

Table II-1. R&D in the FY 2009 Budget by Agency and Character of Work

Table II-1. R&D in the FY 2009 Budget by Agency and Character of Work
(budget authority in millions of dollars)

| | FY 2007 | FY 2008 | FY 2009 | Change FY 08-09 | |
|--|----------------|----------------|----------------|-----------------|-------------|
| | Actual | Estimate | Budget | Amount | Percent |
| TOTAL R&D (Conduct of R&D and R&D Facilities) | | | | | |
| Defense (military) | 79,009 | 77,782 | 80,688 | 2,906 | 3.7% |
| <i>S&T (6.1-6.3 + medical)</i> | 13,518 | 13,215 | 11,669 | -1,546 | -11.7% |
| <i>All Other DOD R&D</i> | 65,490 | 64,567 | 69,019 | 4,452 | 6.9% |
| Health and Human Services | 29,621 | 29,816 | 29,973 | 157 | 0.5% |
| <i>Nat'l Institutes of Health</i> | 28,350 | 28,676 | 28,666 | -10 | 0.0% |
| NASA | 11,582 | 12,188 | 12,780 | 592 | 4.9% |
| Energy | 9,035 | 9,661 | 10,519 | 858 | 8.9% |
| <i>Atomic Energy Defense</i> | 3,649 | 3,718 | 3,825 | 107 | 2.9% |
| <i>Office of Science</i> | 3,560 | 3,574 | 4,314 | 740 | 20.7% |
| <i>Energy R&D</i> | 1,826 | 2,369 | 2,380 | 11 | 0.5% |
| Nat'l Science Foundation | 4,440 | 4,479 | 5,175 | 696 | 15.5% |
| Agriculture | 2,275 | 2,324 | 1,955 | -369 | -15.9% |
| Commerce | 1,073 | 1,138 | 1,152 | 14 | 1.2% |
| <i>NOAA</i> | 557 | 581 | 576 | -5 | -0.9% |
| <i>NIST</i> | 487 | 521 | 546 | 25 | 4.7% |
| Interior | 647 | 676 | 618 | -59 | -8.7% |
| Transportation | 767 | 820 | 902 | 81 | 9.9% |
| Environ. Protection Agency | 557 | 548 | 541 | -7 | -1.3% |
| Veterans Affairs | 819 | 891 | 884 | -7 | -0.8% |
| Education | 327 | 321 | 324 | 3 | 0.9% |
| Homeland Security | 996 | 992 | 1,033 | 41 | 4.1% |
| Int'l Assistance Programs | 246 | 255 | 255 | 0 | 0.0% |
| Smithsonian | 186 | 203 | 222 | 19 | 9.4% |
| Tennessee Valley Auth. | 20 | 20 | 17 | -3 | -15.0% |
| Labor | 24 | 57 | 29 | -28 | -49.1% |
| Nuclear Reg. Comm. | 76 | 71 | 77 | 6 | 8.5% |
| Corps of Engineers | 11 | 11 | 11 | 0 | 0.0% |
| Housing and Urban Dev. | 49 | 51 | 55 | 4 | 7.8% |
| Justice | 104 | 81 | 77 | -4 | -4.9% |
| Social Security | 27 | 27 | 35 | 8 | 29.6% |
| Postal Service | 43 | 43 | 43 | 0 | 0.0% |
| Total R&D | 141,933 | 142,456 | 147,364 | 4,908 | 3.4% |
| Defense R&D | 82,658 | 81,500 | 84,513 | 3,013 | 3.7% |
| Nondefense R&D | 59,276 | 60,956 | 62,851 | 1,895 | 3.1% |

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Table II-1. R&D in the FY 2009 Budget by Agency and Character of Work

Table II-1 (continued). R&D in the FY 2009 Budget by Agency and Character of Work
(budget authority in millions of dollars)

| | FY 2007 Actual | FY 2008 Estimate | FY 2009 Budget | Change FY 08-09 Amount Percent | |
|--|-------------------|---------------------|----------------------|-----------------------------------|-------------|
| BASIC RESEARCH | | | | | |
| (Please see Chapter 3 for a discussion of these data) | | | | | |
| Defense (military) | 1,525 | 1,634 | 1,699 | 65 | 4.0% |
| Health and Human Services | 15,637 | 15,883 | 15,861 | -22 | -0.1% |
| <i>Nat'l Institutes of Health</i> | <i>15,635</i> | <i>15,880</i> | <i>15,858</i> | -22 | -0.1% |
| NASA | 2,318 | 2,311 | 2,287 | -24 | -1.0% |
| Energy | 3,134 | 3,232 | 3,557 | 325 | 10.0% |
| Nat'l Science Foundation | 3,626 | 3,679 | 4,320 | 641 | 17.4% |
| Agriculture | 891 | 868 | 798 | -70 | -8.1% |
| Commerce | 142 | 149 | 176 | 27 | 18.1% |
| NOAA | 50 | 55 | 62 | 7 | 12.7% |
| NIST | 92 | 94 | 114 | 20 | 21.3% |
| Interior | 42 | 43 | 40 | -3 | -6.5% |
| Transportation | 2 | 3 | 3 | 0 | 0.0% |
| Environ. Protection Agency | 97 | 95 | 95 | -1 | -0.7% |
| Veterans Affairs | 335 | 361 | 354 | -7 | -1.9% |
| Education | 4 | 4 | 4 | 0 | 0.0% |
| Homeland Security | 221 | 248 | 276 | 28 | 11.3% |
| Int'l Assistance Programs | 18 | 18 | 18 | 0 | 0.0% |
| Smithsonian | 145 | 149 | 153 | 4 | 2.7% |
| State | 0 | 0 | 0 | 0 | -- |
| Corps of Engineers | 1 | 1 | 1 | 0 | 0.0% |
| Justice | 28 | 16 | 14 | -2 | -12.5% |
| Total BASIC RESEARCH | 28,166 | 28,694 | 29,656 | 962 | 3.4% |
| Defense | 1,533 | 1,641 | 1,706 | 65 | 3.9% |
| Nondefense | 26,633 | 27,053 | 27,950 | 897 | 3.3% |

(continued)

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Table II-1 (continued). R&D in the FY 2009 Budget by Agency and Character of Work
(budget authority in millions of dollars)

| | FY 2007 Actual | FY 2008 Estimate | FY 2009 Budget | Change FY 08-09 Amount | Percent |
|--|-------------------|---------------------|----------------------|---------------------------|--------------|
| APPLIED RESEARCH | | | | | |
| (Please see Chapter 3 for a discussion of these data) | | | | | |
| Defense (military; incl. Med.) | 5,783 | 5,589 | 4,439 | -1,150 | -20.6% |
| Health and Human Services | 13,813 | 13,741 | 13,911 | 170 | 1.2% |
| <i>Nat'l Institutes of Health</i> | <i>12,611</i> | <i>12,669</i> | <i>12,674</i> | 5 | 0.0% |
| NASA | 1,036 | 963 | 816 | -147 | -15.3% |
| Energy | 3,014 | 3,418 | 3,448 | 30 | 0.9% |
| Nat'l Science Foundation | 352 | 339 | 422 | 83 | 24.6% |
| Agriculture | 1,072 | 1,103 | 922 | -181 | -16.4% |
| Commerce | 629 | 672 | 730 | 58 | 8.6% |
| NOAA | 339 | 387 | 427 | 40 | 10.3% |
| NIST | 278 | 272 | 296 | 24 | 8.8% |
| Interior | 542 | 549 | 513 | -36 | -6.5% |
| Transportation | 563 | 574 | 613 | 39 | 6.8% |
| Environ. Protection Agency | 380 | 373 | 367 | -6 | -1.5% |
| Veterans Affairs | 432 | 474 | 478 | 4 | 0.8% |
| Education | 204 | 201 | 199 | -2 | -1.0% |
| Homeland Security | 407 | 381 | 378 | -3 | -0.8% |
| Int'l Assistance Programs | 188 | 197 | 197 | 0 | 0.0% |
| Smithsonian | 0 | 0 | 0 | 0 | -- |
| Tennessee Valley Auth. | 6 | 6 | 5 | -1 | -16.7% |
| Labor | 4 | 4 | 4 | 0 | 0.0% |
| Nuclear Reg. Comm. | 76 | 71 | 77 | 6 | 8.5% |
| Corps of Engineers | 5 | 5 | 5 | 0 | 0.0% |
| Housing and Urban Dev. | 49 | 51 | 55 | 4 | 7.8% |
| Justice | 17 | 12 | 11 | -1 | -8.3% |
| Social Security | 27 | 27 | 35 | 8 | 29.6% |
| Total APPLIED RESEARCH | 28,599 | 28,751 | 27,626 | -1,125 | -3.9% |
| Defense | 7,781 | 7,725 | 6,605 | -1,120 | -14.5% |
| Nondefense | 20,818 | 21,025 | 21,021 | -4 | 0.0% |

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(budget authority in millions of dollars)

| | FY 2007 Actual | FY 2008 Estimate | FY 2009 Budget | Change FY 08-09 Amount | Percent |
|--|-------------------|---------------------|-------------------|---------------------------|--------------|
| Total RESEARCH (basic + applied) | | | | | |
| (Please see Chapter 3 for a discussion of these data) | | | | | |
| Defense (military; incl. Med.) | 7,307 | 7,223 | 6,138 | -1,086 | -15.0% |
| Health and Human Services | 29,451 | 29,624 | 29,773 | 149 | 0.5% |
| <i>Nat'l Institutes of Health</i> | 28,247 | 28,549 | 28,533 | -16 | -0.1% |
| NASA | 3,354 | 3,274 | 3,103 | -171 | -5.2% |
| Energy | 6,148 | 6,650 | 7,005 | 355 | 5.3% |
| Nat'l Science Foundation | 3,978 | 4,017 | 4,742 | 725 | 18.0% |
| Agriculture | 1,963 | 1,971 | 1,720 | -251 | -12.7% |
| Commerce | 771 | 821 | 906 | 85 | 10.3% |
| NOAA | 389 | 442 | 489 | 47 | 10.6% |
| NIST | 370 | 366 | 410 | 44 | 12.0% |
| Interior | 584 | 592 | 554 | -38 | -6.5% |
| Transportation | 565 | 577 | 616 | 39 | 6.7% |
| Environ. Protection Agency | 476 | 468 | 462 | -6 | -1.4% |
| Veterans Affairs | 767 | 835 | 832 | -3 | -0.4% |
| Education | 208 | 205 | 203 | -2 | -1.0% |
| Homeland Security | 628 | 629 | 654 | 25 | 4.0% |
| Int'l Assistance Programs | 206 | 215 | 215 | 0 | 0.0% |
| Smithsonian | 145 | 149 | 153 | 4 | 2.7% |
| Tennessee Valley Auth. | 6 | 6 | 5 | -1 | -16.7% |
| Labor | 4 | 4 | 4 | 0 | 0.0% |
| Nuclear Reg. Comm. | 76 | 71 | 77 | 6 | 8.5% |
| Corps of Engineers | 6 | 6 | 6 | 0 | 0.0% |
| Housing and Urban Dev. | 49 | 51 | 55 | 4 | 7.8% |
| Justice | 45 | 28 | 25 | -3 | -10.7% |
| Social Security | 27 | 27 | 35 | 8 | 29.6% |
| Total RESEARCH | 56,764 | 57,445 | 57,282 | -163 | -0.3% |
| Defense | 9,313 | 9,366 | 8,311 | -1,056 | -11.3% |
| Nondefense | 47,451 | 48,078 | 48,971 | 893 | 1.9% |

(continued)

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| | FY 2007 Actual | FY 2008 Estimate | FY 2009 Budget | Change FY 08-09 Amount Percent | |
|-----------------------------------|-------------------|---------------------|-------------------|-----------------------------------|--------|
| DEVELOPMENT | | | | | |
| Defense (military) | 71,641 | 70,417 | 74,393 | 3,976 | 5.6% |
| <i>S&T (6.3 Development)</i> | 6,211 | 5,987 | 5,532 | -455 | -7.6% |
| <i>All Other DOD Develop.</i> | 65,431 | 64,430 | 68,862 | 4,431 | 6.9% |
| Health and Human Services | 50 | 50 | 50 | 0 | 0.0% |
| <i>Nat'l Institutes of Health</i> | 0 | 0 | 0 | 0 | -- |
| NASA | 6,263 | 6,470 | 7,071 | 601 | 9.3% |
| Energy | 2,091 | 2,249 | 2,458 | 209 | 9.3% |
| Nat'l Science Foundation | 0 | 0 | 0 | 0 | -- |
| Agriculture | 198 | 198 | 189 | -9 | -4.5% |
| Commerce | 84 | 76 | 69 | -7 | -9.5% |
| <i>NOAA</i> | 37 | 36 | 38 | 2 | 5.6% |
| <i>NIST</i> | 30 | 17 | 8 | -9 | -53.4% |
| Interior | 55 | 62 | 62 | 0 | -0.5% |
| Transportation | 183 | 224 | 264 | 41 | 18.1% |
| Environ. Protection Agency | 80 | 79 | 79 | 0 | -0.6% |
| Veterans Affairs | 52 | 56 | 52 | -4 | -7.1% |
| Education | 119 | 116 | 121 | 5 | 4.3% |
| Homeland Security | 368 | 364 | 380 | 16 | 4.5% |
| Int'l Assistance Programs | 40 | 40 | 40 | 0 | 0.0% |
| Tennessee Valley Auth. | 14 | 14 | 12 | -2 | -14.3% |
| Corps of Engineers | 5 | 5 | 5 | 0 | 0.0% |
| Justice | 59 | 53 | 52 | -1 | -1.9% |
| Postal Service | 43 | 43 | 43 | 0 | 0.0% |
| State | 0 | 0 | 0 | 0 | -- |
| Total Development | 81,366 | 80,570 | 85,366 | 4,796 | 6.0% |
| Defense | 72,958 | 71,684 | 75,780 | 4,096 | 5.7% |
| Nondefense | 8,408 | 8,886 | 9,586 | 700 | 7.9% |

(continued)

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| | FY 2007 Actual | FY 2008 Estimate | FY 2009 Budget | Change FY 08-09 Amount Percent | |
|---|-------------------|---------------------|-------------------|-----------------------------------|-------------|
| Total CONDUCT OF R&D (basic + applied research, development) | | | | | |
| Defense (military) | 78,949 | 77,640 | 80,531 | 2,891 | 3.7% |
| <i>S&T (6.1-6.3 + medical)</i> | 13,518 | 13,215 | 11,669 | -1,546 | -11.7% |
| <i>All Other DOD Conduct</i> | 65,430 | 64,425 | 68,862 | 4,437 | 6.9% |
| Health and Human Services | 29,501 | 29,674 | 29,823 | 149 | 0.5% |
| <i>Nat'l Institutes of Health</i> | 28,247 | 28,549 | 28,533 | -16 | -0.1% |
| NASA | 9,617 | 9,745 | 10,175 | 430 | 4.4% |
| Energy | 8,239 | 8,899 | 9,463 | 564 | 6.3% |
| Nat'l Science Foundation | 3,978 | 4,017 | 4,742 | 725 | 18.0% |
| Agriculture | 2,161 | 2,169 | 1,909 | -260 | -12.0% |
| Commerce | 854 | 898 | 975 | 78 | 8.7% |
| <i>NOAA</i> | 426 | 478 | 527 | 49 | 10.3% |
| <i>NIST</i> | 399 | 384 | 418 | 35 | 9.0% |
| Interior | 639 | 654 | 616 | -39 | -5.9% |
| Transportation | 748 | 801 | 881 | 79 | 9.9% |
| Environ. Protection Agency | 557 | 548 | 541 | -7 | -1.3% |
| Veterans Affairs | 819 | 891 | 884 | -7 | -0.8% |
| Education | 327 | 321 | 324 | 3 | 0.9% |
| Homeland Security | 996 | 992 | 1,033 | 41 | 4.1% |
| Int'l Assistance Programs | 246 | 255 | 255 | 0 | 0.0% |
| Smithsonian | 145 | 149 | 153 | 4 | 2.7% |
| Tennessee Valley Auth. | 20 | 20 | 17 | -3 | -15.0% |
| Labor | 24 | 57 | 29 | -28 | -49.1% |
| Nuclear Reg. Comm. | 76 | 71 | 77 | 6 | 8.5% |
| Corps of Engineers | 11 | 11 | 11 | 0 | 0.0% |
| Housing and Urban Dev. | 49 | 51 | 55 | 4 | 7.8% |
| Justice | 104 | 81 | 77 | -4 | -4.9% |
| Social Security | 27 | 27 | 35 | 8 | 29.6% |
| Postal Service | 43 | 43 | 43 | 0 | 0.0% |
| Total Conduct of R&D | 138,130 | 138,015 | 142,648 | 4,633 | 3.4% |
| Defense | 82,272 | 81,050 | 84,091 | 3,041 | 3.8% |
| Nondefense | 55,858 | 56,964 | 58,557 | 1,592 | 2.8% |

(continued)

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| | FY 2007 Actual | FY 2008 Estimate | FY 2009 Budget | Change FY 08-09 | |
|---|-------------------|---------------------|-------------------|-----------------|---------|
| | | | | Amount | Percent |
| R&D Facilities and Capital Equipment | | | | | |
| Defense (military) | 60 | 142 | 157 | 15 | 10.6% |
| Health and Human Services | 120 | 142 | 150 | 9 | 6.0% |
| <i>Nat'l Institutes of Health</i> | 103 | 127 | 133 | 7 | 5.2% |
| NASA | 1,964 | 2,443 | 2,605 | 162 | 6.6% |
| Energy | 796 | 762 | 1,056 | 294 | 38.6% |
| Nat'l Science Foundation | 462 | 461 | 433 | -29 | -6.2% |
| Agriculture | 114 | 155 | 46 | -109 | -70.3% |
| Commerce | 218 | 241 | 177 | -64 | -26.6% |
| NOAA | 131 | 103 | 49 | -54 | -52.4% |
| NIST | 87 | 138 | 128 | -10 | -7.4% |
| Interior | 8 | 22 | 2 | -20 | -90.9% |
| Transportation | 19 | 19 | 21 | 2 | 9.8% |
| Smithsonian | 41 | 54 | 69 | 15 | 27.8% |
| Total R&D Facils. | 3,803 | 4,442 | 4,716 | 275 | 6.2% |
| Defense | 386 | 450 | 422 | -28 | -6.2% |
| Nondefense | 3,417 | 3,992 | 4,294 | 303 | 7.6% |

Source: AAAS, based on OMB data for R&D for FY 2009, agency budget justifications, and information from agency budget offices.

Note: The projected inflation rate between FY 2008 and FY 2009 is 2.0 percent.

All figures are rounded to the nearest million. Changes calculated from unrounded figures.

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