

Appendix C

Federal End-Use Energy Research and Development Appropriations

Table C1 in this appendix documents the annual Federal end-use energy research and development appropriations illustrated in Figure 3 in Chapter 3. The table also documents the allocation of Department of Energy budget line items into the programmatic groupings discussed in Chapter 3. Most of the data are taken from an internal appropriations tally maintained by the Office of the Chief Financial Officer within the Department of Energy. This tally is considerably more detailed than the budget presentations in the *Budget of the United States Government*. As in any data set, however, it is best to know exactly what is being measured. Thus, users of this data set should be aware of the following considerations:

- Data are for appropriations and not for outlays.
- The appropriations shown are for final spending authority, after any subsequent reprogramming and supplemental appropriations have been made. Thus, the figures shown are not necessarily identical with the figures appropriated by the Congress in each year's budget. There were several instances of large-scale reprogramming of Departmental funds in the early 1980s.
- Fiscal year 1999 appropriations are estimated.
- The term "unallocated" is used to describe budget items that cannot be attributed to particular programs or activities. Much of this spending is administrative "overhead" within the Department of Energy and capital and operating costs of the national laboratories. However, because overhead costs have not been treated uniformly over time and are not treated uniformly by different offices within the Department of Energy, it is not possible to use these figures to ascertain what portion of research and development spending is actually devoted to overhead costs, nor to compare overhead spending across programs. See also the discussion of "unallocated" on page 17 of Chapter 3.
- Appropriations for the "IRP" category shown in Table 25 of this report are not included here.
- Appropriations for regulatory (codes and standards) programs in the building technology sector for fiscal years 1992-1999 are excluded from Table C1. Expenditures for such programs before 1992 are included in the building technology appropriations but cannot be disaggregated because of data limitations. See also the discussion of the programs in Chapter 3.

Table C1. Summary of U.S. Department of Energy Research and Development Expenditures for Energy Transformation and End Use, Fiscal Years 1978-1999
(Million 1999 Dollars)

Item	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Building Technology	142.3	163.9	197.4	157.9	77.5	60.9	55.9	59.6	53.6	41.5	45.6
Federal Energy Management Program	NA										
Industrial Sector	71.6	82.6	113.9	120.3	46.9	43.5	50.4	46.1	57.6	47.5	43.5
(Minus Advanced Turbine Systems) ^a	—	—	—	—	—	—	—	—	—	—	—
Industrial Sector, Net	71.6	82.6	113.9	120.3	46.9	43.5	50.4	46.1	57.6	47.5	43.5
Transportation Sector	150.8	204.9	214.5	181.6	95.8	83.9	97.2	89.1	81.4	76.1	68.1
Multi-Fuel	23.5	21.2	31.8	45.8	26.8	19.9	19.1	34.6	36.7	39	38.2
Other Unallocated	0.0	0.0	0.0	0.0	0.0	1.9	3.1	25.7	16.4	16.3	10.2
Total	388.3	472.6	557.6	505.5	247.0	210.1	225.6	255.0	245.7	220.4	205.4

Item	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Building Technology	41.5	43.3	57.9	51.4	49.5	71.0	88.1	76.4	67.9	64.0	81.0
Federal Energy Management Program ^b	NA	20.2	20.0	23.8							
Industrial Sector	38.5	62.5	70.6	110.3	124.2	134.5	139.6	112.8	118.0	135.6	165.9
(Minus Advanced Turbine Systems) ^a	—	—	—	—	—	—	—	—	—	-35.0	-33.0
Industrial Sector, Net	38.5	62.5	70.6	110.3	124.2	134.5	139.6	112.8	118.0	100.6	132.9
Transportation Sector	69.1	79.0	93.2	124.7	154.1	192.0	202.8	181.5	176.4	192.3	202.1
Multi-Fuel	41.0	43.7	41.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Unallocated	18.8	2.1	2.7	3.1	4.0	5.1	8.9	8.5	27.0	29.3	37.7
Total	208.9	230.7	265.6	289.5	331.7	402.6	439.4	379.2	409.5	406.2	477.4

^aIncluded in "Natural Gas R&D" in budgets for historical years.

^bAn adjustment of -\$4.6 million in 1992 and -\$23.8 million was made to the total line of Table 4 of this report because FEMP expenditures are not considered a subsidy.

NA = not applicable. Expenditures for FEMP before 1997 are included in other end use R&D programs.

Sources: U.S. Department of Energy, Office of the Chief Financial Officer, "Budget Authority History Table by Appropriation" (Washington, DC, 1998); U.S. Department of Energy Fiscal Year 1999 Budget Request, DOE/CR-0050 (Washington, DC, February 1998); and U.S. Department of Energy Fiscal Year 2000 Budget Request, DOE/CR-0059 (Washington, DC, May 21, 1999).