

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

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Table II-11. Department of Energy R&D

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

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

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

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

² 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.

³ Development and construction costs. Development costs are in Materials Sciences.

⁴ 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.

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