

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 2002 Actual	FY 2003 Estimate	FY 2004 Budget	Change FY 03-04 Amount Percent	
Summary of DOE R&D (see notes at end of table):					
1. Energy Supply	262	309	376	68	21.9%
2. Science	3,074	3,075	3,066	-9	-0.3%
3. Fossil Energy	446	483	411	-72	-14.9%
4. Energy Conservation	434	427	442	15	3.6%
5. Atomic Energy Defense	3,761	3,849	4,180	330	8.6%
6. Clean Coal Technology	42	0	0	0	--
7. Radioactive Waste Management	60	62	59	-3	-5.4%
Total DOE R&D	8,078	8,205	8,535	330	4.0%
Detail of DOE R&D:					
1. Energy Supply (does not include non-R&D components)					
Renewable Energy Resources	219	240	250	10	4.3%
Nuclear Energy	42	69	127	57	82.8%
Total Energy Supply R&D	262	309	376	68	21.9%
2. Science (does not include non-R&D components)					
High-Energy Physics (HEP)					
Proton Accelerator-Based	388	388	399	12	3.0%
Electron Accelerator-Based	148	150	159	9	6.2%
Non-Accelerator Physics	39	37	43	6	14.9%
Theoretical Physics	43	42	42	0	-0.6%
Advanced Tech. R&D	68	84	81	-3	-3.5%
Construction	11	20	13	-8	-37.8%
Total HEP	697	722	738	16	2.2%
Nuclear Physics					
Medium-Energy Nuclear Phys.	111	124	124	1	0.5%
Heavy Ion Nuclear Phys.	151	167	168	0	0.2%
Low Energy Nuclear Phys.	63	66	69	3	4.7%
Nuclear Theory	25	25	28	3	14.2%
Total Nuclear Physics	351	382	389	8	2.0%
Fusion Energy Sciences					
Science	134	137	145	8	5.9%
Facility Operations	71	77	88	11	14.4%
Enabling R&D	36	35	25	-10	-29.1%
Total Fusion	241	248	257	9	3.6%
Basic Energy Sciences (BES)					
Materials Sciences	500	548	568	20	3.7%
Chem. Scis., Geoscis., Energy	200	220	221	1	0.4%

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Table II-11 (continued). R&D in the Department of Energy
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	FY 2002	FY 2003	FY 2004	Change FY 03-04	
	Actual	Estimate	Budget	Amount	Percent
Construction	279	252	220	-32	-12.6%
- Spallation Neutron Source ³	291	225	143	-82	-36.5%
Adjustment	0	4	0	-4	-100.0%
Total BES	980	1,023	1,009	-15	-1.4%
Advanced Scientific Computing Research (ASCR)					
Math., Info. and Compu. Sci.	147	169	170	2	1.2%
Laboratory Technology Res.	3	3	3	0	0.0%
Total ASCR	150	172	173	2	1.2%
Biological and Environmental Research (BER)					
Life Sciences	186	191	201	11	5.5%
Climate Change Research	126	138	143	5	3.6%
Environmental Remediation	112	110	109	0	-0.2%
Medical Apps./ Measurement	119	88	46	-42	-48.0%
Construction	11	0	0	0	--
Total BER	554	527	500	-27	-5.1%
Energy Research Analyses	1	1	0	-1	--
Small Bus. Innov. Research	100	0	0	0	--
Total Science R&D	3,074	3,075	3,066	-9	-0.3%
3. Fossil Energy R&D	446	483	411	-72	-14.9%
4. Energy Conservation	434	427	442	15	3.6%
5. Atomic Energy Defense Activities (does not include non-R&D components)					
National Nuclear Security Administration (NNSA)					
Weapons Activities					
Stockpile R&D	313	467	433	-34	-7.3%
Science Campaigns	257	255	270	14	5.5%
Adv. Simulation & Computing	704	704	751	46	6.6%
Inertial Confinement Fusion	507	504	467	-38	-7.4%
- National Ignition Facility	245	214	150	-64	-29.9%
All Other Weapons R&D	989	991	1,336	345	34.8%
Total Weapons Acts. R&D	2,769	2,922	3,256	334	11.4%

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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 2002 Actual	FY 2003 Estimate	FY 2004 Budget	Change FY 03-04	
				Amount	Percent
Nonproliferation & Verification	195	192	196	3	1.7%
Naval Reactors	605	617	632	15	2.4%
Total NNSA R&D	3,569	3,732	4,084	352	9.4%
Other AEDA R&D	31	27	28	1	5.1%
Environmental Management	160	91	68	-23	-25.3%
Total Atomic Defense R&D	3,761	3,849	4,180	330	8.6%
6. Clean Coal Technology	42	0	0	0	--
7. Radioactive Waste Management	60	62	59	-3	-5.4%
Total DOE R&D	8,078	8,205	8,535	330	4.0%
Conduct of R&D	7,007	7,190	7,559	370	5.1%
R&D Facilities	1,071	1,015	975	-40	-3.9%
DOE R&D by Function:					
Defense	3,761	3,849	4,180	330	8.6%
General Science	3,074	3,075	3,066	-9	-0.3%
Energy	1,244	1,281	1,289	8	0.6%

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

¹ Development and construction costs. Development costs are in Materials Sciences.

FY 2003 figures reflect AAAS estimates of final FY 2003 appropriations.

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 2002 Actual	FY 2003 Estimate	FY 2004 Budget	Change FY 03-04	
				Amount	Percent
DOE Defense Programs:					
National Nuclear Security Administration (NNSA):					
Weapons Activities	5,542	5,916	6,378	462	7.8%
Other Nuclear Security Acts.	2,053	2,137	2,457	319	14.9%
Total NNSA	7,596	8,053	8,835	782	9.7%
Defense Site Accel. Comp. ²	5,281	5,691	5,815	124	2.2%
Defense Env. Services ³	1,025	1,060	995	-65	-6.2%
Other Defense Activities	787	828	953	125	15.1%
Total DOE Defense	14,688	15,632	16,597	965	6.2%
Science	3,309	3,284	3,311	27	0.8%
Energy Supply	775	697	862	165	23.7%
Fossil Energy	578	621	519	-102	-16.4%
Energy Conservation	896	892	876	-16	-1.8%
Other Programs (net)	528	423	492	68	16.1%
Non-defense Environmental Mgmt.	148	214	292	78	36.7%
Power Marketing Administrations	207	202	207	5	2.6%
Departmental Administration & IG	187	124	219	95	76.3%
Total DOE Budget	21,317	22,089	23,375	1,286	5.8%

Source: Department of Energy budget justification and AAAS estimates of final

FY 2003 appropriations. 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.

² Formerly Defense Facilities Closure Projects.

³ Formerly Defense Environmental Management Privatization.

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