

TABLE 99

Federal outlays for research and development, by agency: FYs 2011–20

(Dollars in millions)

Agency	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020 (preliminary)
All agencies	131,451.9	128,559.8	127,224.8	128,476.5	128,089.9	109,551.8	110,000.2	117,072.2	124,854.5	136,453.3
Departments										
Department of Agriculture	2,300.5	2,290.2	2,231.9	2,320.7	2,320.3	2,411.5	2,329.8	2,308.1	2,497.8	3,204.4
Agricultural Marketing Service	4.3	4.3	5.0	5.7	6.8	6.7	7.2	7.2	7.7	7.0
Agricultural Research Service	1,161.5	1,095.0	1,071.2	1,025.4	1,077.2	1,118.3	1,148.8	1,101.3	1,149.6	1,372.0
Animal and Plant Health Inspection Service	24.6	31.8	31.3	37.1	34.2	39.1	39.1	38.5	39.1	39.1
Economic Research Service	87.9	80.2	78.6	77.0	74.4	94.4	81.5	86.6	82.2	87.0
Foreign Agricultural Service	0.6	0.7	0.7	0.2	0.6	0.2	0.2	0.0	0.0	0.5
Forest Service	353.0	355.0	342.0	330.0	336.0	336.0	334.0	327.0	323.0	412.0
Grain Inspection, Packers, and Stockyards Administration	6.7	5.0	4.7	5.7	6.0	6.0	0.2	na	na	na
National Agricultural Statistics Service	7.4	7.4	7.5	9.4	9.3	9.3	9.4	9.5	9.5	9.0
National Institute of Food and Agriculture	653.8	706.8	688.0	824.4	772.3	798.0	706.1	735.3	884.0	1,275.0
Rural Business-Cooperative Service	0.7	3.9	3.0	5.8	3.5	3.6	3.3	2.8	2.8	2.8
Department of Commerce	1,267.0	1,112.1	1,081.7	1,266.7	1,220.7	1,330.4	1,526.5	1,414.6	1,521.9	1,554.6
Economic Development Administration	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
National Institute of Standards and Technology	570.6	570.2	524.1	553.2	606.9	644.7	644.4	670.5	703.4	708.6
National Oceanic and Atmospheric Administration	629.0	432.8	418.6	504.4	461.0	505.0	653.7	627.0	714.0	717.0
National Telecommunications and Information Administration	7.2	7.4	7.8	7.9	11.3	10.3	8.1	7.3	8.9	9.2
U.S. Census Bureau	59.5	101.7	131.3	201.2	141.6	170.4	220.3	109.9	95.6	119.8
Department of Defense	72,527.4	65,252.9	65,019.6	63,509.3	62,100.4	42,700.4	41,292.2	44,843.2	48,135.3	54,317.2
Defense Advanced Research Projects Agency	2,889.3	2,833.3	2,692.2	2,807.7	2,832.5	2,870.6	2,877.1	2,996.0	3,253.7	3,403.7
Department of the Air Force	25,854.5	25,042.8	24,789.7	23,204.7	23,322.8	7,137.3	7,439.3	11,014.9	11,830.4	14,931.2
Department of the Army	8,125.0	6,688.5	7,816.8	7,653.1	7,306.3	6,800.4	6,911.1	7,011.3	9,293.2	10,203.4
Department of the Navy	15,345.4	14,363.0	15,487.4	15,437.3	14,669.0	15,166.4	14,397.6	12,522.6	10,902.7	11,985.6
Other defense agencies	20,313.3	16,325.4	14,233.4	14,406.5	13,969.8	10,725.8	9,667.2	11,298.4	12,855.2	13,793.3
Department of Education	105.7	101.6	97.2	344.8	318.0	212.2	245.8	235.3	226.4	203.0
Department of Energy	9,685.0	9,599.3	9,302.1	10,364.2	11,303.4	11,855.3	12,019.6	14,606.7	13,656.5	16,157.5
Advanced Research Projects Agency—Energy	118.4	142.4	143.6	187.2	245.2	237.9	269.2	250.9	247.1	352.1
Bonneville Power Administration	13.2	14.5	0.0	16.0	15.6	15.6	14.0	0.0	0.0	0.0
Electricity Delivery and Energy Reliability	89.5	101.1	45.3	73.1	107.6	91.7	133.0	103.8	144.2	146.8
Energy Efficiency and Renewable Energy	852.6	909.8	704.9	960.5	1,043.1	1,142.1	1,280.0	1,341.0	1,451.2	1,679.5
Environmental Management	67.5	45.8	9.1	23.2	24.2	22.8	28.7	38.0	29.3	31.4
Fossil Energy	288.4	285.7	360.4	425.6	631.9	624.5	620.3	661.6	659.0	680.0
National Nuclear Security Administration	4,033.9	3,919.8	3,855.7	4,312.2	4,221.9	4,544.8	4,636.1	4,025.5	5,477.1	7,466.5
Defense Programs	2,768.7	2,648.2	2,568.1	2,921.5	2,925.9	2,980.1	3,167.0	2,536.7	3,359.5	5,425.2
Naval Nuclear Propulsion Program	941.7	1,040.1	994.0	1,093.7	1,083.4	1,215.7	1,220.0	1,172.8	1,788.6	1,648.4

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Office of Defense Nuclear Nonproliferation	323.5	231.5	293.6	297.0	212.7	348.9	249.0	316.0	329.0	393.0
Nuclear Energy	387.8	361.2	263.4	323.9	760.4	832.6	811.1	846.0	1,109.5	631.3
Office of Cybersecurity, Energy Security, and Emergency Response	na	na	na	na	na	na	na	0.0	36.3	67.4
Office of Science	3,833.6	3,819.1	3,919.7	4,042.4	4,253.3	4,343.4	4,227.3	7,340.0	4,502.9	5,102.5
Department of Health and Human Services	30,379.4	30,721.0	29,282.5	30,403.9	29,497.0	29,522.1	31,168.6	32,997.0	35,270.7	37,604.0
Administration for Children and Families	9.3	8.1	2.6	2.6	2.5	3.0	2.0	1.3	2.4	1.6
Administration for Community Living	0.0	0.0	0.0	0.0	76.0	83.1	83.3	82.7	83.1	90.2
Agency for Healthcare Research and Quality	0.0	0.0	365.0	364.0	364.0	334.0	324.0	334.0	338.0	338.0
Agency for Toxic Substances and Disease Registry	5.1	1.4	1.1	1.4	1.8	2.2	2.8	2.8	7.0	7.0
Biomedical Advanced Research and Development Authority	NA	NA	NA	NA	NA	NA	NA	NA	280.8	16.9
Centers for Disease Control and Prevention	296.5	445.3	300.5	198.0	275.3	198.0	208.0	200.1	187.2	181.6
Centers for Medicare and Medicaid Services	45.2	33.8	20.0	33.6	24.0	29.5	29.8	230.7	5.8	5.8
Food and Drug Administration	206.4	315.7	322.8	348.3	336.3	455.3	435.0	427.5	443.7	445.5
Health Resources and Services Administration	36.8	20.3	36.6	37.8	41.1	41.0	45.8	33.7	26.6	19.4
National Institutes of Health	29,760.2	29,876.8	28,215.3	29,399.6	28,358.0	28,358.0	30,021.0	31,667.0	33,879.0	36,481.0
Office of the Secretary of Health and Human Services	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Office of the Assistant Secretary for Planning and Evaluation	19.9	19.5	18.6	18.6	18.0	18.0	16.9	17.1	17.0	17.0
Department of Homeland Security	471.4	593.4	334.9	448.0	475.8	538.4	840.7	862.2	863.2	813.5
Countering Weapons of Mass Destruction Office	NA	NA	NA	73.5	71.3	63.0	69.3	64.9	81.4	47.7
Cybersecurity and Infrastructure Security Agency	na	na	na	na	na	na	na	7.2	13.1	14.4
Science and Technology Directorate	450.9	572.7	314.0	350.5	380.0	454.4	750.6	752.2	724.0	715.0
Transportation Security Administration	NA	NA	NA	NA	NA	NA	NA	20.2	20.6	22.9
U.S. Coast Guard	20.5	20.7	20.8	24.0	24.5	20.9	20.9	16.5	22.1	1.2
U.S. Secret Service	NA	NA	NA	NA	NA	NA	NA	1.2	1.9	12.2
Department of Housing and Urban Development	50.1	53.5	63.8	66.7	56.0	74.7	71.0	70.5	63.0	64.0
Department of the Interior	705.4	738.7	698.3	739.4	805.4	856.8	861.2	750.8	800.7	837.4
Bureau of Indian Affairs	NA	NA	NA	NA	NA	NA	NA	5.0	5.0	5.0
Bureau of Land Management	NA	NA	NA	NA	16.4	18.0	18.0	20.8	20.8	20.8
Bureau of Ocean Energy Management	na	39.0	30.5	48.0	50.0	73.0	73.1	77.4	73.3	69.6
Bureau of Ocean Energy Management, Regulation and Enforcement	44.8	na	na	na	na	na	na	na	na	na
Bureau of Reclamation	11.5	10.0	10.1	12.0	9.8	20.9	27.4	23.4	23.2	36.4
Bureau of Safety and Environmental Enforcement	na	11.6	14.4	14.8	23.3	26.8	21.4	5.6	12.5	13.3
National Park Service	9.2	5.3	7.0	15.2	8.3	8.7	9.5	0.8	0.9	0.9
Office of Surface Mining Reclamation and Enforcement	NA	NA	NA	NA	NA	NA	NA	1.1	1.0	0.8

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U.S. Fish and Wildlife Service	NA	NA	NA	NA	31.9	32.5	24.0	24.0	24.0	25.8
U.S. Geological Survey	640.0	672.8	636.3	649.5	665.8	676.9	687.8	592.6	640.2	664.8
Department of Justice	102.3	67.0	109.7	160.5	56.9	69.1	23.8	19.7	19.6	19.1
Bureau of Prisons	11.6	10.5	11.1	10.8	11.0	11.0	9.6	5.8	6.6	7.0
Federal Bureau of Investigation	17.7	7.7	30.0	9.6	12.9	13.0	2.2	2.9	1.0	1.0
Office of Justice Programs	72.9	48.8	68.6	140.1	33.0	45.2	12.0	11.0	12.0	11.0
Department of Labor	10.5	18.8	14.7	12.3	12.5	8.0	3.1	3.3	2.8	2.8
Employee Benefits Security Administration	4.7	11.5	8.2	5.9	5.1	3.0	1.1	1.4	1.1	1.1
Occupational Safety and Health Administration	3.0	4.6	3.9	3.6	3.4	0.7	2.0	1.9	1.7	1.8
Pension Benefit Guaranty Corp.	2.8	2.7	2.6	2.9	4.1	4.3	0.0	0.0	NA	NA
Department of State	3.3	2.2	1.5	NA	2.0	2.0	2.1	62.1	62.2	62.3
Department of Transportation	768.5	719.2	659.8	786.1	697.2	719.0	681.6	629.9	668.9	710.3
Federal Aviation Administration	211.0	224.0	198.0	209.0	209.0	223.0	234.0	209.0	211.0	226.0
Federal Highway Administration	320.1	311.3	280.9	385.9	353.0	353.0	274.4	261.4	287.1	261.8
Federal Motor Carrier Safety Administration	6.9	6.7	6.9	7.5	7.6	10.6	11.7	10.3	7.1	9.1
Federal Railroad Administration	40.9	43.9	40.9	52.1	41.3	38.9	41.1	33.3	33.4	53.3
Federal Transit Administration	42.0	25.9	10.5	9.1	17.0	6.8	40.7	36.0	39.7	35.0
National Highway Traffic Safety Administration	116.0	82.6	95.0	93.0	46.0	49.0	55.0	53.0	64.0	57.0
Office of the Secretary of Transportation	17.9	13.9	15.6	13.9	11.5	18.5	11.4	16.4	8.5	22.2
Pipeline and Hazardous Materials Safety Administration	9.7	8.0	7.3	15.6	11.9	19.3	13.4	10.5	18.0	45.9
Research and Innovative Technology Administration	4.0	3.0	4.7	na	na	na	na	na	na	na
Department of the Treasury	77.6	75.6	74.1	76.4	66.5	85.2	10.5	37.7	44.7	47.7
Bureau of Engraving and Printing	5.8	5.0	9.4	9.4	9.5	18.8	9.2	37.7	44.5	47.5
Internal Revenue Service	70.8	69.0	64.5	64.4	53.7	64.6	0.0	0.0	0.0	0.0
U.S. Mint	1.0	1.6	0.1	2.6	3.4	1.8	1.3	0.0	0.2	0.2
Department of Veterans Affairs	558.9	614.8	639.0	608.3	612.1	583.1	594.1	644.0	685.0	757.0
Other agencies										
Administrative Office of the U.S. Courts	NA	NA	NA	NA	NA	6.8	8.0	6.8	6.4	7.7
Agency for International Development	119.2	77.4	125.5	59.9	212.2	192.8	192.2	166.6	220.6	220.6
Appalachian Regional Commission	0.4	0.6	0.5	0.6	0.6	0.4	0.6	0.6	0.6	0.5
Consumer Product Safety Commission	NA	2.0	1.3	1.8	2.0	2.0	1.9	1.0	0.9	0.2
Environmental Protection Agency	577.0	576.3	522.8	530.9	515.6	508.0	493.6	487.4	485.3	488.5
Federal Communications Commission	3.7	4.0	5.2	6.7	4.8	5.1	7.2	5.5	2.0	1.8
Federal Trade Commission	2.7	2.9	2.7	2.5	1.9	3.0	5.7	5.8	6.0	7.3
Library of Congress	1.3	1.0	1.0	1.0	1.1	1.6	1.8	3.3	1.9	2.7
National Aeronautics and Space Administration	6,145.5	10,427.0	11,265.4	11,128.1	12,150.2	11,936.7	10,528.0	10,765.1	13,260.0	12,935.2

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National Archives and Records Administration	3.1	2.0	1.1	0.9	0.7	0.7	0.5	0.5	0.5	0.0
National Science Foundation	5,233.0	5,124.0	5,269.0	5,198.0	5,059.0	5,120.0	5,279.0	5,207.0	5,273.0	5,414.0
Nuclear Regulatory Commission	99.0	81.0	85.0	90.6	70.8	86.0	67.4	77.7	74.9	65.3
Patient-Centered Outcomes Research Trust Fund	8.9	41.1	74.2	93.6	244.2	354.1	1,345.0	491.7	578.5	540.7
Smithsonian Institution	192.2	195.3	204.0	194.8	195.6	207.8	210.0	230.1	236.4	241.4
Social Security Administration	53.0	64.9	56.7	59.6	58.9	129.0	109.5	71.6	146.2	131.8
Tennessee Valley Authority	NA	NA	NA	NA	NA	NA	5.6	13.2	9.7	8.2
U.S. Agency for Global Media	NA	NA	NA	NA	NA	NA	NA	NA	6.1	6.2
U.S. Postal Service	NA	NA	NA	NA	28.0	29.4	73.3	53.2	26.7	26.6

na = not applicable; agency or subagency did not exist as such or in that organization in that year. NA = not available; data were not collected at that level in that fiscal year.

Note(s):

Because of rounding, detail may not add to total. Only those agencies and subdivisions that had outlays in variables represented by this table appear in the table. Beginning with FY 2016, the totals reported for development outlays 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) outlays. Those funds, previously included in DOD's development outlay 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. FY 2020 preliminary data do not include obligations from supplemental COVID-19 related appropriations (e.g., Coronavirus Aid, Relief, and Economic Security [CARES] Act). See technical table A-2 for additional notes associated with the agencies listed in this table.

Source(s):

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