

TABLE S4-2

## Federal obligations for R&amp;D and R&amp;D plant, by type of work: FYs 1953–2018

(Millions of current and constant 2012 dollars)

Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
Current \$millions						
1953	2,167	1,920	116	NA	NA	248
1954	1,918	1,762	116	NA	NA	156
1955	2,252	2,045	130	NA	NA	207
1956	3,267	2,988	206	646	2,136	279
1957	4,389	3,932	262	662	3,007	457
1958	4,906	4,570	335	744	3,491	336
1959	7,123	6,694	466	874	5,353	429
1960	8,080	7,552	590	1,282	5,679	528
1961	9,607	9,059	815	1,663	6,581	548
1962	11,069	10,290	986	2,018	7,285	779
1963	13,663	12,495	1,152	2,356	8,987	1,168
1964	15,324	14,225	1,303	2,571	10,351	1,099
1965	15,746	14,614	1,435	2,812	10,367	1,132
1966	16,179	15,320	1,579	3,081	10,660	858
1967	17,149	16,529	1,846	2,786	11,898	620
1968	16,525	15,921	1,841	2,941	11,140	604
1969	16,310	15,641	1,945	2,700	10,996	669
1970	15,863	15,339	1,926	2,975	10,438	524
1971	16,154	15,543	1,980	3,143	10,419	611
1972	17,098	16,496	2,187	3,361	10,948	602
1973	17,574	16,800	2,232	3,349	11,219	774
1974	18,176	17,410	2,388	3,788	11,235	766
1975	19,860	19,039	2,588	4,141	12,309	821
1976	21,616	20,780	2,767	4,852	13,160	837
1977	24,818	23,450	3,259	5,255	14,936	1,367
1978	27,141	25,845	3,699	5,908	16,238	1,296
1979	29,621	28,145	4,193	6,342	17,610	1,475
1980	31,386	29,830	4,674	6,923	18,233	1,556
1981	34,590	33,104	5,041	7,171	20,891	1,486
1982	37,822	36,433	5,482	7,541	23,410	1,390
1983	40,009	38,712	6,260	7,993	24,458	1,297
1984	44,012	42,225	7,067	7,911	27,246	1,787
1985	50,180	48,360	7,819	8,315	32,226	1,821
1986	52,951	51,412	8,153	8,349	34,910	1,539
1987	57,100	55,254	8,942	8,998	37,313	1,846
1988	58,827	56,769	9,474	9,177	38,119	2,057
1989	63,572	61,406	10,602	10,164	40,641	2,165
1990	65,831	63,559	11,286	10,337	41,937	2,272
1991	64,148	61,295	12,171	11,798	37,327	2,853
1992	68,577	65,593	12,490	12,001	41,102	2,985
1993	70,415	67,314	13,399	13,491	40,424	3,101
1994	69,451	67,235	13,523	13,888	39,824	2,215
1995	70,443	68,187	13,877	14,557	39,752	2,256
1996	69,399	67,653	14,464	13,796	39,393	1,746
1997	71,753	69,827	14,942	14,423	40,461	1,927
1998	73,914	72,101	15,613	15,309	41,178	1,813
1999	77,386	75,341	17,444	16,084	41,813	2,046
2000	80,403	75,910	19,570	18,901	37,440	4,493

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## Federal obligations for R&amp;D and R&amp;D plant, by type of work: FYs 1953–2018

(Millions of current and constant 2012 dollars)

Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
2001	88,562	84,493	21,958	22,756	39,779	4,070
2002	98,013	93,709	23,668	24,338	45,702	4,305
2003	107,794	103,528	24,751	26,320	52,456	4,267
2004	116,069	112,074	26,121	27,237	58,717	3,994
2005	122,620	118,848	27,140	26,598	65,110	3,771
2006	123,855	121,730	26,585	26,951	68,194	2,125
2007	129,431	127,263	26,866	27,228	73,169	2,168
2008	129,050	127,106	27,154	26,740	73,212	1,944
2009 <sup>a</sup>	144,758	141,090	32,879	30,813	77,398	3,668
2010 <sup>a</sup>	146,968	140,355	31,795	31,933	76,627	6,613
2011	139,703	135,533	29,314	28,751	77,468	4,171
2012	140,670	138,525	30,959	31,027	76,538	2,146
2013	127,626	125,720	29,779	29,753	66,188	1,905
2014	132,779	130,561	31,588	31,604	67,370	2,218
2015	131,578	128,753	31,527	32,298	64,928	2,825
2016	118,274	115,833	32,293	34,812	48,728	2,441
2017	121,627	118,975	33,271	36,600	49,103	2,652
2018 preliminary	133,278	129,425	36,195	38,392	54,837	3,853
Constant 2012 \$millions						
1953	15,010	13,293	803	NA	NA	1,717
1954	13,128	12,059	794	NA	NA	1,069
1955	15,298	13,890	884	NA	NA	1,408
1956	21,635	19,789	1,367	4,275	14,147	1,846
1957	28,028	25,109	1,675	4,229	19,205	2,920
1958	30,415	28,331	2,074	4,614	21,642	2,085
1959	43,484	40,864	2,845	5,337	32,682	2,620
1960	48,645	45,465	3,554	7,719	34,192	3,180
1961	57,083	53,824	4,840	9,884	39,101	3,258
1962	65,112	60,529	5,802	11,873	42,854	4,583
1963	79,435	72,643	6,696	13,699	52,248	6,792
1964	87,967	81,661	7,480	14,761	59,420	6,306
1965	88,859	82,473	8,101	15,868	58,505	6,386
1966	89,385	84,643	8,725	17,022	58,896	4,742
1967	91,953	88,628	9,897	14,936	63,795	3,325
1968	85,622	82,493	9,537	15,236	57,721	3,129
1969	80,822	77,507	9,637	13,380	54,490	3,315
1970	74,616	72,149	9,059	13,993	49,098	2,467
1971	72,309	69,573	8,864	14,069	46,640	2,736
1972	73,068	70,495	9,346	14,362	46,787	2,573
1973	71,968	68,797	9,140	13,716	45,941	3,171
1974	69,482	66,552	9,127	14,478	42,947	2,929
1975	68,813	65,970	8,969	14,350	42,651	2,844
1976	70,024	67,313	8,965	15,717	42,631	2,710
1977	74,978	70,847	9,845	15,878	45,125	4,131
1978	76,821	73,154	10,469	16,723	45,962	3,667
1979	77,581	73,717	10,981	16,612	46,124	3,864
1980	75,611	71,863	11,260	16,678	43,924	3,748
1981	75,871	72,612	11,058	15,730	45,824	3,259
1982	77,568	74,718	11,242	15,465	48,011	2,850

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## Federal obligations for R&amp;D and R&amp;D plant, by type of work: FYs 1953–2018

(Millions of current and constant 2012 dollars)

Fiscal year	Total, R&D and R&D plant	R&D				R&D plant
		All R&D	Basic	Applied	Development	
1983	78,619	76,069	12,301	15,707	48,061	2,550
1984	83,499	80,108	13,408	15,009	51,691	3,391
1985	92,125	88,782	14,354	15,265	59,163	3,343
1986	95,082	92,319	14,640	14,992	62,687	2,763
1987	100,280	97,038	15,705	15,803	65,531	3,242
1988	100,079	96,579	16,117	15,612	64,851	3,500
1989	103,943	100,403	17,335	16,618	66,450	3,540
1990	103,835	100,252	17,801	16,304	66,147	3,583
1991	97,697	93,352	18,536	17,968	56,849	4,345
1992	101,898	97,463	18,558	17,832	61,073	4,435
1993	102,228	97,727	19,453	19,587	58,687	4,502
1994	98,680	95,532	19,215	19,732	56,585	3,148
1995	98,001	94,862	19,306	20,252	55,304	3,139
1996	94,769	92,384	19,752	18,839	53,794	2,384
1997	96,275	93,689	20,048	19,352	54,289	2,585
1998	97,951	95,548	20,690	20,288	54,570	2,403
1999	101,251	98,575	22,823	21,044	54,708	2,677
2000	103,081	97,321	25,090	24,232	48,000	5,760
2001	110,925	105,827	27,503	28,502	49,823	5,097
2002	120,825	115,518	29,177	30,003	56,339	5,307
2003	130,501	125,336	29,965	31,865	63,506	5,165
2004	137,229	132,507	30,883	32,203	69,421	4,722
2005	140,683	136,357	31,139	30,516	74,702	4,327
2006	137,693	135,331	29,555	29,962	75,814	2,362
2007	140,077	137,730	29,076	29,467	79,188	2,347
2008	136,836	134,775	28,792	28,353	77,630	2,061
2009 <sup>a</sup>	151,738	147,893	34,465	32,298	81,130	3,845
2010 <sup>a</sup>	152,741	145,868	33,044	33,187	79,637	6,873
2011	142,351	138,101	29,869	29,296	78,936	4,250
2012	140,670	138,525	30,959	31,027	76,538	2,146
2013	125,320	123,449	29,241	29,216	64,992	1,871
2014	127,906	125,770	30,429	30,444	64,897	2,136
2015	125,229	122,540	30,006	30,740	61,795	2,689
2016	111,537	109,235	30,453	32,829	45,953	2,302
2017	112,659	110,203	30,818	33,901	45,483	2,456
2018 preliminary	120,832	117,339	32,815	34,807	49,716	3,493

NA = not available; data collected for this table were not recorded at that level in that particular fiscal year.

<sup>a</sup> Includes obligations from the additional federal R&D funding authorized by the American Recovery and Reinvestment Act of 2009.**Note(s)**

Beginning in FY 2016 (and continuing in subsequent years), agency reports of obligations for R&D reflect the application of a definition for development that is narrowed to "experimental development." This revision was introduced to align federal R&D budget formulation to be consistent with the Office of Management and Budget's Circular A-11, Section 84. This change in definition applies to all agencies, but the predominant impact is that the Department of Defense's (DOD's) Operational Systems Development (Budget Activity 7) is no longer included as development. DOD Operational Systems Development was about \$24.6 billion in FY 2016, \$26.0 billion in FY 2017, and \$26.7 billion in FY 2018. Accordingly, the obligations data listed above for FYs 2016–18 are not directly comparable with those for FY 2015 and earlier years.

**Source(s)**

National Center for Science and Engineering Statistics, National Science Foundation, Survey of Federal Funds for Research and Development, FYs 2018–19 (Volume 68).

