

Table II-1. R&D in the FY 2003 Budget by Agency and Character of Work

**Table II-1.** R&D in the FY 2003 Budget by Agency and Character of Work  
(budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
<b>TOTAL R&amp;D (Conduct of R&amp;D and R&amp;D Facilities)</b>					
Defense (military)	42,740	49,639	<b>54,827</b>	5,188	10.5%
<i>S&amp;T (6.1-6.3 + medical)</i>	9,365	10,341	<b>9,957</b>	-384	-3.7%
<i>All Other DOD R&amp;D</i>	33,375	39,298	<b>44,870</b>	5,572	14.2%
Health and Human Services	21,045	24,141	<b>27,551</b>	3,410	14.1%
<i>Nat'l Institutes of Health</i>	19,807	22,795	<b>26,452</b>	3,657	16.0%
NASA	9,887	10,232	<b>10,676</b>	444	4.3%
Energy	7,733	8,361	<b>8,323</b>	-38	-0.5%
Nat'l Science Foundation	3,320	3,526	<b>3,651</b>	125	3.5%
Agriculture	2,181	2,334	<b>2,118</b>	-216	-9.3%
Commerce	1,030	1,096	<b>1,100</b>	4	0.3%
<i>NOAA</i>	561	611	<b>605</b>	-6	-1.1%
<i>NIST</i>	413	460	<b>483</b>	23	5.0%
Interior	621	660	<b>628</b>	-32	-4.8%
Transportation	718	778	<b>736</b>	-42	-5.4%
Environ. Protection Agency	574	592	<b>627</b>	35	5.9%
Veterans Affairs	719	761	<b>810</b>	49	6.5%
Education	264	268	<b>311</b>	43	16.0%
Int'l Assistance Programs	252	268	<b>182</b>	-86	-32.1%
Smithsonian	121	126	<b>131</b>	5	4.0%
Tennessee Valley Auth.	29	30	<b>30</b>	0	0.0%
Labor	17	20	<b>10</b>	-10	-50.0%
Nuclear Reg. Comm.	53	61	<b>68</b>	7	11.5%
Corps of Engineers	27	27	<b>27</b>	0	0.0%
Housing and Urban Dev.	53	47	<b>47</b>	0	0.0%
Justice	88	98	<b>114</b>	16	16.3%
Social Security	30	37	<b>30</b>	-7	-18.9%
Postal Service	29	46	<b>47</b>	1	2.2%
Treasury	3	3	<b>3</b>	0	0.0%
<b>Total R&amp;D</b>	91,534	103,150	<b>112,047</b>	8,897	8.6%
Defense R&D	46,202	53,478	<b>58,774</b>	5,297	9.9%
Nondefense R&D	45,332	49,672	<b>53,273</b>	3,601	7.2%

(continued)

Table II-1. R&D in the FY 2003 Budget by Agency and Character of Work

**Table II-1 (continued).** R&D in the FY 2003 Budget by Agency and Character of Work  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
<b>BASIC RESEARCH</b>					
<b>(Please see Chapter 3 for a discussion of these data)</b>					
Defense (military)	1,287	1,376	<b>1,365</b>	-11	-0.8%
Health and Human Services	11,642	13,193	<b>14,379</b>	1,185	9.0%
<i>Nat'l Institutes of Health</i>	<i>11,639</i>	<i>13,190</i>	<i><b>14,376</b></i>	<i>1,185</i>	<i>9.0%</i>
NASA	1,695	1,967	<b>2,361</b>	395	20.1%
Energy	2,390	2,424	<b>2,519</b>	94	3.9%
Nat'l Science Foundation	2,852	3,058	<b>3,205</b>	147	4.8%
Agriculture	801	860	<b>880</b>	20	2.3%
Commerce	50	52	<b>73</b>	21	40.4%
NOAA	0	0	<b>0</b>	0	--
NIST	50	52	<b>73</b>	21	40.4%
Interior	56	58	<b>55</b>	-3	-4.4%
Transportation	17	13	<b>25</b>	12	92.6%
Environ. Protection Agency	104	107	<b>101</b>	-6	-5.3%
Veterans Affairs	289	329	<b>351</b>	23	6.9%
Education	2	2	<b>1</b>	-1	-50.0%
Int'l Assistance Programs	50	53	<b>39</b>	-14	-26.4%
Smithsonian	108	111	<b>114</b>	3	2.7%
Labor	2	2	<b>2</b>	0	0.0%
Corps of Engineers	3	3	<b>3</b>	0	0.0%
Justice	27	27	<b>25</b>	-2	-7.4%
<b>Total BASIC RESEARCH</b>	<b>21,376</b>	<b>23,635</b>	<b>25,499</b>	<b>1,864</b>	<b>7.9%</b>
Defense	1,303	1,392	<b>1,383</b>	-10	-0.7%
Nondefense	20,073	22,243	<b>24,116</b>	1,874	8.4%

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Table II-1. R&D in the FY 2003 Budget by Agency and Character of Work

**Table II-1 (continued).** R&D in the FY 2003 Budget by Agency and Character of Work  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount    Percent	
<b>APPLIED RESEARCH</b>					
<b>(Please see Chapter 3 for a discussion of these data)</b>					
Defense (military; incl. Med.)	4,106	4,550	<b>3,847</b>	-703	-15.4%
Health and Human Services	9,094	10,416	<b>12,258</b>	1,842	17.7%
<i>Nat'l Institutes of Health</i>	<i>7,923</i>	<i>9,156</i>	<i>11,203</i>	<i>2,047</i>	<i>22.4%</i>
NASA	2,599	2,857	<b>3,188</b>	330	11.6%
Energy	2,306	2,731	<b>2,669</b>	-62	-2.3%
Nat'l Science Foundation	180	192	<b>199</b>	7	3.7%
Agriculture	1,044	986	<b>946</b>	-40	-4.1%
Commerce	775	835	<b>810</b>	-25	-3.0%
NOAA	511	546	<b>546</b>	0	0.0%
NIST	256	282	<b>255</b>	-27	-9.5%
Interior	534	570	<b>541</b>	-29	-5.1%
Transportation	444	503	<b>481</b>	-22	-4.4%
Environ. Protection Agency	369	383	<b>430</b>	47	12.3%
Veterans Affairs	415	417	<b>442</b>	26	6.1%
Education	172	178	<b>212</b>	34	19.1%
Int'l Assistance Programs	199	215	<b>143</b>	-72	-33.5%
Smithsonian	0	0	<b>0</b>	0	- -
Tennessee Valley Auth.	15	15	<b>15</b>	0	0.0%
Labor	15	18	<b>8</b>	-10	-55.6%
Nuclear Reg. Comm.	53	61	<b>68</b>	7	11.5%
Corps of Engineers	14	14	<b>14</b>	0	0.0%
Housing and Urban Dev.	53	47	<b>47</b>	0	0.0%
Justice	31	22	<b>20</b>	-2	-9.1%
Social Security	30	37	<b>30</b>	-7	-18.9%
Treasury	3	3	<b>3</b>	0	0.0%
<b>Total APPLIED RESEARCH</b>	<b>22,451</b>	<b>25,050</b>	<b>26,370</b>	<b>1,320</b>	<b>5.3%</b>
Defense	5,786	6,526	<b>5,924</b>	-602	-9.2%
Nondefense	16,665	18,524	<b>20,447</b>	1,923	10.4%

(continued)

Table II-1. R&D in the FY 2003 Budget by Agency and Character of Work

**Table II-1 (continued).** R&D in the FY 2003 Budget by Agency and Character of Work  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount	Percent
<b>Total RESEARCH (basic + applied)</b>					
<i>(Please see Chapter 3 for a discussion of these data)</i>					
Defense (military; incl. Med.)	5,393	5,926	<b>5,213</b>	-713	-12.0%
Health and Human Services	20,735	23,610	<b>26,636</b>	3,027	12.8%
<i>Nat'l Institutes of Health</i>	<i>19,561</i>	<i>22,346</i>	<i><b>25,578</b></i>	<i>3,232</i>	<i>14.5%</i>
NASA	4,294	4,824	<b>5,549</b>	725	15.0%
Energy	4,697	5,155	<b>5,188</b>	32	0.6%
Nat'l Science Foundation	3,032	3,250	<b>3,404</b>	154	4.7%
Agriculture	1,845	1,846	<b>1,826</b>	-20	-1.1%
Commerce	825	887	<b>883</b>	-4	-0.4%
NOAA	511	546	<b>546</b>	0	0.0%
NIST	306	334	<b>328</b>	-6	-1.8%
Interior	590	628	<b>596</b>	-32	-5.1%
Transportation	461	517	<b>506</b>	-10	-2.0%
Environ. Protection Agency	474	489	<b>531</b>	41	8.5%
Veterans Affairs	704	745	<b>794</b>	48	6.5%
Education	174	180	<b>213</b>	33	18.3%
Int'l Assistance Programs	249	268	<b>182</b>	-86	-32.1%
Smithsonian	108	111	<b>114</b>	3	2.7%
Tennessee Valley Auth.	15	15	<b>15</b>	0	0.0%
Labor	17	20	<b>10</b>	-10	-50.0%
Nuclear Reg. Comm.	53	61	<b>68</b>	7	11.5%
Corps of Engineers	17	17	<b>17</b>	0	0.0%
Housing and Urban Dev.	53	47	<b>47</b>	0	0.0%
Justice	58	49	<b>45</b>	-4	-8.2%
Social Security	30	37	<b>30</b>	-7	-18.9%
Treasury	3	3	<b>3</b>	0	0.0%
<b>Total RESEARCH</b>	<b>43,826</b>	<b>48,685</b>	<b>51,869</b>	<b>3,184</b>	<b>6.5%</b>
Defense	7,088	7,918	<b>7,306</b>	-612	-7.7%
Nondefense	36,738	40,767	<b>44,563</b>	3,796	9.3%

(continued)

Table II-1. R&D in the FY 2003 Budget by Agency and Character of Work

**Table II-1 (continued).** R&D in the FY 2003 Budget by Agency and Character of Work  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount    Percent	
<b>DEVELOPMENT</b>					
Defense (military)	37,326	43,703	<b>49,593</b>	5,890	13.5%
<i>S&amp;T (6.3 Development)</i>	3,972	4,415	<b>4,745</b>	330	7.5%
<i>All Other DOD Develop.</i>	33,354	39,288	<b>44,848</b>	5,560	14.2%
Health and Human Services	45	62	<b>28</b>	-34	-54.8%
<i>Nat'l Institutes of Health</i>	0	0	<b>0</b>	0	--
NASA	2,768	2,667	<b>2,723</b>	56	2.1%
Energy	1,965	2,061	<b>2,062</b>	1	0.0%
Nat'l Science Foundation	0	0	<b>0</b>	0	--
Agriculture	152	163	<b>156</b>	-7	-4.3%
Commerce	139	132	<b>80</b>	-52	-39.6%
<i>NOAA</i>	23	28	<b>29</b>	1	2.0%
<i>NIST</i>	69	87	<b>49</b>	-38	-43.7%
Interior	32	32	<b>32</b>	0	-0.2%
Transportation	243	244	<b>210</b>	-34	-13.9%
Environ. Protection Agency	100	102	<b>96</b>	-6	-6.3%
Veterans Affairs	14	15	<b>16</b>	1	6.4%
Education	90	88	<b>98</b>	10	11.4%
Int'l Assistance Programs	3	0	<b>0</b>	0	--
Tennessee Valley Auth.	14	15	<b>15</b>	0	0.0%
Labor	0	0	<b>0</b>	0	--
Corps of Engineers	10	10	<b>10</b>	0	0.0%
Justice	30	49	<b>69</b>	20	40.8%
Postal Service	29	46	<b>47</b>	1	2.2%
<b>Total Development</b>	<b>42,959</b>	<b>49,390</b>	<b>55,235</b>	<b>5,845</b>	<b>11.8%</b>
Defense	38,624	45,003	<b>50,952</b>	5,949	13.2%
Nondefense	4,334	4,386	<b>4,283</b>	-104	-2.4%

(continued)

Table II-1. R&D in the FY 2003 Budget by Agency and Character of Work

**Table II-1 (continued).** R&D in the FY 2003 Budget by Agency and Character of Work  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount Percent	
<b>Total CONDUCT OF R&amp;D (basic + applied research, development)</b>					
Defense (military)	42,719	49,629	<b>54,805</b>	5,176	10.4%
<i>S&amp;T (6.1-6.3 + medical)</i>	9,365	10,341	<b>9,957</b>	-384	-3.7%
<i>All Other DOD Conduct</i>	33,354	39,288	<b>44,848</b>	5,560	14.2%
Health and Human Services	20,780	23,672	<b>26,664</b>	2,993	12.6%
<i>Nat'l Institutes of Health</i>	19,561	22,346	<b>25,578</b>	3,232	14.5%
NASA	7,062	7,491	<b>8,272</b>	781	10.4%
Energy	6,661	7,216	<b>7,250</b>	33	0.5%
Nat'l Science Foundation	3,032	3,250	<b>3,404</b>	154	4.7%
Agriculture	1,997	2,009	<b>1,982</b>	-27	-1.3%
Commerce	964	1,019	<b>963</b>	-56	-5.5%
<i>NOAA</i>	534	574	<b>575</b>	1	0.1%
<i>NIST</i>	375	421	<b>377</b>	-44	-10.4%
Interior	621	660	<b>628</b>	-32	-4.8%
Transportation	704	761	<b>717</b>	-44	-5.8%
Environ. Protection Agency	574	592	<b>627</b>	35	5.9%
Veterans Affairs	719	761	<b>810</b>	49	6.5%
Education	264	268	<b>311</b>	43	16.0%
Int'l Assistance Programs	252	268	<b>182</b>	-86	-32.1%
Smithsonian	108	111	<b>114</b>	3	2.7%
Tennessee Valley Auth.	29	30	<b>30</b>	0	0.0%
Labor	17	20	<b>10</b>	-10	-50.0%
Nuclear Reg. Comm.	53	61	<b>68</b>	7	11.5%
Corps of Engineers	27	27	<b>27</b>	0	0.0%
Housing and Urban Dev.	53	47	<b>47</b>	0	0.0%
Justice	88	98	<b>114</b>	16	16.3%
Social Security	30	37	<b>30</b>	-7	-18.9%
Postal Service	29	46	<b>47</b>	1	2.2%
Treasury	3	3	<b>3</b>	0	0.0%
<b>Total Conduct of R&amp;D</b>	<b>86,785</b>	<b>98,075</b>	<b>107,104</b>	<b>9,029</b>	<b>9.2%</b>
Defense	45,713	52,922	<b>58,259</b>	5,337	10.1%
Nondefense	41,072	45,153	<b>48,845</b>	3,692	8.2%

(continued)

Table II-1. R&D in the FY 2003 Budget by Agency and Character of Work

**Table II-1 (continued).** R&D in the FY 2003 Budget by Agency and Character of Work  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
<b>R&amp;D Facilities and Capital Equipment</b>					
Defense (military)	21	10	<b>22</b>	12	120.0%
Health and Human Services	265	469	<b>887</b>	418	89.0%
<i>Nat'l Institutes of Health</i>	<i>246</i>	<i>449</i>	<i><b>874</b></i>	<i>425</i>	<i>94.6%</i>
NASA	2,826	2,741	<b>2,404</b>	-337	-12.3%
Energy	1,072	1,145	<b>1,073</b>	-71	-6.2%
Nat'l Science Foundation	288	276	<b>247</b>	-29	-10.4%
Agriculture	184	325	<b>136</b>	-189	-58.2%
Commerce	66	77	<b>137</b>	60	77.9%
NOAA	27	37	<b>30</b>	-7	-18.9%
NIST	38	39	<b>106</b>	67	171.8%
Transportation	15	17	<b>19</b>	2	11.5%
Smithsonian	13	15	<b>17</b>	2	13.3%
<b>Total R&amp;D Facils.</b>	<b>4,749</b>	<b>5,075</b>	<b>4,943</b>	<b>-132</b>	<b>-2.6%</b>
Defense	489	556	<b>516</b>	-40	-7.3%
Nondefense	4,260	4,519	<b>4,427</b>	-92	-2.0%

Source: AAAS, based on OMB data for R&D for FY 2003, agency budget justifications, and information from agency budget offices.

All years include homeland security and other emergency appropriations.

All years adjusted to include proposals to fully fund federal retiree costs.

Note: The projected inflation rate between FY 2002 and FY 2003 is 1.8 percent.

See individual agency tables for more information.

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

Table II-2. R&D in the Department of Defense

**Table II-2.** R&D in the Department of Defense  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount Percent	
<b>Research, Development, Test, and Evaluation (RDT&amp;E)</b>					
Basic Research ("6.1")	1,287	1,376	<b>1,365</b>	-11	-0.8%
Applied Research ("6.2")	3,674	4,086	<b>3,780</b>	-306	-7.5%
Total Research	4,961	5,462	<b>5,145</b>	-317	-5.8%
Adv. Tech. Development ("6.3")	3,972	4,415	<b>4,745</b>	330	7.5%
Total Science & Technology	8,933	9,877	<b>9,890</b>	13	0.1%
Demons. and Valid. ("6.4")	8,052	10,361	<b>10,539</b>	177	1.7%
Eng. & Manufacturing Dev. ("6.5")	8,441	11,018	<b>13,550</b>	2,533	23.0%
Management Support ("6.6")	3,342	2,850	<b>2,890</b>	40	1.4%
Operational Sys. Dev. ("6.7")	12,980	14,399	<b>17,200</b>	2,802	19.5%
BA Adjustment	-13	49	<b>0</b>	-49	-100.0%
Total RDT&E	41,735	48,554	<b>54,070</b>	5,516	11.4%
Medical Research <sup>1</sup>	432	464	<b>67</b>	-397	-85.5%
Other Appropriations <sup>2</sup>	573	621	<b>690</b>	69	11.1%
<b>Total DOD R&amp;D</b>	42,740	49,639	<b>54,827</b>	5,188	10.5%
Total Conduct of R&D	42,719	49,629	<b>54,805</b>	5,176	10.4%
Total R&D Facilities & Equip.	21	10	<b>22</b>	12	120.0%

Source: OMB data for R&D for FY 2003, *Budget of the United States Government FY 2003*, DOD "RDT&E Programs" (R-1).

<sup>1</sup> Medical research appropriated in Defense Health Programs, not RDT&E. These funds are not included in "6.2" (applied research).

<sup>2</sup> R&D support in military personnel, O&M, and other appropriations. Includes R&D on chemical agents and munition destruction.

Character of work ("6.x" categories) are expressed in total obligational authority (TOA).

BA Adjustment converts TOA into budget authority.

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

All figures include homeland security and other emergency appropriations.

**Please see Chapter 6 for a discussion of DOD R&D.**

Table II-3. DOD R&amp;D by Departments and Agencies

**Table II-3.** DOD R&D by Military Departments and Agencies  
(budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
<b>Research, Development, Test, and Evaluation (RDT&amp;E)</b>					
Army	6,310	7,138	<b>7,131</b>	-7	-0.1%
Navy	9,583	11,375	<b>12,502</b>	1,127	9.9%
Air Force	14,331	14,514	<b>17,601</b>	3,087	21.3%
Defense Agencies	11,286	15,297	<b>16,614</b>	1,317	8.6%
<i>Ballistic Missile Defense Org.</i>	<i>4,208</i>	<i>6,969</i>	<i><b>6,691</b></i>	<i>-279</i>	<i>-4.0%</i>
<i>Def. Adv. Res. Projects Agency</i>	<i>1,977</i>	<i>2,253</i>	<i><b>2,685</b></i>	<i>432</i>	<i>19.2%</i>
<i>Secretary of Defense</i>	<i>1,510</i>	<i>1,699</i>	<i><b>1,813</b></i>	<i>114</i>	<i>6.7%</i>
<i>Chem. And Bio. Defense</i>	<i>405</i>	<i>550</i>	<i><b>933</b></i>	<i>383</i>	<i>69.7%</i>
<i>Classified Agencies</i>	<i>2,055</i>	<i>2,542</i>	<i><b>3,207</b></i>	<i>665</i>	<i>26.1%</i>
<i>Other</i>	<i>1,132</i>	<i>1,284</i>	<i><b>1,285</b></i>	<i>1</i>	<i>0.1%</i>
Director of Test and Evaluation	0	0	<b>0</b>	0	--
Director of Operational Test & Eval	225	230	<b>222</b>	-8	-3.5%
Total RDT&E	41,735	48,554	<b>54,070</b>	5,516	11.4%
Medical Research <sup>1</sup>	432	464	<b>67</b>	-397	-85.5%
Other Appropriations <sup>2</sup>	573	621	<b>690</b>	69	11.1%
<b>Total DOD R&amp;D</b>	42,740	49,639	<b>54,827</b>	5,188	10.5%

Source: OMB data for R&D for FY 2003, *Budget of the United States Government FY 2003*, DOD "RDT&E Programs" (R-1).

<sup>1</sup> Medical research appropriated in Defense Health Programs, not RDT&E.

<sup>2</sup> R&D support in military personnel, O&M, and other appropriations.

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

**DOD Military Budget (in BILLIONS of dollars discretionary budget authority)**

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
RDT&E (see above)	41.7	48.6	<b>53.9</b>	5.3	10.9%
Military Personnel	76.9	82.0	<b>94.2</b>	12.3	15.0%
Operations and Maintenance	117.2	129.5	<b>150.2</b>	20.7	16.0%
Procurement	62.6	61.1	<b>68.7</b>	7.6	12.4%
Military Construction	5.5	6.6	<b>4.8</b>	-1.8	-27.7%
Family Housing	3.7	4.1	<b>4.2</b>	0.2	4.1%
Revolving and Management Funds	2.2	2.5	<b>3.3</b>	0.7	29.4%
Allowances, Offsets, Other	0.0	0.0	<b>0.0</b>	0.0	--
<b>Total DOD Discret. Budget</b>	309.8	334.3	<b>379.3</b>	44.9	13.4%

DOD military budget only (excludes civilian activities of the Corps of Engineers).

Table II-4. DOD R&D by Character of Work

**Table II-4.** Department of Defense R&D by Character of Work  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	<b>FY 2003 Budget</b>	Change FY 02-03	
				Amount	Percent
<b>Current Dollars</b>					
Basic Research	1,287	1,376	<b>1,365</b>	-11	-0.8%
Applied Research <sup>1</sup>	4,106	4,550	<b>3,847</b>	-703	-15.4%
Total Research	<u>5,393</u>	<u>5,926</u>	<u><b>5,213</b></u>	-713	-12.0%
Development	37,326	43,703	<b>49,593</b>	5,890	13.5%
Total Conduct of R&D	<u>42,719</u>	<u>49,629</u>	<u><b>54,805</b></u>	5,176	10.4%
R&D Facilities <sup>2</sup>	21	10	<b>22</b>	12	120.0%
<b>Total DOD R&amp;D</b>	<u>42,740</u>	<u>49,639</u>	<u><b>54,827</b></u>	5,188	10.5%
<b>Constant FY 2002 Dollars</b>					
Basic Research	1,316	1,376	<b>1,341</b>	-35	-2.5%
Applied Research <sup>1</sup>	4,196	4,550	<b>3,779</b>	-771	-16.9%
Total Research	<u>5,512</u>	<u>5,926</u>	<u><b>5,121</b></u>	-806	-13.6%
Development	38,145	43,703	<b>48,716</b>	5,014	11.5%
Total Conduct of R&D	<u>43,656</u>	<u>49,629</u>	<u><b>53,837</b></u>	4,208	8.5%
R&D Facilities <sup>2</sup>	21	10	<b>22</b>	12	116.1%
<b>Total DOD R&amp;D</b>	<u>43,678</u>	<u>49,639</u>	<u><b>53,859</b></u>	4,220	8.5%

Source: OMB data for R&D for FY 2003, *Budget of the United States Government FY 2003*, DOD "RDT&E Programs" (R-1).

<sup>1</sup> Includes medical research appropriated outside RDT&E.

<sup>2</sup> Includes expenses for major capital equipment used for R&D.

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

**Please see Chapter 6 for a discussion of DOD R&D.**

Table II-5. DOD Funding for Basic Research ("6.1")

**Table II-5.** Department of Defense Funding for Basic Research ("6.1")  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
<b>Army</b>					
In-House Indep. Research	14	15	<b>23</b>	8	56.6%
Defense Research Sciences	133	144	<b>140</b>	-5	-3.2%
Univ. & Indus. Research Ctrs.	58	73	<b>75</b>	2	2.5%
Total Army	205	232	<b>237</b>	6	2.4%
<b>Navy</b>					
In-House Indep. Research	14	16	<b>16</b>	0	1.3%
Defense Research Sciences	372	388	<b>394</b>	5	1.3%
Total Navy	385	405	<b>410</b>	5	1.3%
<b>Air Force</b>					
Defense Research Sciences	207	226	<b>219</b>	-7	-3.2%
Total Air Force	207	226	<b>219</b>	-7	-3.2%
<b>Defense Agencies</b>					
In-House Indep. Research	2	2	<b>2</b>	0	2.2%
Defense Research Sciences	100	142	<b>176</b>	33	23.4%
Univ. Research Initiatives*	314	278	<b>244</b>	-34	-12.3%
Gov't / Industry University Res.	7	9	<b>3</b>	-6	-62.3%
Force Health Protection	29	36	<b>10</b>	-26	-72.6%
Chem. and Bio. Defense	38	46	<b>64</b>	18	40.0%
Total Defense Agencies	490	513	<b>499</b>	-15	-2.8%
<b>Total DOD</b>					
In-House Indep. Research	30	33	<b>41</b>	9	26.0%
Defense Research Sciences	811	901	<b>928</b>	27	3.0%
Univ. Research Initiatives *	314	278	<b>244</b>	-34	-12.3%
Gov't / Industry University Res.	7	9	<b>3</b>	-6	-62.3%
Chem. and Bio. Defense	38	46	<b>64</b>	18	40.0%
Univ. & Indus. Research Ctrs.	58	73	<b>75</b>	2	2.5%
Force Health Protection	29	36	<b>10</b>	-26	-72.6%
<b>Total DOD Basic Research</b>	1,287	1,376	<b>1,365</b>	-11	-0.8%

Source: OMB data for R&D for FY 2003, *Budget of the United States Government FY 2003*, DOD "RDT&E Programs" (R-1).

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

\* - Includes DEPSCoR program and High Energy Laser Research Initiative.

**Please see Chapter 6 for a discussion of DOD R&D.**

Table II-6. DOD R&D Trends, FY 1965-2003

**Table II-6.** Trends in Department of Defense R&D, FY 1965 - FY 2003  
(budget authority in millions of dollars)

Fiscal Year	Basic Research <sup>1</sup>		Total DOD R&D	
	Current Dollars	Constant FY 2002 \$	Current Dollars	Constant FY 2002 \$
1965	347	1,639	6,865	32,428
1970	323	1,267	7,491	29,388
1975	305	882	9,167	26,494
1980	552	1,102	14,150	28,249
1985	851	1,294	31,632	48,110
1986	954	1,417	35,000	51,979
1987	894	1,292	37,136	53,675
1988	897	1,255	38,126	53,360
1989	951	1,282	38,578	51,994
1990	931	1,210	37,869	49,188
1991	1,155	1,444	37,209	46,519
1992	1,140	1,389	37,779	46,027
1993	1,312	1,561	38,848	46,227
1994	1,179	1,373	35,510	41,360
1995	1,175	1,339	35,349	40,299
1996	1,098	1,228	35,783	39,994
1997	1,032	1,131	37,238	40,825
1998	1,012	1,094	37,569	40,614
1999	1,064	1,135	38,888	41,498
2000	1,139	1,191	39,960	41,780
2001	1,287	1,316	42,740	43,678
2002 (estimate)	1,376	1,376	49,639	49,639
2003 (budget)	1,365	1,341	54,827	53,859

Source: National Science Foundation historical reports, the R-1, and OMB data on R&D for FY 2003. Constant dollar conversions based on OMB's GDP deflators.

<sup>1</sup> Budget authority for DOD "6.1" category. Some figures reflect later DOD revisions.

**Please see Chapter 6 for a discussion of DOD R&D.**

Table II-7. NSF R&amp;D

**Table II-7.** R&D in the National Science Foundation  
(budget authority in millions of dollars) \*

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
1. Research and Related Activities (R&RA)					
Mathematical and Physical Sciences (MPS)					
Mathematical Sciences	121	151	<b>182</b>	30	20.1%
Astronomical Sciences	149	166	<b>161</b>	-5	-2.8%
Physics	188	196	<b>193</b>	-3	-1.3%
Chemistry	154	163	<b>161</b>	-2	-1.3%
Materials Research	210	220	<b>219</b>	0	-0.1%
Multidisciplinary Activities	32	25	<b>25</b>	0	0.8%
Total MPS	854	920	<b>942</b>	21	2.3%
Engineering (ENG)					
Bioengineering & Env. Sys.	39	42	<b>44</b>	2	5.0%
Chemical & Transport System Design, Manufacture, & Industrial Innovation	51	57	<b>59</b>	2	3.8%
Electrical & Commun. Sys.	127	136	<b>141</b>	5	3.7%
Engineering Edu. & Centers	54	65	<b>67</b>	2	2.9%
Civil & Mechanical Systems	109	117	<b>119</b>	3	2.4%
	53	56	<b>58</b>	2	3.0%
Total ENG	433	472	<b>488</b>	16	3.3%
Biological Sciences (BIO)					
Molecular and Cellular Biosci	114	115	<b>112</b>	-3	-2.7%
Integrative Biology & Neurosci	96	101	<b>99</b>	-3	-2.7%
Environmental Biology	97	102	<b>100</b>	-3	-2.7%
Biological Infrastructure	69	69	<b>72</b>	4	5.5%
Emerging Frontiers	45	46	<b>68</b>	22	47.2%
Plant Genome Research	65	75	<b>75</b>	0	0.0%
Total BIO	486	508	<b>526</b>	17	3.4%
Geosciences (GEO)					
Atmospheric Sciences	189	202	<b>219</b>	17	8.4%
Earth Sciences	116	126	<b>153</b>	27	21.2%
Ocean Sciences	259	281	<b>319</b>	38	13.5%
Total GEO	564	609	<b>691</b>	82	13.4%
Computer and Information Science and Engineering (CISE)					
Computer-Communications Res	66	70	<b>70</b>	0	0.5%
Information and Intelligent Sys	49	52	<b>51</b>	-1	-2.8%
Experimental and Integrative Activities	61	63	<b>62</b>	-1	-0.8%

(continued)

Table II-7. NSF R&amp;D

**Table II-7 (continued).** R&D in the National Science Foundation  
(budget authority in millions of dollars) \*

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Adv. Networking Infra. and Res.	65	70	<b>68</b>	-2	-2.8%
Adv. Compu. Infra. and Res.	82	87	<b>85</b>	-2	-1.8%
Information Tech. Research	155	174	<b>191</b>	17	9.9%
Total CISE	478	515	<b>527</b>	12	2.3%
Social, Behavioral, and Economic Sciences (SBE)					
Social & Economic Scis.	66	68	<b>78</b>	10	13.9%
Behavioral & Cognitive Scis.	57	59	<b>65</b>	7	11.6%
Int'l. Sci. and Engineering	38	26	<b>27</b>	1	3.9%
Science Resources Statistics	16	16	<b>26</b>	10	58.8%
Total SBE	177	169	<b>196</b>	27	15.9%
US Polar Programs					
Polar Research Programs	214	230	<b>236</b>	6	2.6%
Antarctic Logistical Support	68	68	<b>68</b>	0	0.0%
Total Polar Programs	282	298	<b>304</b>	6	2.0%
Integrative Activities	98	107	<b>111</b>	4	3.8%
BA Adjustment *	-15	0	<b>0</b>	0	--
<b>Total R&amp;RA *</b>	<b>3,357</b>	<b>3,599</b>	<b>3,783</b>	<b>185</b>	<b>5.1%</b>
2. Major Research Equipment	122	139	<b>126</b>	-13	-9.0%
3. Education & Human Resources (EHR)					
Educational System Reform	110	45	<b>40</b>	-5	-10.9%
Elem., Secondary, & Informal	203	165	<b>171</b>	6	3.7%
Undergraduate Education	141	142	<b>136</b>	-7	-4.8%
Graduate Education	88	106	<b>128</b>	23	21.7%
Human Resource Develop.	90	97	<b>90</b>	-7	-7.4%
Math & Science Partnerships	0	160	<b>200</b>	40	25.0%
Res., Eval.. And Commun.	74	68	<b>67</b>	-1	-1.3%
EPSCoR <sup>1</sup>	89	91	<b>75</b>	-16	-17.6%
BA Adjustment *	-10	0	<b>0</b>	0	--
Total EHR	785	875	<b>908</b>	33	3.8%

(continued)

Table II-7. NSF R&D

**Table II-7 (continued).** R&D in the National Science Foundation  
(budget authority in millions of dollars) \*

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount    Percent	
4. Salaries and Expenses	167	176	210	34	19.1%
5. Inspector General	6	7	8	1	19.2%
Total NSF Budget *	4,437	4,796	<b>5,036</b>	240	5.0%
<b>Deduct non-R&amp;D Activities:</b>					
<i>R&amp;RA non-R&amp;D</i>	320	357	<b>396</b>	38	10.7%
<i>EHR non-R&amp;D</i>	624	729	<b>771</b>	42	5.7%
<i>Salaries and Expenses</i>	167	176	<b>210</b>	34	19.1%
<i>Inspector General</i>	6	7	<b>8</b>	1	19.2%
<b>Total NSF R&amp;D</b>	3,320	3,526	<b>3,651</b>	125	3.5%
Conduct of R&D	3,032	3,250	<b>3,404</b>	154	4.7%
R&D Facilities	288	276	<b>247</b>	-29	-10.4%

Source: NSF budget justification and Quantitative Data Tables.

\* - Directorate detailed figures are in obligations. BA adjustment converts obligations to budget authority.

Does not include funding from H-1B Nonimmigrant Petitioner Fees.

<sup>1</sup> Experimental Program to Stimulate Competitive Research.

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

**Please see Chapter 7 for information on the NSF budget.**

Table II-8. R&D in the Department of Health and Human Services

**Table II-8.** R&D in the Department of Health and Human Services  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount	Percent
<b>Health</b>					
National Institutes of Health	19,807	22,795	<b>26,452</b>	3,657	16.0%
Centers for Disease Control	544	601	<b>548</b>	-53	-8.9%
Food and Drug Administration	155	174	<b>168</b>	-6	-3.4%
Medicare & Medicaid Services <sup>1</sup>	138	117	<b>28</b>	-89	-76.1%
Health Resources & Svcs. Admin.	36	53	<b>21</b>	-32	-60.4%
Departmental Management	46	65	<b>17</b>	-48	-73.8%
Healthcare Research and Quality <sup>2</sup>	291	311	<b>263</b>	-48	-15.4%
<b>Total Health R&amp;D</b>	<b>21,017</b>	<b>24,117</b>	<b>27,497</b>	<b>3,380</b>	<b>14.0%</b>
<b>Human Services</b>					
Admin. For Children and Families	24	24	<b>54</b>	30	125.0%
Office of Aging	4	0	<b>0</b>	0	--
<b>Total Human Services R&amp;D</b>	<b>28</b>	<b>24</b>	<b>54</b>	<b>30</b>	<b>125.0%</b>
<b>Total HHS R&amp;D</b>	<b>21,045</b>	<b>24,141</b>	<b>27,551</b>	<b>3,410</b>	<b>14.1%</b>
<b>Dept. of Health and Human Services Budget</b> (includes R&D components above)					
Food and Drug Administration	1,146	1,423	<b>1,434</b>	11	0.8%
Health Resources & Svcs. Admin.	6,904	6,283	<b>5,538</b>	-745	-11.9%
Indian Health Services	2,801	2,930	<b>2,990</b>	60	2.0%
Centers for Disease Control	4,006	4,443	<b>4,015</b>	-428	-9.6%
National Institutes of Health	20,558	23,454	<b>27,446</b>	3,992	17.0%
Substance Abuse & Mental Health	2,968	3,142	<b>3,197</b>	55	1.8%
Medicaid	129,419	144,641	<b>158,790</b>	14,149	9.8%
Medicare <sup>3</sup>	217,176	230,338	<b>234,467</b>	4,129	1.8%
Admin. for Children and Families	43,221	44,588	<b>46,967</b>	2,379	5.3%
Admin. on Aging	1,104	1,201	<b>1,342</b>	141	11.7%
Other <sup>4</sup>	6,034	6,011	<b>5,668</b>	-343	-5.7%
<b>Total HHS Budget</b>	<b>435,337</b>	<b>468,454</b>	<b>491,854</b>	<b>23,400</b>	<b>5.0%</b>

Source: *Budget of the United States Government FY 2003*, OMB R&D data for FY 2003 and agency budget justification. Includes budget authority from appropriations, permanent appropriations, and trust funds.

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

<sup>1</sup> Formerly the Health Care Financing Administration.

<sup>2</sup> Figures reflect estimated R&D program levels from all receipts, not just appropriated BA.

<sup>3</sup> Net BA after subtracting receipts from premiums, etc.

<sup>4</sup> Includes offsetting receipts.

**Please see Chapter 8 for a discussion of HHS R&D.**

Table II-9. NIH R&amp;D by Institute

**Table II-9.** R&D in the National Institutes of Health by Institute  
(budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Cancer	3,740	4,210	<b>4,725</b>	515	12.2%
Heart, Lung and Blood	2,293	2,582	<b>2,798</b>	217	8.4%
Dental & Cranofacial Research	307	345	<b>374</b>	29	8.4%
Diabetes & Digestive & Kidney Dis	1,404	1,471	<b>1,609</b>	138	9.4%
Neurological Disorders and Stroke	1,176	1,332	<b>1,443</b>	112	8.4%
Allergy and Infectious Diseases	2,069	2,542	<b>3,999</b>	1,457	57.3%
General Medical Sciences	1,532	1,726	<b>1,881</b>	155	9.0%
Child Health & Human Dev.	982	1,117	<b>1,218</b>	101	9.0%
Eye	509	583	<b>632</b>	49	8.4%
Environmental Health Sciences <sup>1</sup>	571	652	<b>696</b>	44	6.7%
Aging	789	896	<b>972</b>	76	8.4%
Arthritis & Musculoskeletal & Skin	396	450	<b>488</b>	38	8.4%
Deafness & Commun. Disorders	302	343	<b>372</b>	29	8.4%
Mental Health	1,108	1,254	<b>1,359</b>	105	8.4%
Drug Abuse	792	891	<b>968</b>	77	8.6%
Alcohol Abuse and Alcoholism	342	386	<b>418</b>	33	8.4%
Nursing Research	105	121	<b>131</b>	10	8.3%
Research Resources	812	1,013	<b>1,091</b>	79	7.8%
Human Genome Research	382	431	<b>467</b>	36	8.4%
Complementary & Alternative Med.	89	105	<b>114</b>	9	8.4%
Fogarty International Center	51	57	<b>64</b>	6	11.3%
National Library of Medicine	242	282	<b>315</b>	33	11.9%
Office of the Director	192	239	<b>259</b>	20	8.3%
Minority Health/Health Disparities	132	158	<b>187</b>	29	18.6%
Biomed. Imaging/Bioengineering	69	112	<b>121</b>	9	8.4%
Buildings and Facilities	161	326	<b>633</b>	307	94.1%
<b>Total NIH Budget</b>	20,549	23,623	<b>27,335</b>	3,712	15.7%
<i>minus Est. Research Training</i>	590	654	<b>689</b>	34	5.2%
<i>minus Other Non-R&amp;D</i>	152	173	<b>194</b>	21	12.1%
<b>Total NIH R&amp;D</b>	19,807	22,795	<b>26,452</b>	3,657	16.0%

Source: OMB data for R&D for FY 2003 and NIH budget office documents.

<sup>1</sup> Funding for all years includes Superfund-related transfers and appropriations.

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

**Please see Chapter 8 for a discussion of NIH R&D.**

Table II-10. NIH by Funding Mechanism

**Table II-10.** National Institutes of Health by Funding Mechanism  
(budget authority in millions of dollars) <sup>1</sup>

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Research Project Grants <sup>2</sup>	11,159	12,511	<b>13,748</b>	1,237	9.9%
{# of Non-Competing}	23,360	25,309	<b>26,066</b>	757	3.0%
{# of New / Competing}	9,186	9,377	<b>9,854</b>	477	5.1%
{Total # of Grants}	32,546	34,686	<b>35,920</b>	1,234	3.6%
SBIR / STTR Grants <sup>3</sup>	418	481	<b>556</b>	74	15.4%
Research Centers	1,859	2,127	<b>2,466</b>	339	15.9%
Other Research	1,221	1,387	<b>1,592</b>	205	14.8%
R&D Contracts	1,371	1,780	<b>2,575</b>	795	44.7%
Intramural Research	2,015	2,296	<b>2,644</b>	348	15.2%
Research Mngmt. & Support	720	829	<b>971</b>	143	17.2%
Research Training	590	654	<b>689</b>	34	5.2%
Library of Medicine	242	282	<b>315</b>	33	11.9%
Office of the Director	192	239	<b>259</b>	20	8.3%
NIEHS Appropriation (Superfund)	63	81	<b>76</b>	-5	-5.8%
Buildings and Facilities	161	326	<b>633</b>	307	94.1%
Extramural Facilities Construction	78	115	<b>240</b>	125	108.9%
Cancer Prevention and Control	462	514	<b>570</b>	56	11.0%
<b>Total NIH Budget</b>	20,549	23,623	<b>27,335</b>	3,712	15.7%

Source: NIH budget justification. Totals may not add due to rounding.

\* Mandatory funds distributed by mechanism in FY 2001, listed separately FY 2002 and 2003.

<sup>1</sup> All NIH support, including non-R&D activities such as research training.

<sup>2</sup> Excludes SBIR / STTR grants.

<sup>3</sup> Small Business Innovation Research / Small Business Technology Transfer.

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

**Please see Chapter 8 for a discussion of the NIH budget.**

Table II-11. Department of Energy R&amp;D

**Table II-11.** R&D in the Department of Energy  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
<b>Summary of DOE R&amp;D (see notes at end of table):</b>					
1. Energy Supply	372	447	<b>424</b>	-23	-5.1%
2. Science	3,033	3,048	<b>3,059</b>	11	0.4%
3. Fossil Energy	352	503	<b>416</b>	-87	-17.3%
4. Energy Conservation	470	464	<b>413</b>	-51	-10.9%
5. Atomic Energy Defense	3,462	3,839	<b>3,947</b>	108	2.8%
6. Clean Coal Technology <sup>1</sup>	0	0	<b>0</b>	0	- -
7. Radioactive Waste Management	44	60	<b>64</b>	3	5.7%
<b>Total DOE R&amp;D</b>	<b>7,733</b>	<b>8,361</b>	<b>8,323</b>	<b>-38</b>	<b>-0.5%</b>
<b>Detail of DOE R&amp;D:</b>					
1. Energy Supply (does not include non-R&D components)					
Renewable Energy Resources	327	351	<b>361</b>	10	2.8%
Nuclear Energy	44	96	<b>63</b>	-33	-34.3%
Total Energy Supply R&D	372	447	<b>424</b>	-23	-5.1%
2. Science (does not include non-R&D components)					
High-Energy Physics (HEP)					
Research and Technology	241	244	<b>259</b>	14	5.9%
HEP Facilities	423	458	<b>446</b>	-11	-2.4%
Construction	32	11	<b>20</b>	9	76.3%
Total HEP	696	713	<b>725</b>	12	1.7%
Nuclear Physics					
Medium-Energy Nuclear Phys.	113	118	<b>124</b>	6	5.2%
Heavy Ion Nuclear Phys.	152	156	<b>168</b>	12	7.9%
Low Energy Nuclear Phys.	63	62	<b>66</b>	4	6.0%
Nuclear Theory	24	23	<b>25</b>	1	4.9%
Total Nuclear Physics	352	359	<b>382</b>	23	6.5%
Fusion Energy Sciences					
Science	131	138	<b>143</b>	5	3.6%
Facility Operations	77	74	<b>79</b>	5	6.1%
Enabling R&D	34	36	<b>36</b>	0	1.2%
Total Fusion	242	247	<b>257</b>	10	4.0%
Basic Energy Sciences (BES)					
Materials Sciences	512	513	<b>548</b>	35	6.9%
Chem. Scis., Geoscis., Energy	203	208	<b>220</b>	12	5.9%
Equipment & Construction	259	279	<b>252</b>	-28	-9.9%
- Spallation Neutron Source <sup>3</sup>	278	291	<b>225</b>	-66	-22.8%
Total BES	974	1,000	<b>1,020</b>	20	2.0%

(continued)

Table II-11. Department of Energy R&amp;D

**Table II-11 (continued).** R&D in the Department of Energy  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount Percent	
Advanced Scientific Computing Research (ASCR)					
Math., Info. and Compu. Sci.	152	154	<b>167</b>	12	7.9%
Laboratory Technology Res.	10	3	<b>3</b>	0	0.0%
Total ASCR	161	157	<b>170</b>	12	7.8%
Biological and Environmental Research (BER) <sup>4</sup>					
Life Sciences	188	193	<b>211</b>	18	9.5%
Environmental Processes	126	129	<b>138</b>	9	7.0%
Environmental Remediation	104	114	<b>110</b>	-5	-4.3%
Medical Apps./ Measurement	93	123	<b>46</b>	-77	-62.7%
Construction	2	11	<b>0</b>	-11	-100.0%
Total BER <sup>4</sup>	514	570	<b>504</b>	-66	-11.6%
Energy Research Analyses	1	1	<b>1</b>	0	2.5%
Small Bus. Innov. Research	93	0	<b>0</b>	0	--
Total Science R&D	3,033	3,048	<b>3,059</b>	11	0.4%
3. Fossil Energy R&D (does not include non-R&D components)					
Coal Research Initiative	268	338	<b>326</b>	-13	-3.8%
Other Power Systems	51	58	<b>50</b>	-9	-14.8%
Oil Technology	65	56	<b>35</b>	-21	-36.8%
Natural Gas Research	44	45	<b>23</b>	-23	-50.0%
Cooperative R&D	8	8	<b>6</b>	-2	-27.2%
Plant and Capital Equipment	4	13	<b>2</b>	-11	-85.1%
Adjustments (deduct non R&D) <sup>2</sup>	-88	-16	<b>-25</b>	-9	53.1%
Total Fossil Energy R&D	352	503	<b>416</b>	-87	-17.3%
4. Energy Conservation	470	464	<b>413</b>	-51	-10.9%
5. Atomic Energy Defense Activities (does not include non-R&D components)					
<b>National Nuclear Security Administration (NNSA)</b>					
Weapons Activities					
Stockpile R&D	263	357	<b>467</b>	110	30.8%
Science Campaigns	231	260	<b>238</b>	-23	-8.7%
Adv. Simulation & Computing	746	718	<b>725</b>	7	1.0%
High Energy Density Physics	238	266	<b>235</b>	-30	-11.4%
National Ignition Facility	197	245	<b>214</b>	-31	-12.6%
Other construction	151	164	<b>176</b>	12	7.5%
All Other Weapons R&D	603	775	<b>863</b>	89	11.5%
Total Weapons Acts. R&D	2,429	2,784	<b>2,919</b>	134	4.8%

(continued)

Table II-11. Department of Energy R&D

**Table II-11 (continued).** R&D in the Department of Energy  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
Nonproliferation & Verification	204	238	<b>215</b>	-23	-9.6%
Naval Reactors	667	665	<b>683</b>	17	2.6%
Fissile Materials Disposition	29	16	<b>9</b>	-7	-41.3%
<b>Total NNSA R&amp;D</b>	<b>3,330</b>	<b>3,703</b>	<b>3,826</b>	122	3.3%
Nuclear Safeguards & Security	24	25	<b>21</b>	-4	-16.8%
Environmental Management <sup>4</sup>	103	105	<b>95</b>	-10	-9.4%
Intelligence	6	6	<b>6</b>	0	0.0%
<b>Total Atomic Defense R&amp;D</b>	<b>3,462</b>	<b>3,839</b>	<b>3,947</b>	108	2.8%
6. Clean Coal Technology <sup>1</sup>	0	0	<b>0</b>	0	--
7. Radioactive Waste Management	44	60	<b>64</b>	3	5.7%
<b>Total DOE R&amp;D</b>	<b>7,733</b>	<b>8,361</b>	<b>8,323</b>	-38	-0.5%
Conduct of R&D	6,661	7,216	<b>7,250</b>	33	0.5%
R&D Facilities	1,072	1,145	<b>1,073</b>	-71	-6.2%
DOE R&D by Function:					
Defense	3,462	3,839	<b>3,947</b>	108	2.8%
General Science	3,033	3,048	<b>3,059</b>	11	0.4%
Energy	1,238	1,474	<b>1,317</b>	-157	-10.7%

Source: DOE budget justification, OMB data for R&D, and agency supporting documents.

<sup>1</sup> Does not reflect previously appropriated funds in this program, nor rescissions and deferrals.

<sup>2</sup> Does not include program direction, waste management, and other non-R&D costs. Adjustments align program costs with R&D, and adjust for use of prior-year balances.

<sup>3</sup> Development and construction costs. Development costs are in Materials Sciences.

<sup>4</sup> BER figures include transfer of EM Science programs from Defense Environmental Management to BER in FY 2003. FY 2001 and 2002 figures adjusted for comparability.

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

**Please see Chapter 9 for a discussion of DOE R&D.**

(continued)

Table II-11. Department of Energy R&D

**Department of Energy Budget** (discretionary budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
DOE Defense Programs:					
National Nuclear Security Administration (NNSA):					
Weapons Activities	4,952	5,563	<b>5,869</b>	306	5.5%
Other Nuclear Security Acts.	1,879	2,042	<b>2,169</b>	127	6.2%
Total NNSA	6,831	7,606	<b>8,039</b>	433	5.7%
Defense Env. Restoration	5,030	5,218	<b>5,358</b>	140	2.7%
Defense Facilities Closure Projects	1,101	1,093	<b>1,091</b>	-2	-0.1%
EM Privatization	-2	154	<b>158</b>	5	3.2%
Other Defense Activities	657	710	<b>787</b>	77	10.9%
Total DOE Defense	13,617	14,780	<b>15,434</b>	653	4.4%
Science	3,234	3,281	<b>3,285</b>	4	0.1%
Energy Supply	693	719	<b>697</b>	-22	-3.1%
Fossil Energy	443	587	<b>494</b>	-93	-15.8%
Energy Conservation	810	915	<b>904</b>	-11	-1.2%
Other Programs (net)	686	415	<b>524</b>	109	26.2%
Non-defense Environmental Mngm	289	236	<b>166</b>	-70	-29.8%
Power Marketing Administrations	209	215	<b>205</b>	-10	-4.8%
Departmental Administration & IG	222	186	<b>209</b>	23	12.3%
<b>Total DOE Budget</b>	20,203	21,335	<b>21,917</b>	582	2.7%

Source: Department of Energy budget justification.

DOE appropriations only (discretionary).

Includes R&D and non-R&D components.

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

**Please see Chapter 9 for a discussion of DOE R&D.**

Table II-12. NASA R&amp;D

**Table II-12.** R&D in the National Aeronautics and Space Administration  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
<b>Summary of R&amp;D by Appropriation:*</b>					
1. Human Space Flight (HSF)					
International Space Station	2,128	1,722	<b>1,492</b>	-230	-13.3%
Other HSF R&D	734	532	<b>390</b>	-142	-26.6%
Total HSF R&D	2,862	2,253	<b>1,882</b>	-371	-16.5%
2. Science, Aeronautics and Technology (SAT)					
Space Science	2,618	2,880	<b>3,428</b>	548	19.0%
Biological & Physical Research	365	828	<b>851</b>	23	2.8%
Earth Science	1,771	1,636	<b>1,639</b>	4	0.2%
Aero-Space Technology	2,248	2,544	<b>2,856</b>	312	12.3%
Academic Programs	133	227	<b>144</b>	-84	-36.8%
Total SAT	7,135	8,115	<b>8,918</b>	804	9.9%
<i>minus non R&amp;D in SAT *</i>	<i>-109</i>	<i>-136</i>	<i>-125</i>	12	-8.6%
Total SAT R&D	7,025	7,978	<b>8,794</b>	815	10.2%
<b>Total NASA R&amp;D</b>	9,887	10,232	<b>10,676</b>	444	4.3%
NASA Non-R&D Activities	4,470	4,781	<b>4,441</b>	-340	-7.1%
<b>Total NASA Budget</b>	14,357	15,013	<b>15,117</b>	104	0.7%
<b>Detail of R&amp;D in NASA Appropriations: *</b>					
1. Human Space Flight (HSF)					
Russian Program Assurance	24	0	<b>0</b>	0	--
Vehicle	752	369	<b>247</b>	-122	-33.0%
Crew Return Vehicle	70	40	<b>0</b>	-40	-100.0%
Research <sup>1</sup>	457	0	<b>0</b>	0	--
Operations Capability	825	1,313	<b>1,245</b>	-68	-5.2%
Total Int'l. Space Station <sup>1</sup>	2,128	1,722	<b>1,492</b>	-230	-13.3%
Space Comm. & Data Sys. R&D	235	182	<b>46</b>	-137	-75.1%
Other HSF R&D incl. Support	499	349	<b>344</b>	-5	-1.3%
Total HSF R&D	2,862	2,253	<b>1,882</b>	-371	-16.5%

(continued)

Table II-12. NASA R&amp;D

**Table II-12 (continued).** R&D in the National Aeronautics and Space Administration (budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
<b>2. Science, Aeronautics and Technology (SAT)</b>					
Space Science					
Outer Planets Program	0	0	<b>15</b>	15	--
SIRTF <sup>3</sup>	118	113	<b>47</b>	-66	-58.1%
Hubble Space Telescope	180	172	<b>139</b>	-33	-19.2%
Relativity Mission	41	46	<b>20</b>	-26	-57.3%
TIMED <sup>4</sup>	13	4	<b>0</b>	-4	-100.0%
Stratospheric Observatory	43	38	<b>47</b>	9	23.4%
Solar Terrestrial Relations	0	53	<b>74</b>	21	40.5%
Gamma-Ray Large Area Tele.	0	21	<b>69</b>	49	234.3%
Payload & Instru. Develop.	40	48	<b>38</b>	-10	-20.0%
Explorers	141	125	<b>135</b>	10	7.9%
Discovery	213	215	<b>208</b>	-7	-3.2%
Mars Exploration	430	415	<b>437</b>	22	5.4%
Mission Operations <sup>2</sup>	123	175	<b>385</b>	210	120.4%
Technology Program <sup>5</sup>	353	440	<b>704</b>	264	59.9%
Research Program	613	647	<b>726</b>	80	12.3%
Investments	13	0	<b>0</b>	0	--
Institutional Support *	297	370	<b>384</b>	14	3.8%
Total Space Science	2,618	2,880	<b>3,428</b>	548	19.0%
Biological and Physical Research					
Adv. Human Support Tech.	31	26	<b>32</b>	6	22.4%
Biomedical Research	70	69	<b>81</b>	12	16.6%
Fundamental Space Biology	41	35	<b>56</b>	21	58.6%
Physical Sciences Research	130	120	<b>134</b>	14	11.8%
Space Product Development	29	17	<b>15</b>	-2	-12.9%
Health Research	12	10	<b>4</b>	-6	-61.0%
Space Station Research <sup>1</sup>	0	371	<b>347</b>	-24	-6.5%
Investments/ Instit. Support *	52	179	<b>182</b>	4	2.0%
Total Bio. and Phys. Res. <sup>1</sup>	365	828	<b>851</b>	23	2.8%
Earth Science					
Earth Observing System	432	385	<b>411</b>	26	6.6%
EOS Data Info. System	279	293	<b>74</b>	-219	-74.6%
Earth Explorers	142	74	<b>71</b>	-3	-4.0%
Earth Sci. Program Science	350	341	<b>354</b>	13	3.9%
Apps., Education, Outreach	114	95	<b>62</b>	-33	-34.9%

(continued)

Table II-12. NASA R&amp;D

**Table II-12 (continued).** R&D in the National Aeronautics and Space Administration (budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Technology Infusion	100	102	<b>91</b>	-11	-10.9%
Mission Operations <sup>2</sup>	58	48	<b>248</b>	200	420.6%
Investments	10	0	<b>0</b>	0	- -
Institutional Support *	287	298	<b>329</b>	31	10.2%
<b>Total Earth Science</b>	<b>1,771</b>	<b>1,636</b>	<b>1,639</b>	<b>4</b>	<b>0.2%</b>
<b>Aero-Space Technology</b>					
Revolutionize Aviation	573	599	<b>541</b>	-58	-9.7%
<i>Aviation Safety</i>	76	96	<b>95</b>	-1	-1.1%
<i>Vehicle Systems</i>	371	369	<b>321</b>	-48	-13.0%
<i>Airspace Systems</i>	126	134	<b>125</b>	-9	-6.6%
Advanced Space Transport.	391	578	<b>879</b>	301	52.1%
<i>Space Launch Initiative</i>	289	467	<b>759</b>	292	62.6%
<i>Space Trans. &amp; Launch Tech.</i>	102	111	<b>120</b>	9	8.3%
Pioneer Revolutionary Tech.	278	277	<b>275</b>	-2	-0.7%
Aerospace Institut. Support <sup>2</sup> *	844	926	<b>1,013</b>	87	9.4%
Commercial Tech. Programs	162	164	<b>147</b>	-17	-10.3%
<b>Total Aero-Space Tech.</b>	<b>2,248</b>	<b>2,544</b>	<b>2,856</b>	<b>312</b>	<b>12.3%</b>
<b>Academic Programs</b>					
Education Programs	77	143	<b>62</b>	-81	-56.8%
Minority Res. and Edu.	56	85	<b>82</b>	-3	-3.1%
<b>Total Academic Programs</b>	<b>133</b>	<b>227</b>	<b>144</b>	<b>-84</b>	<b>-36.8%</b>
<i>Conduct of R&amp;D</i>	<i>7,062</i>	<i>7,491</i>	<i><b>8,272</b></i>	<i>781</i>	<i>10.4%</i>
<i>R&amp;D Facilities &amp; Capital Equip.</i>	<i>2,826</i>	<i>2,741</i>	<i><b>2,404</b></i>	<i>-337</i>	<i>-12.3%</i>

Source: OMB R&D data for FY 2003, agency budget justification, and agency documents.

<sup>1</sup> Space Station research, funded in Human Space Flight through FY 2001, was transferred to Biological and Physical Research in SAT beginning in FY 2002.

<sup>2</sup> The FY 2003 budget would transfer some Space Communications & Data Systems costs (mostly non-R&D costs) to R&D lines in Earth Science (\$40 mil. '02), Space Science (\$154 mil. '02), and Aero-Space Technology (\$12 mil. '02).

<sup>1</sup> Space Infrared Telescope Facility.

<sup>2</sup> Thermosphere, Ionosphere, Mesosphere Energetics and Dynamics.

<sup>5</sup> FY 2003 figures include \$126 million for two nuclear technology programs.

\* Program support costs formerly funded in Mission Support are allocated to the HSF and SAT accounts. Most of these reallocated costs can be found in the Institutional Support lines. The Bush Administration proposal to fully fund retiree costs are included in these accounts. These costs are not counted as R&D.

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

**Please see Chapter 10 for a discussion of NASA R&D.**

Table II-12. NASA R&D

<b>NASA Non-R&amp;D Activities</b> (budget authority in millions of dollars)					
	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Non R&D in SAT	109	136	<b>125</b>	-12	-8.6%
Space Commun. & Data Non R&D	286	300	<b>72</b>	-228	-76.0%
Space Shuttle (in HSF)	3,119	3,273	<b>3,208</b>	-65	-2.0%
Payload & ELV Non R&D (HSF)	90	91	<b>88</b>	-4	-4.2%
Safety, Mission Assurance (HSF)	47	48	<b>48</b>	0	0.0%
Investm./Support Non R&D (HSF)	794	908	<b>876</b>	-33	-3.6%
Inspector General	24	25	<b>26</b>	1	3.6%
Total NASA Non-R&D Activities	4,470	4,781	<b>4,441</b>	-340	-7.1%

Source: *Budget of the United States Government FY 2003* and agency budget justification.

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

\* Program support costs formerly funded in Mission Support are allocated to the HSF and SAT accounts. Most of these reallocated costs can be found in the Institutional Support lines. The Bush Administration proposal to fully fund retiree costs are included in these accounts. These costs are not counted as R&D.

Table II-13. U.S. Department of Agriculture R&D

**Table II-13.** R&D in the U.S. Department of Agriculture  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
<b>Agricultural Research Service (ARS)</b>					
Programs (conduct of R&D only)	935	1,035	<b>1,005</b>	-30	-2.9%
Buildings and Facilities <sup>1</sup>	169	310	<b>121</b>	-189	-61.0%
<b>Total ARS R&amp;D</b>	<b>1,104</b>	<b>1,345</b>	<b>1,126</b>	<b>-219</b>	<b>-16.3%</b>
<b>Cooperative State Research, Education, and Extension Service (CSREES)</b>					
Research & Education Progs.	610	554	<b>565</b>	11	2.0%
<i>National Research Initiative</i>	106	120	<b>240</b>	120	99.2%
<i>Hatch Act (Ag. Experiment)</i>	180	180	<b>180</b>	0	0.0%
<i>Special Research Grants</i>	86	97	<b>3</b>	-94	-96.6%
<i>Integrated Grants</i>	42	43	<b>45</b>	2	4.7%
<i>Initiative for Future Agri.</i> <sup>3</sup>	68	0	<b>0</b>	0	--
<i>All Other</i>	129	114	<b>97</b>	-17	-14.9%
<b>Total CSREES R&amp;D</b> <sup>3</sup>	<b>610</b>	<b>554</b>	<b>565</b>	<b>11</b>	<b>2.0%</b>
Forest Service	355	321	<b>294</b>	-27	-8.4%
Economic Research Service	71	73	<b>85</b>	12	16.4%
Agricultural Marketing Service	5	5	<b>6</b>	1	20.0%
National Agricultural Statistics	4	4	<b>4</b>	0	0.0%
Animal and Plant Inspection	23	25	<b>29</b>	4	16.0%
Federal Grain Inspection	5	6	<b>7</b>	1	16.7%
Foreign Agricultural Service	1	1	<b>2</b>	1	100.0%
Office of the Secretary <sup>2</sup>	3	0	<b>0</b>	0	--
<b>Total USDA R&amp;D</b>	<b>2,181</b>	<b>2,334</b>	<b>2,118</b>	<b>-216</b>	<b>-9.3%</b>

Source: OMB data for R&D for FY 2003, USDA budget documents, and USDA budget office.

<sup>1</sup> Includes repair and maintenance funded through the Programs account.

<sup>2</sup> Mandatory spending from the Fund for Rural America. R&D portion only.

<sup>3</sup> Public Law 105-185 created a \$120 million a year mandatory (non-appropriated) program of competitive grants for agricultural research from FY 1999 to FY 2003.

Table shows R&D portions of the IFAFS program.

FY 2001 ARS and CSREES figures include mandatory R&D funds appropriated in the Agricultural Risk Protection Act and discretionary funds from the FY 2001 supplemental.

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

**Please see Chapter 11 for information on USDA R&D.**

Table II-14. Department of Commerce R&D

**Table II-14.** R&D in the Department of Commerce  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03 Amount	Percent
National Oceanic and Atmospheric Administration (NOAA - Non R&D excluded)					
National Ocean Service	62	61	<b>55</b>	-6	-9.4%
Nat'l Marine Fisheries Srv.	126	122	<b>122</b>	0	0.0%
Oceanic and Atmos. Res.	266	290	<b>284</b>	-6	-2.0%
National Weather Service	23	28	<b>28</b>	0	0.0%
Other NOAA R&D	84	111	<b>116</b>	5	4.6%
<b>Total NOAA R&amp;D</b>	<b>561</b>	<b>611</b>	<b>605</b>	<b>-6</b>	<b>-1.1%</b>
National Institute of Standards and Technology (NIST - Non-R&D components excluded)					
1. Scientific and Technical Research and Services (STRS)					
Electronics & Elec. Eng.	40	41	<b>44</b>	3	6.9%
Manufacturing Engineering	20	20	<b>22</b>	1	6.9%
Chemical Sci. and Tech.	33	34	<b>40</b>	5	15.0%
Physics	30	31	<b>36</b>	5	16.9%
Materials Science and Eng.	54	56	<b>67</b>	11	18.7%
Building and Fire Research	17	20	<b>19</b>	-1	-4.3%
Computer Sci./ Applied Math.	49	54	<b>54</b>	0	0.5%
Technology Assistance	4	4	<b>4</b>	0	6.9%
Critical Infrastructure	5	0	<b>0</b>	0	- -
Research Support / Equip.	18	19	<b>62</b>	43	225.4%
<b>Total STRS R&amp;D</b>	<b>269</b>	<b>280</b>	<b>348</b>	<b>68</b>	<b>24.2%</b>
2. Industrial Technology Services					
2. Advanced Tech. Program	123	158	<b>81</b>	-77	-48.7%
<i>Manuf. Exten. Part. (Non-R&amp;D)</i>	<i>105</i>	<i>107</i>	<i>13</i>	<i>-94</i>	<i>-87.9%</i>
3. Construction	21	22	<b>54</b>	32	146.4%
<b>Total NIST R&amp;D</b>	<b>413</b>	<b>460</b>	<b>483</b>	<b>23</b>	<b>5.0%</b>
Dept. Administration	1	1	<b>1</b>	0	0.0%
Nat'l Telecomm. & Info. Admin.	52	21	<b>7</b>	-14	-66.7%
- <i>Telecommunication Sci. Res.</i>	6	5	<b>7</b>	2	40.0%
- <i>Tech. Opportunity Grants</i>	46	16	<b>0</b>	-16	-100.0%
Bureau of the Census	2	2	<b>3</b>	1	50.0%
Economic Development Admin.	1	1	<b>1</b>	0	0.0%
<b>Total Commerce R&amp;D</b>	<b>1,030</b>	<b>1,096</b>	<b>1,100</b>	<b>4</b>	<b>0.3%</b>

Source: OMB data for R&D, NOAA and NIST R&D documents, and agency budget summaries  
All figures are rounded to the nearest million. Changes calculated from unrounded figures.

**Please see Chapter 12 for a discussion of Commerce R&D.**

Table II-15. Department of Transportation R&amp;D

**Table II-15.** R&D in the Department of Transportation  
(budget authority in millions of dollars) \*

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Federal Aviation Administration	301	359	<b>225</b>	-134	-37.3%
Federal Highway Administration	268	275	<b>266</b>	-10	-3.5%
- <i>Surface Transportation Res.</i>	63	88	<b>67</b>	-22	-24.7%
- <i>Intelligent Transportation Sys.</i>	54	47	<b>47</b>	0	0.0%
- <i>State Planning and Research</i>	139	128	<b>140</b>	12	9.3%
- <i>All Other</i>	12	12	<b>12</b>	0	2.6%
Federal Transit Administration	8	7	<b>4</b>	-3	-40.0%
Transportation Security Admin. <sup>1</sup>	0	0	<b>95</b>	95	-
Nat'l High. Traffic & Safety Adm.	58	59	<b>59</b>	0	0.5%
Federal Railroad Administration	28	32	<b>31</b>	-1	-2.2%
Office of the Secretary	11	12	<b>11</b>	-1	-6.5%
Research & Special Programs	9	10	<b>14</b>	4	44.7%
Coast Guard	22	21	<b>24</b>	3	13.5%
Nat'l Motor Carrier Safety Admin.	12	3	<b>6</b>	3	119.2%
<b>Total DOT R&amp;D</b>	<b>718</b>	<b>778</b>	<b>736</b>	<b>-42</b>	<b>-5.4%</b>

Source: OMB data for R&D for FY 2003; agency budget justification; agency documents.

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

\* - DOT budget includes budget authority, limitations on obligations, and other resources.

<sup>1</sup> New DOT agency created to operate civilian airport security; as part of its mission, TSA will take over aviation security R&D funded by the FAA in FY 2001 and 2002.

No R&D data for TSA are available yet; FY 2003 figures assume aviation security R&D will be funded at the FY 2002 level.

**DOT Budget** (includes R&D components; budget authority in millions): \*

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Federal Highway Administration	35,068	35,587	<b>31,111</b>	-4,476	-12.6%
Federal Aviation Administration	12,409	13,922	<b>14,012</b>	90	0.6%
Federal Transit Administration	7,566	6,874	<b>7,230</b>	356	5.2%
Coast Guard	5,078	5,702	<b>7,274</b>	1,572	27.6%
Transportation Security Admin.	0	95	<b>2,454</b>	2,359	2483.2%
Federal Railroad Administration	759	839	<b>710</b>	-129	-15.4%
Nat'l Highway Traffic Safety Admin.	408	427	<b>429</b>	2	0.5%
All Other <sup>1</sup>	6,086	1,200	<b>1,032</b>	-168	-14.0%
Miscellaneous Receipts	-236	-273	<b>-1,173</b>	-900	329.7%
<b>Total DOT Budget *</b>	<b>67,138</b>	<b>64,373</b>	<b>63,079</b>	<b>-1,294</b>	<b>-2.0%</b>

Source: *Budget of the United States Government FY 2003*.

\* - DOT budget includes budget authority, limitations on obligations, and other resources.

<sup>1</sup> Includes Office of Secretary, RSPA, Maritime Administration, Bureau of Transportation Statistics, and others.

**Please see Chapter 12 for a discussion of DOT R&D.**

Table II-16. Department of the Interior R&amp;D

**Table II-16.** R&D in the Department of the Interior  
(budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
U.S. Geological Survey	566	583	<b>542</b>	-41	-7.0%
<i>National Mapping, Geography</i>	43	44	<b>43</b>	-1	-2.1%
<i>Geologic &amp; Mineral Resources</i>	225	233	<b>221</b>	-12	-5.2%
<i>Water Resources</i>	137	140	<b>114</b>	-26	-18.5%
<i>Biological Research</i>	161	166	<b>164</b>	-2	-1.1%
Minerals Management Service	31	33	<b>29</b>	-4	-12.1%
National Park Service	0	0	<b>0</b>	0	--
Bureau of Reclamation	7	10	<b>7</b>	-3	-30.0%
Bureau of Land Management	17	34	<b>50</b>	16	47.1%
<b>Total Interior R&amp;D</b>	621	660	<b>628</b>	-32	-4.8%
Conduct of R&D	621	660	<b>628</b>	-32	-4.8%
R&D Facilities	0	0	<b>0</b>	0	--

Source: OMB data for R&D for FY 2003 and agency supporting documents.

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

**Dept. of the Interior Budget** (includes R&D components above)  
(budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Bureau of Land Management	2,232	2,170	<b>2,154</b>	-16	-0.7%
Minerals Management Service	1,200	837	<b>854</b>	17	2.0%
Office of Surface Mining...	502	400	<b>353</b>	-47	-11.8%
Bureau of Reclamation	919	1,041	<b>953</b>	-88	-8.5%
U.S. Geological Survey	921	951	<b>905</b>	-46	-4.8%
U.S. Fish and Wildlife Service	2,027	1,977	<b>1,976</b>	-1	-0.1%
National Park Service	2,631	2,742	<b>2,733</b>	-9	-0.3%
Bureau of Indian Affairs	2,258	2,338	<b>2,355</b>	17	0.7%
Other	843	832	<b>893</b>	61	7.3%
Misc. Offsetting Receipts	-3,568	-2,567	<b>-2,587</b>	-20	0.8%
<b>Total Interior Budget</b>	9,965	10,721	<b>10,589</b>	-132	-1.2%

Source: *Budget of the United States Government FY 2003*.

Includes budget authority from appropriations, trust funds, and permanent appropriations.

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

**Please see Chapter 12 for a discussion of Interior R&D.**

Table II-17. Environmental Protection Agency R&amp;D

**Table II-17.** R&D in the Environmental Protection Agency  
(budget authority in millions of dollars)

	FY 2001 Actual	FY 2002 Estimate	FY 2003 Budget	Change FY 02-03	
				Amount	Percent
<b>EPA R&amp;D by account:</b>					
Science and Technology <sup>1</sup>	531	545	<b>514</b>	-30	-5.6%
Superfund	36	38	<b>111</b>	73	190.0%
Leaking Undergrd. Storage Tanks	1	1	<b>1</b>	0	1.3%
Oil Spill Response	1	1	<b>1</b>	0	0.5%
Environmental Progs. and Mngmt.	4	7	<b>0</b>	-7	-100.0%
<b>Total EPA R&amp;D</b>	<b>574</b>	<b>592</b>	<b>627</b>	<b>35</b>	<b>5.9%</b>
<b>EPA R&amp;D by goal: *</b>					
Clean Air	--	98	<b>93</b>	-5	-4.9%
Clean and Safe Water	--	102	<b>94</b>	-9	-8.5%
Safe Food	--	11	<b>11</b>	-1	-5.0%
Preventing Pollution	--	22	<b>25</b>	3	13.6%
Better Waste Management	--	53	<b>120</b>	67	125.5%
Reducing Global Risks	--	21	<b>22</b>	0	1.8%
Quality Environmental Info.	--	10	<b>6</b>	-5	-46.6%
Sound Science	--	273	<b>257</b>	-16	-5.9%
- <i>Ecosystem Assessment</i>	--	114	<b>113</b>	-1	-1.0%
- <i>Env. Hazards &amp; Exposures</i>	--	50	<b>53</b>	4	7.0%
- <i>Enhance Capabilities</i>	--	54	<b>41</b>	-13	-24.3%
- <i>Improve Env. Sys. Manag.</i>	--	55	<b>50</b>	-5	-9.6%
<b>Total EPA R&amp;D</b>	<b>574</b>	<b>592</b>	<b>627</b>	<b>35</b>	<b>5.9%</b>
<b>EPA Budget (Includes R&amp;D components above):</b>					
Science and Technology <sup>1</sup>	746	840	<b>796</b>	-44	-5.2%
Environmental Progs. and Mngmt.	2,149	2,159	<b>2,115</b>	-44	-2.0%
Superfund	1,249	1,293	<b>1,182</b>	-111	-8.6%
State and Tribal Assistance Grants	3,641	3,738	<b>3,464</b>	-274	-7.3%
Buildings and Facilities	24	25	<b>43</b>	18	72.0%
Leaking Undergrd. Storage Tanks	73	74	<b>73</b>	-1	-1.4%
Oil Spill Response	16	16	<b>17</b>	1	6.3%
Inspector General	36	37	<b>38</b>	1	2.7%
<b>Total EPA Appropriations</b>	<b>7,934</b>	<b>8,182</b>	<b>7,728</b>	<b>-454</b>	<b>-5.5%</b>

Source: OMB data for R&D for FY 2003, agency budget justification, information from agency budget office, and *Budget of the United States Government FY 2003*.

Discretionary budget authority only. Excludes mandatory spending and offsets.

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

\* Details not available for FY 2001.

<sup>1</sup> Excludes transfers from Superfund (see Superfund line).

**Please see Chapter 12 for a discussion of EPA R&D.**

Table II-18. Department of Education R&D

**Table II-18.** R&D in the Department of Education  
(budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Edu. Research and Improvement	143	135	<b>185</b>	50	37.0%
Special Education and Rehab.	100	109	<b>109</b>	0	0.0%
Vocational and Adult Education	13	13	<b>9</b>	-4	-30.8%
Elementary and Secondary Ed.	0	2	<b>0</b>	-2	-100.0%
Postsecondary Education	8	9	<b>8</b>	-1	-11.1%
<b>Total Education R&amp;D</b>	264	268	<b>311</b>	43	16.0%
Conduct of R&D	264	268	<b>311</b>	43	16.0%
R&D Facilities	0	0	<b>0</b>	0	--

Source: OMB data for R&D for FY 2003 and agency budget justification.

**Dept. of Education Budget** (includes R&D components above)  
(DISCRETIONARY budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Elementary/ Secondary Education	17,038	21,021	<b>21,435</b>	414	2.0%
Bilingual Education	460	665	<b>665</b>	0	0.0%
Special Education	6,110	8,673	<b>9,688</b>	1,015	11.7%
Rehab. Services / Disability Res.	2,805	2,946	<b>3,002</b>	56	1.9%
Vocational and Adult Education	1,826	1,934	<b>1,898</b>	-36	-1.9%
Higher Education	2,150	2,273	<b>2,124</b>	-149	-6.6%
Student Financial Assistance	10,674	13,562	<b>12,768</b>	-794	-5.9%
Other higher education	-2,459	3,139	<b>3,821</b>	682	21.7%
Edu. Research, Stats. Assessmt.	722	444	<b>433</b>	-11	-2.5%
Dept. Management	539	557	<b>554</b>	-3	-0.5%
Other	90	116	<b>110</b>	-6	-5.2%
<b>Total Education Budget</b>	39,955	55,330	<b>56,498</b>	1,168	2.1%

Source: *Budget of the United States Government FY 2003*.

Please see Chapter 5 for a discussion of the Education budget.

Table II-19. Department of Veterans Affairs R&D

**Table II-19.** R&D in the Department of Veterans Affairs  
(budget authority in millions of dollars)

	FY 2001	FY 2002	FY 2003	Change FY 02-03	
	Actual	Estimate	Budget	Amount	Percent
Medical and Prosthetic Research	363	384	<b>409</b>	25	6.5%
Medical Care support <sup>1</sup>	356	377	<b>401</b>	24	6.4%
<b>Total VA R&amp;D</b>	719	761	<b>810</b>	49	6.5%
Federal Grants (other agencies) <sup>2</sup>	417	438	<b>460</b>	22	5.0%
Other grants (contributions) <sup>3</sup>	178	186	<b>196</b>	9	5.0%
<b>Total VA-Performed R&amp;D</b>	1,313	1,385	<b>1,465</b>	80	5.8%

Source: OMB data for R&D for FY 2003 and agency budget justification.

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

All years adjusted to include proposal to fully fund federal retiree costs.

<sup>1</sup> Funding for laboratory facilities, support services, and some investigator salaries.

<sup>2</sup> Funding for VA investigators originating in other agencies (NIH, DOD, etc.)

These funds are included in the R&D totals for the sponsoring agencies.

<sup>3</sup> Funding for VA investigators from non-government sources (foundations, etc.)

**See Chapter 8 for information on the VA budget.**