8	30,958,892.9	31,027,416.9	76,538,257.7	2,145,675.6
2013	127,625,543.8	125,720,395.1	59,532,626.3	29,779,403.8	29,753,222.4	66,187,768.9	1,905,148.7
2014	132,778,961.6	130,561,319.9	63,191,428.1	31,587,903.1	31,603,525.0	67,369,891.9	2,217,641.6
2015	131,578,340.7	128,753,285.5	63,825,444.2	31,527,071.3	32,298,372.9	64,927,841.2	2,825,055.2
2016	118,273,783.6	115,832,794.4	67,104,649.2	32,292,658.7	34,811,990.4	48,728,145.3	2,440,989.2
2017	121,626,565.0	118,974,798.7	69,871,308.0	33,271,489.9	36,599,818.1	49,103,490.7	2,651,766.3
2018	133,277,539.6	129,424,802.5	74,587,572.8	36,195,127.6	38,392,445.2	54,837,229.7	3,852,737.1
2019	146,800,654.4	142,424,206.6	81,117,784.1	40,017,257.6	41,100,526.5	61,306,422.5	4,376,447.8
2020	173,552,851.5	167,402,781.5	85,304,757.4	41,546,622.0	43,758,135.4	82,098,024.1	6,150,070.1
2021 (preliminary)	185,408,110.0	179,465,235.7	85,155,455.8	41,231,293.0	43,924,162.8	94,309,779.9	5,942,874.4

NA = not available; data were not collected at this level of detail.

**Note(s):**

Because of rounding, detail may not add to total. FYs 2009 and 2010 obligations include additional funding provided by the American Recovery and Reinvestment Act of 2009. Beginning with FY 2016, the totals reported for development obligations represent a refinement to this category by more narrowly defining it to be "experimental development." Most notably, totals for development do not include the Department of Defense (DOD) Budget Activity 7 (Operational Systems Development) obligations. Those funds, previously included in DOD's development obligation totals, support the development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year. Therefore, the data are not directly comparable with totals reported in previous years. FYs 2020 and 2021 obligations include additional funding provided by supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act).

**Source(s):**

National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development.