

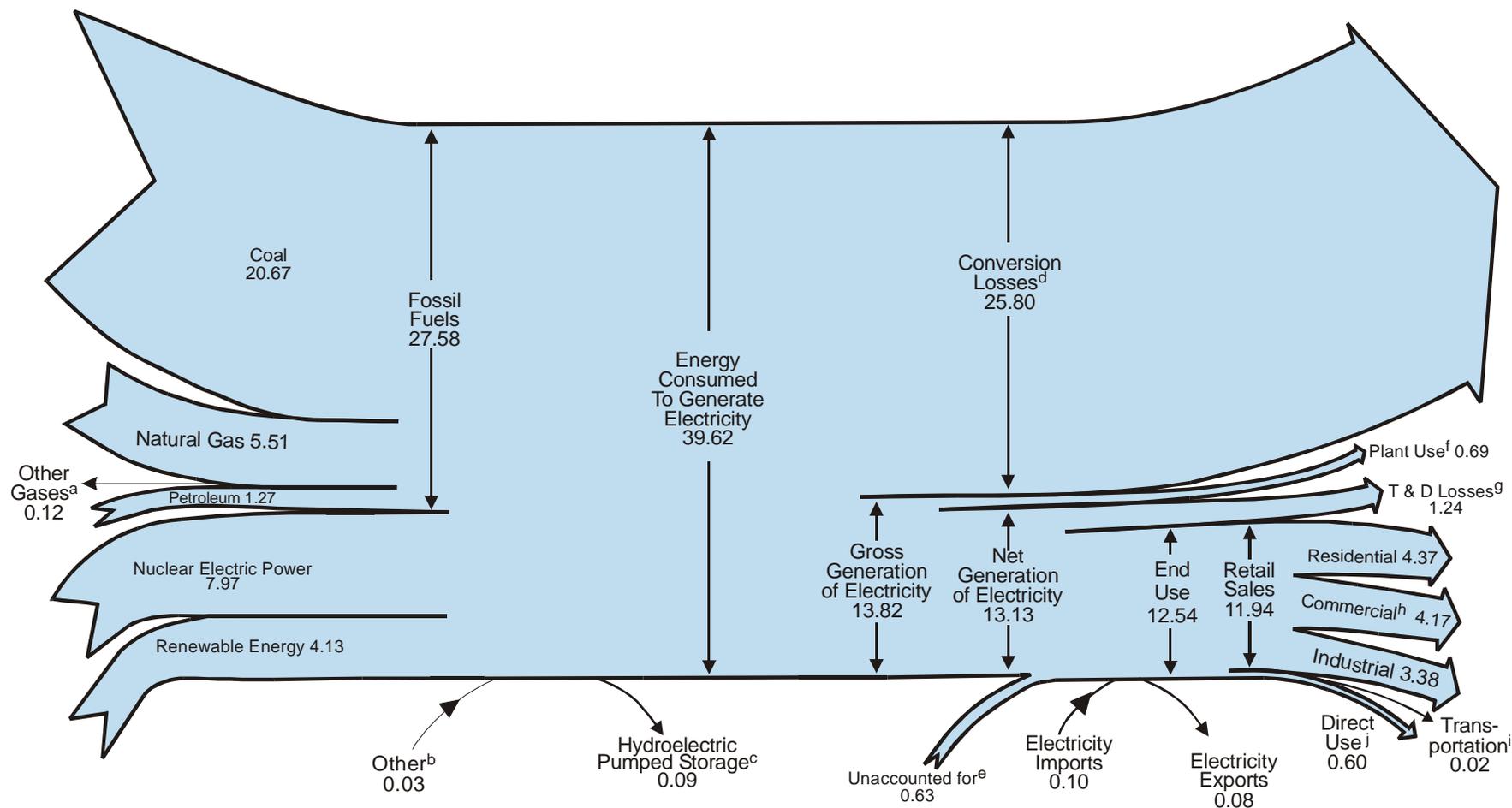
8

Electricity



High-tension power lines and towers. Source: U.S. Department of Energy.

Diagram 5. Electricity Flow, 2003
(Quadrillion Btu)



^a Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

^b Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

^c Pumped storage facility production minus energy used for pumping.

^d Approximately two-thirds of all energy used to generate electricity. See note "Electrical System Energy Losses," at end of Section 2.

^e Data collection frame differences and nonsampling error.

^f Electric energy used in the operation of power plants, estimated as 5 percent of gross generation. See note "Electrical System Energy Losses," at end of Section 2.

^g Transmission and distribution losses (electricity losses that occur between the point of generation and delivery to the customer) are estimated as 9 percent of gross generation. See note "Electrical System Energy Losses," at end of Section 2.

^h Commercial retail sales plus approximately 95 percent of "Other" retail sales from Table 8.9.

ⁱ Approximately 5 percent of "Other" retail sales from Table 8.9.

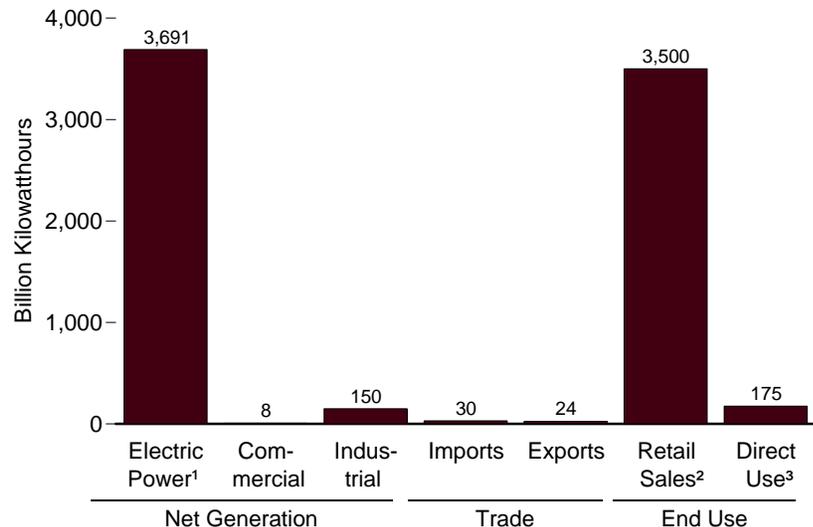
^j Commercial and industrial facility use of onsite net electricity generation; and electricity sales among adjacent or co-located facilities for which revenue information is not available.

Note: Totals may not equal sum of components due to independent rounding.

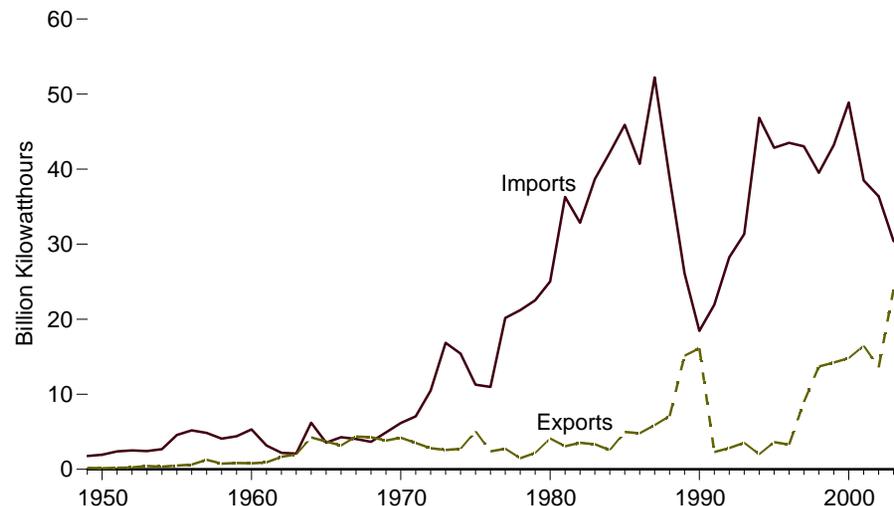
Sources: Tables 2.1b-2.1e, 8.1, 8.4a, and A6 (column 4).

Figure 8.1 Electricity Overview

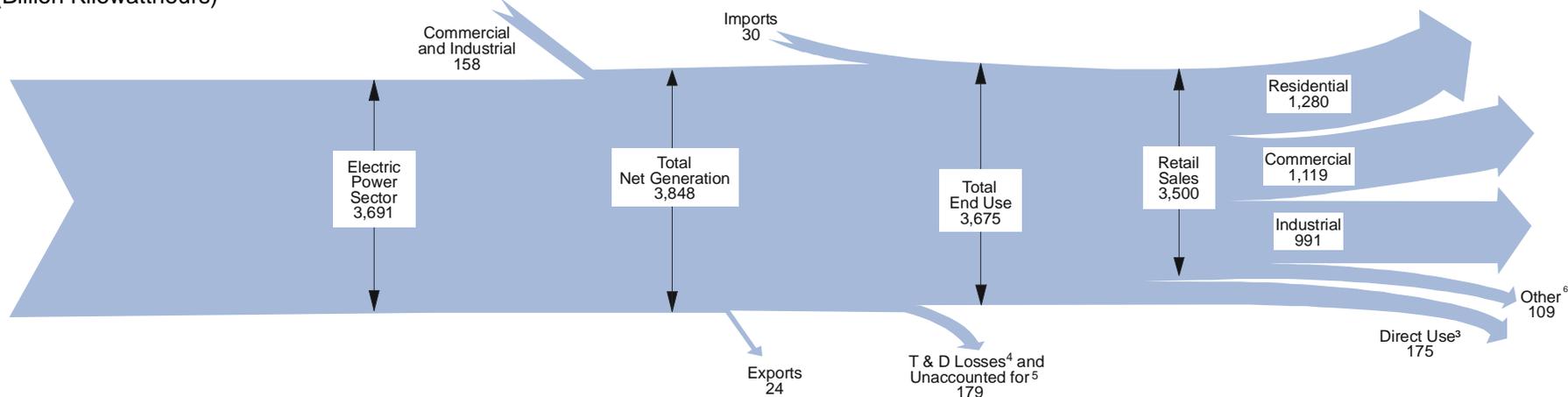
Overview, 2003



Electricity Trade, 1949-2003



Net-Generation-to-End-Use Flow, 2003 (Billion Kilowatt-hours)



¹ Electricity-only and combined-heat-and-power plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

² Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

³ Commercial and industrial facility use of onsite net electricity generation; and electricity sales among adjacent or co-located facilities for which revenue information is not available.

⁴ Transmission and distribution losses (electricity losses that occur between the point of

generation and delivery to the customer). See Note, "Electrical System Energy Losses," at the end of Section 2.

⁵ Data collection frame differences and nonsampling error.

⁶ Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Note: Because vertical scales differ, graphs should not be compared.

Sources: Tables 8.1 and 8.9.

Table 8.1 Electricity Overview, Selected Years, 1949-2003
(Billion Kilowatthours)

Year	Net Generation				Imports ¹		Exports ¹		T & D Losses ⁵ and Unaccounted for ⁶	End Use		
	Electric Power Sector ²	Commercial Sector ³	Industrial Sector ⁴	Total	From Canada	Total	To Canada	Total		Retail Sales ⁷	Direct Use ⁸	Total
1949	291	NA	5	296	NA	2	NA	(s)	43	255	NA	255
1950	329	NA	5	334	NA	2	NA	(s)	44	291	NA	291
1955	547	NA	3	550	NA	5	NA	(s)	58	497	NA	497
1960	756	NA	4	759	NA	5	NA	1	76	688	NA	688
1965	1,055	NA	3	1,058	NA	4	NA	4	104	954	NA	954
1970	1,532	NA	3	1,535	NA	6	NA	4	145	1,392	NA	1,392
1971	1,613	NA	3	1,616	NA	7	NA	4	150	1,470	NA	1,470
1972	1,750	NA	3	1,753	NA	10	NA	3	166	1,595	NA	1,595
1973	1,861	NA	3	1,864	NA	17	NA	3	165	1,713	NA	1,713
1974	1,867	NA	3	1,870	NA	15	NA	3	177	1,706	NA	1,706
1975	1,918	NA	3	1,921	NA	11	NA	5	180	1,747	NA	1,747
1976	2,038	NA	3	2,041	NA	11	NA	2	194	1,855	NA	1,855
1977	2,124	NA	3	2,127	NA	20	NA	3	197	1,948	NA	1,948
1978	2,206	NA	3	2,209	NA	21	NA	1	211	2,018	NA	2,018
1979	2,247	NA	3	2,251	NA	23	NA	2	200	2,071	NA	2,071
1980	2,286	NA	3	2,290	NA	25	NA	4	216	2,094	NA	2,094
1981	2,295	NA	3	2,298	NA	36	NA	3	184	2,147	NA	2,147
1982	2,241	NA	3	2,244	NA	33	NA	4	187	2,086	NA	2,086
1983	2,310	NA	3	2,313	NA	39	NA	3	198	2,151	NA	2,151
1984	2,416	NA	3	2,419	NA	42	NA	3	173	2,286	NA	2,286
1985	2,470	NA	3	2,473	NA	46	NA	5	190	2,324	NA	2,324
1986	2,487	NA	3	2,490	NA	41	NA	5	158	2,369	NA	2,369
1987	2,572	NA	3	2,575	NA	52	NA	6	164	2,457	NA	2,457
1988	2,704	NA	3	2,707	NA	39	NA	7	161	2,578	NA	2,578
1989	² 2,848	4	⁴ 115	2,967	NA	26	NA	15	223	2,647	108	2,755
1990	2,901	6	131	3,038	16	18	16	16	214	2,713	114	2,827
1991	2,936	6	133	3,074	20	22	2	2	213	2,762	118	2,880
1992	2,934	6	143	3,084	26	28	2	3	224	2,763	122	2,886
1993	3,044	7	146	3,197	29	31	3	4	236	2,861	128	2,989
1994	3,089	8	151	3,248	45	47	1	2	224	2,935	134	3,069
1995	3,194	8	151	3,353	41	43	2	4	235	3,013	144	3,157
1996	3,284	9	151	3,444	42	43	2	3	237	3,101	146	3,247
1997	3,329	9	154	3,492	43	43	7	9	232	3,146	148	3,294
1998	3,457	9	154	3,620	40	40	12	14	221	3,264	161	3,425
1999	3,530	9	156	3,695	43	43	13	14	229	3,312	183	3,495
2000	3,638	8	157	3,802	49	49	13	15	231	3,421	183	3,605
2001	3,580	7	149	3,737	38	39	16	16	^R 215	3,370	^{RE} 174	^R 3,544
2002	^R 3,698	^R 7	^R 153	^R 3,858	36	36	13	^R 14	^R 241	^R 3,463	^{RE} 178	^R 3,641
2003	^P 3,691	^P 8	^P 150	^P 3,848	^P 29	^P 30	^P 24	^P 24	^P 179	^P 3,500	^E 175	^P 3,675

¹ Electricity transmitted across U.S. borders with Canada and Mexico.

² Electricity-only and combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

³ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

⁴ Industrial combined-heat-and-power (CHP) and industrial electricity-only plants. Through 1988, data are for industrial hydroelectric power only.

⁵ Transmission and distribution losses (electricity losses that occur between the point of generation and delivery to the customer). See Note, "Electrical System Energy Losses," at end of Section 2.

⁶ Data collection frame differences and nonsampling error.

⁷ Electricity retail sales to ultimate customers by electric utilities and other energy service providers.

⁸ Commercial and industrial facility use of onsite net electricity generation; and electricity sales among adjacent or co-located facilities for which revenue information is not available.

R=Revised, P=Preliminary, E=Estimate, NA=Not available, (s)=Less than 0.5 billion kilowatthours.

Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>.

• For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: **Net Generation, Electric Power Sector:** Table 8.2b. **Net Generation, Commercial Sector:** Table 8.2d. **Net Generation, Industrial Sector:** • 1949-September 1977—Federal Power Commission

(FPC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FPC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.

• October 1977-1978—Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FERC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants. • 1979—FERC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and EIA estimates for all other plants. • 1980-1988—Estimated by EIA as the average generation over the 6-year period of 1974-1979.

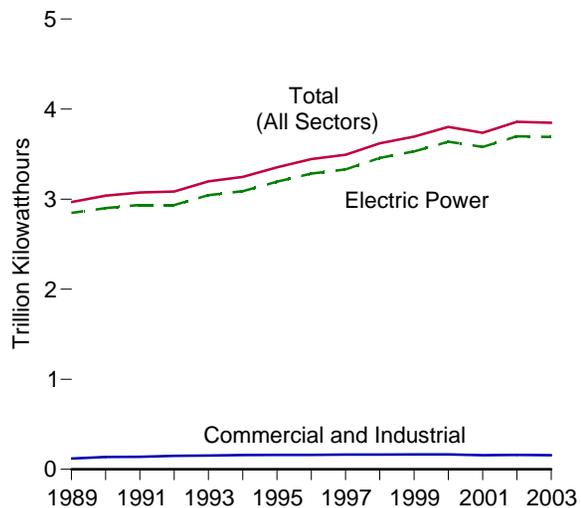
• 1989 forward—Table 8.2d. **Net Generation, Total:** Table 8.2a. **Imports and Exports:** • 1949-September 1977—unpublished FPC data. • October 1977-1980—unpublished Economic Regulatory Administration (ERA) data. • 1981—Department of Energy (DOE), Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982). • 1982 and 1983—DOE, ERA, *Electricity Exchanges Across International Borders*.

• 1984-1986—DOE, ERA, *Electricity Transactions Across International Borders*.

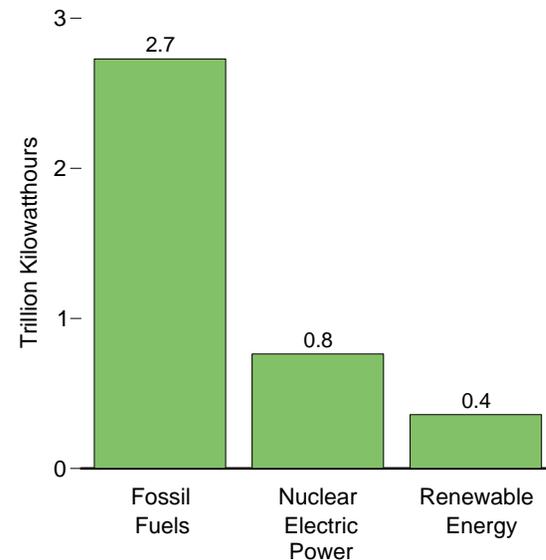
• 1987 and 1988—DOE, ERA, Form ERA-781R, "Annual Report of International Electrical Export/Import Data." • 1989—DOE, Fossil Energy, Form FE-781R, "Annual Report of International Electrical Export/Import Data." • 1990 forward—National Energy Board of Canada, and DOE, Fossil Energy, Office of Fuels Programs, Form FE-781R, "Annual Report of International Electrical Export/Imports Data." For 2001-2003, data from the California Independent System Operator were used in combination with the Form FE-781R values to estimate electricity trade with Mexico. See Note 3, "Electricity Imports and Exports," at end of section. **T & D Losses and Unaccounted for:** Calculated as the sum of total net generation and imports minus total end use and exports. **End Use:** Table 8.9.

Figure 8.2a Electricity Net Generation, Total (All Sectors)

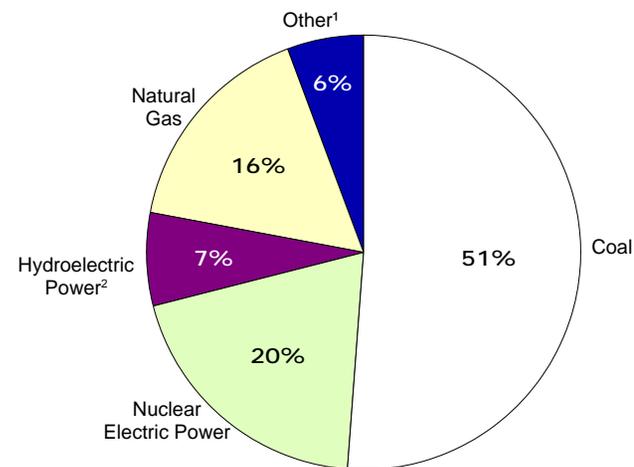
Total (All Sectors) and Sectors, 1989-2003



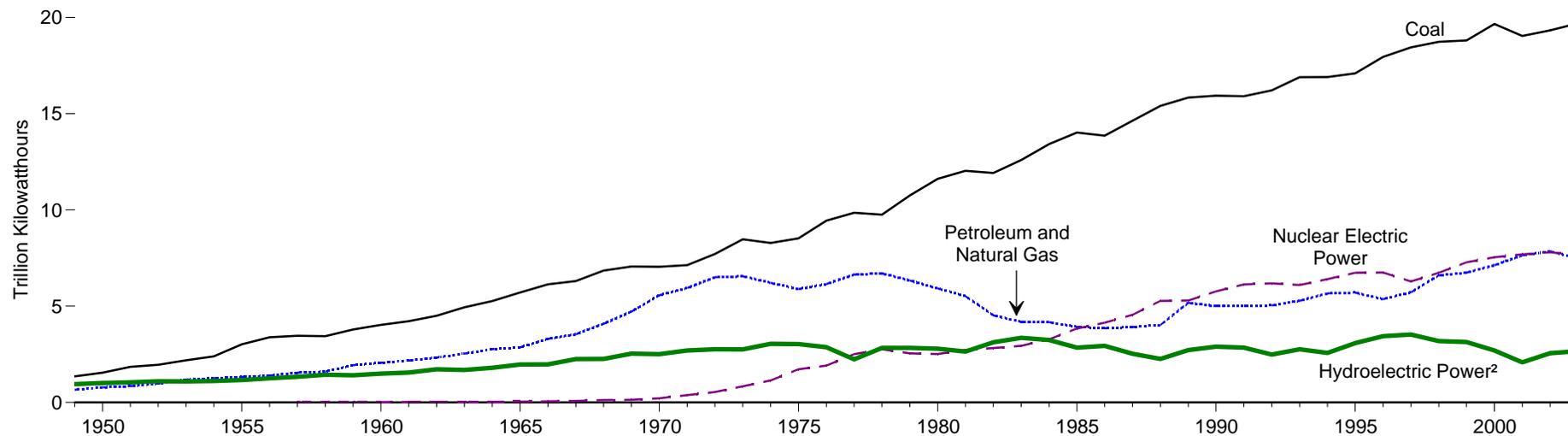
By Source Category, 2003



By Source, 2003



By Major Sources, 1949-2003



¹ Petroleum, wood, waste, geothermal, other gases, wind, solar, and other.

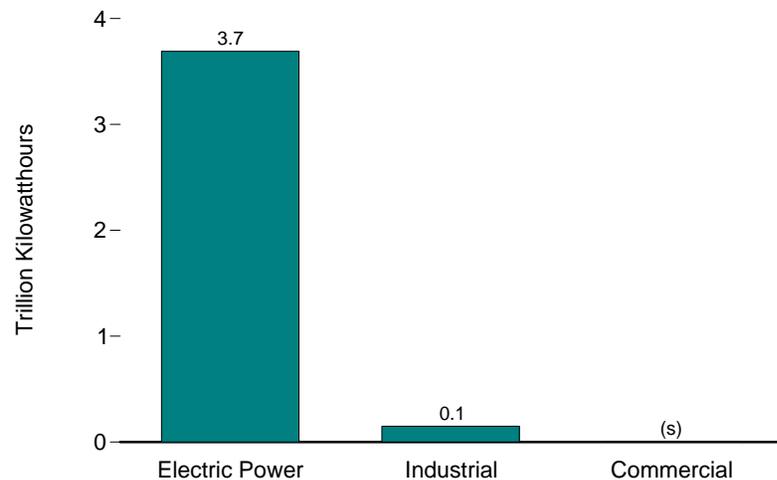
² Conventional hydroelectric power and pumped storage.

Note: Because vertical scales differ, graphs should not be compared.

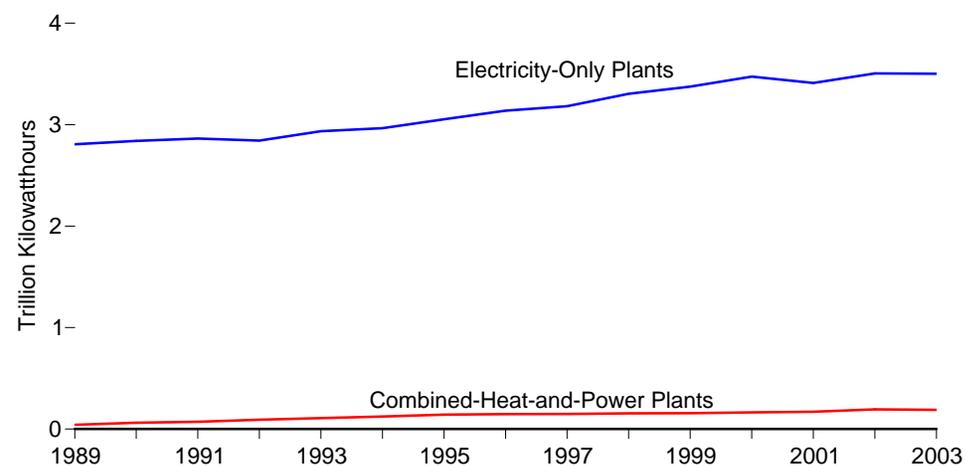
Sources: Tables 8.2a, 8.2b, and 8.2d.

Figure 8.2b Electricity Net Generation by Sector

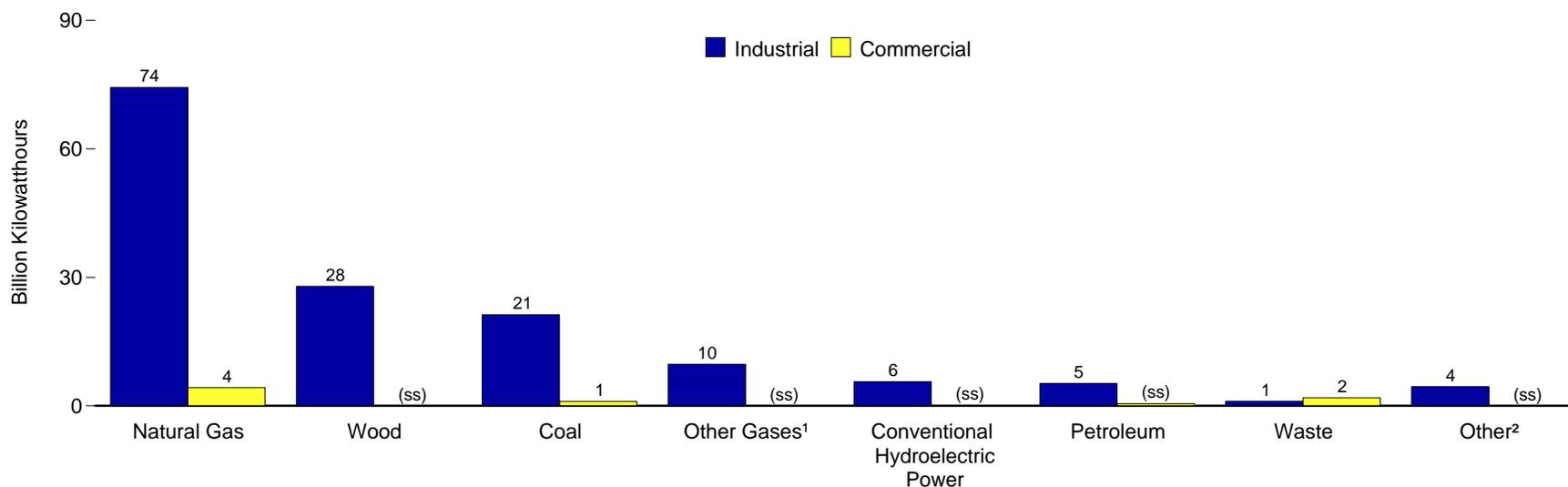
By Sector, 2003



Electric Power Sector by Plant Type, 1989-2003



Industrial and Commercial Sectors, 2003



¹ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

² Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

(s) = Less than 0.05 trillion kilowatt-hours.

(ss) = Less than 0.5 billion kilowatt-hours.

Note: Because vertical scales differ, graphs should not be compared.

Sources: Tables 8.2b-8.2d.

Table 8.2a Electricity Net Generation: Total (All Sectors), Selected Years, 1949-2003

(Sum of Tables 8.2b and 8.2d; Billion Kilowatthours)

Year	Fossil Fuels					Nuclear Electric Power	Hydro-electric Pumped Storage ⁵	Renewable Energy							Other ⁹	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total		
1949	135.5	28.5	37.0	NA	201.0	0.0	(¹⁰)	94.8	0.4	NA	NA	NA	NA	95.2	NA	296.1
1950	154.5	33.7	44.6	NA	232.8	0.0	(¹⁰)	100.9	0.4	NA	NA	NA	NA	101.3	NA	334.1
1955	301.4	37.1	95.3	NA	433.8	0.0	(¹⁰)	116.2	0.3	NA	NA	NA	NA	116.5	NA	550.3
1960	403.1	48.0	158.0	NA	609.0	0.5	(¹⁰)	149.4	0.1	NA	(s)	NA	NA	149.6	NA	759.2
1965	570.9	64.8	221.6	NA	857.3	3.7	(¹⁰)	197.0	0.3	NA	0.2	NA	NA	197.4	NA	1,058.4
1970	704.4	184.2	372.9	NA	1,261.5	21.8	(¹⁰)	251.0	0.1	0.2	0.5	NA	NA	251.8	NA	1,535.1
1971	713.1	220.2	374.0	NA	1,307.4	38.1	(¹⁰)	269.5	0.1	0.2	0.5	NA	NA	270.4	NA	1,615.9
1972	771.1	274.3	375.7	NA	1,421.2	54.1	(¹⁰)	275.9	0.1	0.2	1.5	NA	NA	277.7	NA	1,753.0
1973	847.7	314.3	340.9	NA	1,502.9	83.5	(¹⁰)	275.4	0.1	0.2	2.0	NA	NA	277.7	NA	1,864.1
1974	828.4	300.9	320.1	NA	1,449.4	114.0	(¹⁰)	304.2	0.1	0.2	2.5	NA	NA	306.9	NA	1,870.3
1975	852.8	289.1	299.8	NA	1,441.7	172.5	(¹⁰)	303.2	(s)	0.2	3.2	NA	NA	306.6	NA	1,920.8
1976	944.4	320.0	294.6	NA	1,559.0	191.1	(¹⁰)	286.9	0.1	0.2	3.6	NA	NA	290.8	NA	2,040.9
1977	985.2	358.2	305.5	NA	1,648.9	250.9	(¹⁰)	223.6	0.3	0.2	3.6	NA	NA	227.7	NA	2,127.4
1978	975.7	365.1	305.4	NA	1,646.2	276.4	(¹⁰)	283.5	0.2	0.1	3.0	NA	NA	286.8	NA	2,209.4
1979	1,075.0	303.5	329.5	NA	1,708.0	255.2	(¹⁰)	283.1	0.3	0.2	3.9	NA	NA	287.5	NA	2,250.7
1980	1,161.6	246.0	346.2	NA	1,753.8	251.1	(¹⁰)	279.2	0.3	0.2	5.1	NA	NA	284.7	NA	2,289.6
1981	1,203.2	206.4	345.8	NA	1,755.4	272.7	(¹⁰)	263.8	0.2	0.1	5.7	NA	NA	269.9	NA	2,298.0
1982	1,192.0	146.8	305.3	NA	1,644.1	282.8	(¹⁰)	312.4	0.2	0.1	4.8	NA	NA	317.5	NA	2,244.4
1983	1,259.4	144.5	274.1	NA	1,678.0	293.7	(¹⁰)	335.3	0.2	0.2	6.1	NA	(s)	341.7	NA	2,313.4
1984	1,341.7	119.8	297.4	NA	1,758.9	327.6	(¹⁰)	324.3	0.5	0.4	7.7	(s)	(s)	332.9	NA	2,419.5
1985	1,402.1	100.2	291.9	NA	1,794.3	383.7	(¹⁰)	284.3	0.7	0.6	9.3	(s)	(s)	295.0	NA	2,473.0
1986	1,385.8	136.6	248.5	NA	1,770.9	414.0	(¹⁰)	294.0	0.5	0.7	10.3	(s)	(s)	305.5	NA	2,490.5
1987	1,463.8	118.5	272.6	NA	1,854.9	455.3	(¹⁰)	252.9	0.8	0.7	10.8	(s)	(s)	265.1	NA	2,575.3
1988	1,540.7	148.9	252.8	NA	1,942.4	527.0	(¹⁰)	226.1	0.9	0.7	10.3	(s)	(s)	238.1	NA	2,707.4
1989 ¹¹	1,583.8	164.5	352.6	7.9	2,108.8	529.4	(¹⁰)	272.0	27.2	9.2	14.6	0.3	2.1	325.3	3.8	2,967.3
1990	1,594.0	126.6	372.8	10.4	2,103.8	576.9	-3.5	292.9	32.5	13.3	15.4	0.4	2.8	357.2	3.6	3,038.0
1991	1,590.6	119.8	381.6	11.3	2,103.3	612.6	-4.5	289.0	33.7	15.7	16.0	0.5	3.0	357.8	4.7	3,073.8
1992	1,621.2	100.2	404.1	13.3	2,138.7	618.8	-4.2	253.1	36.5	17.8	16.1	0.4	2.9	326.9	3.7	3,083.9
1993	1,690.1	112.8	414.9	13.0	2,230.7	610.3	-4.0	280.5	37.6	18.3	16.8	0.5	3.0	356.7	3.5	3,197.2
1994	1,690.7	105.9	460.2	13.3	2,270.1	640.4	-3.4	260.1	37.9	19.1	15.5	0.5	3.4	336.7	3.7	3,247.5
1995	1,709.4	74.6	496.1	13.9	2,293.9	673.4	-2.7	310.8	36.5	20.4	13.4	0.5	3.2	384.8	4.1	3,353.5
1996	1,795.2	81.4	455.1	14.4	2,346.0	674.7	-3.1	347.2	36.8	20.9	14.3	0.5	3.2	423.0	3.6	3,444.2
1997	1,845.0	92.6	479.4	13.4	2,430.3	628.6	-4.0	356.5	36.9	21.7	14.7	0.5	3.3	433.6	3.6	3,492.2
1998	1,873.5	128.8	531.3	13.5	2,547.1	673.7	-4.5	323.3	36.3	22.4	14.8	0.5	3.0	400.4	3.6	3,620.3
1999	1,881.1	118.1	556.4	14.1	2,569.7	728.3	-6.1	319.5	37.0	22.6	14.8	0.5	4.5	399.0	4.0	3,694.8
2000	1,966.3	111.2	601.0	14.0	2,692.5	753.9	-5.5	275.6	37.6	23.1	14.1	0.5	5.6	356.5	4.8	3,802.1
2001	1,904.0	124.9	639.1	9.0	2,677.0	768.8	-8.8	217.0	35.2	21.8	13.7	0.5	6.7	294.9	4.7	3,736.6
2002	^R 1,933.1	^R 94.6	^R 691.0	^R 11.5	^R 2,730.2	^R 780.1	^R -8.7	^R 264.3	^R 38.7	^R 22.9	^R 14.5	^R 0.6	^R 10.4	^R 351.3	^R 5.7	^R 3,858.5
2003 ^P	1,970.3	118.3	629.2	10.9	2,728.7	763.7	-8.7	275.0	37.0	22.8	13.1	0.5	10.7	359.2	5.1	3,848.0

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.
² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.
³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
⁵ Pumped storage facility production minus energy used for pumping.
⁶ Wood, black liquor, and other wood waste.
⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.
⁸ Solar thermal and photovoltaic energy.
⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.
¹⁰ Included in "Conventional Hydroelectric Power."

¹¹ Through 1988, all data except hydroelectric are for electric utilities only; hydroelectric data through 1988 include industrial plants as well as electric utilities. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.
R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.05 billion kilowatthours.
Notes: • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding.
Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>.
• For related information, see <http://www.eia.doe.gov/fuelelectric.html>.
Sources: • 1949-1988—Table 8.2b for electric power sector, and Table 8.1 for industrial sector. • 1989 forward—Tables 8.2b and 8.2d.

Table 8.2b Electricity Net Generation: Electric Power Sector, Selected Years, 1949-2003

(Subset of Table 8.2a; Billion Kilowatthours)

Year	Fossil Fuels					Nuclear Electric Power	Hydro-electric Pumped Storage ⁵	Renewable Energy							Other ⁹	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total		
1949	135.5	28.5	37.0	NA	201.0	0.0	(¹⁰)	89.7	0.4	NA	NA	NA	NA	90.1	NA	291.1
1950	154.5	33.7	44.6	NA	232.8	0.0	(¹⁰)	95.9	0.4	NA	NA	NA	NA	96.3	NA	329.1
1955	301.4	37.1	95.3	NA	433.8	0.0	(¹⁰)	113.0	0.3	NA	NA	NA	NA	113.3	NA	547.0
1960	403.1	48.0	158.0	NA	609.0	0.5	(¹⁰)	145.8	0.1	NA	(s)	NA	NA	146.0	NA	755.5
1965	570.9	64.8	221.6	NA	857.3	3.7	(¹⁰)	193.9	0.3	NA	0.2	NA	NA	194.3	NA	1,055.3
1970	704.4	184.2	372.9	NA	1,261.5	21.8	(¹⁰)	247.7	0.1	0.2	0.5	NA	NA	248.6	NA	1,531.9
1971	713.1	220.2	374.0	NA	1,307.4	38.1	(¹⁰)	266.3	0.1	0.2	0.5	NA	NA	267.2	NA	1,612.6
1972	771.1	274.3	375.7	NA	1,421.2	54.1	(¹⁰)	272.6	0.1	0.2	1.5	NA	NA	274.4	NA	1,749.7
1973	847.7	314.3	340.9	NA	1,502.9	83.5	(¹⁰)	272.1	0.1	0.2	2.0	NA	NA	274.4	NA	1,860.7
1974	828.4	300.9	320.1	NA	1,449.4	114.0	(¹⁰)	301.0	0.1	0.2	2.5	NA	NA	303.7	NA	1,867.1
1975	852.8	289.1	299.8	NA	1,441.7	172.5	(¹⁰)	300.0	(s)	0.2	3.2	NA	NA	303.5	NA	1,917.6
1976	944.4	320.0	294.6	NA	1,559.0	191.1	(¹⁰)	283.7	0.1	0.2	3.6	NA	NA	287.6	NA	2,037.7
1977	985.2	358.2	305.5	NA	1,648.9	250.9	(¹⁰)	220.5	0.3	0.2	3.6	NA	NA	224.5	NA	2,124.3
1978	975.7	365.1	305.4	NA	1,646.2	276.4	(¹⁰)	280.4	0.2	0.1	3.0	NA	NA	283.7	NA	2,206.3
1979	1,075.0	303.5	329.5	NA	1,708.0	255.2	(¹⁰)	279.8	0.3	0.2	3.9	NA	NA	284.2	NA	2,247.4
1980	1,161.6	246.0	346.2	NA	1,753.8	251.1	(¹⁰)	276.0	0.3	0.2	5.1	NA	NA	281.5	NA	2,286.4
1981	1,203.2	206.4	345.8	NA	1,755.4	272.7	(¹⁰)	260.7	0.2	0.1	5.7	NA	NA	266.7	NA	2,294.8
1982	1,192.0	146.8	305.3	NA	1,644.1	282.8	(¹⁰)	309.2	0.2	0.1	4.8	NA	NA	314.4	NA	2,241.2
1983	1,259.4	144.5	274.1	NA	1,678.0	293.7	(¹⁰)	332.1	0.2	0.2	6.1	NA	(s)	338.6	NA	2,310.3
1984	1,341.7	119.8	297.4	NA	1,758.9	327.6	(¹⁰)	321.2	0.5	0.4	7.7	(s)	(s)	329.8	NA	2,416.3
1985	1,402.1	100.2	291.9	NA	1,794.3	383.7	(¹⁰)	281.1	0.7	0.6	9.3	(s)	(s)	291.9	NA	2,469.8
1986	1,385.8	136.6	248.5	NA	1,770.9	414.0	(¹⁰)	290.8	0.5	0.7	10.3	(s)	(s)	302.3	NA	2,487.3
1987	1,463.8	118.5	272.6	NA	1,854.9	455.3	(¹⁰)	249.7	0.8	0.7	10.8	(s)	(s)	262.0	NA	2,572.1
1988	1,540.7	148.9	252.8	NA	1,942.4	527.0	(¹⁰)	222.9	0.9	0.7	10.3	(s)	(s)	234.9	NA	2,704.3
1989 ¹¹	1,562.4	159.0	297.3	0.5	2,019.1	529.4	(¹⁰)	269.2	5.6	7.7	14.6	0.3	2.1	299.5	0.3	2,848.2
1990	1,572.1	118.9	309.5	0.6	2,001.1	576.9	-3.5	289.8	7.0	11.5	15.4	0.4	2.8	326.9	(s)	2,901.3
1991	1,568.8	112.8	317.8	0.7	2,000.1	612.6	-4.5	286.0	7.7	13.9	16.0	0.5	3.0	327.0	0.4	2,935.6
1992	1,597.7	92.2	334.3	1.2	2,025.4	618.8	-4.2	250.0	8.5	15.9	16.1	0.4	2.9	293.9	0.5	2,934.4
1993	1,665.5	105.4	342.2	1.0	2,114.1	610.3	-4.0	277.5	9.2	16.2	16.8	0.5	3.0	323.2	0.4	3,043.9
1994	1,666.3	98.7	385.7	1.1	2,151.7	640.4	-3.4	254.0	9.2	17.0	15.5	0.5	3.4	299.7	0.2	3,088.7
1995	1,686.1	68.1	419.2	1.9	2,175.3	673.4	-2.7	305.4	7.6	18.0	13.4	0.5	3.2	348.0	0.2	3,194.2
1996	1,772.0	74.8	378.8	1.3	2,226.9	674.7	-3.1	341.2	8.4	17.8	14.3	0.5	3.2	385.4	0.2	3,284.1
1997	1,820.8	86.5	399.6	1.5	2,308.4	628.6	-4.0	350.6	8.7	18.5	14.7	0.5	3.3	396.3	0.1	3,329.4
1998	1,850.2	122.2	449.3	2.3	2,424.0	673.7	-4.5	317.9	8.6	19.2	14.8	0.5	3.0	364.0	0.2	3,457.4
1999	1,858.6	111.5	473.0	1.6	2,444.8	728.3	-6.1	314.7	9.0	19.5	14.8	0.5	4.5	362.9	0.1	3,530.0
2000	1,943.1	105.2	518.0	2.0	2,568.3	753.9	-5.5	271.3	8.9	20.3	14.1	0.5	5.6	320.7	0.1	3,637.5
2001	1,882.8	119.1	554.9	0.6	2,557.5	768.8	-8.8	213.7	8.3	19.5	13.7	0.5	6.7	262.5	0.0	3,580.1
2002	R ¹ 1,910.6	R ² 89.7	R ³ 607.7	R ⁴ 2.0	R ⁵ 2,610.0	780.1	R ⁶ -8.7	R ⁷ 260.5	R ⁸ 9.0	R ⁹ 20.2	R ¹⁰ 14.5	R ¹¹ 0.6	R ¹² 10.4	R ¹³ 315.1	R ¹⁴ 2.1	R ¹⁵ 3,698.5
2003 ^P	1,948.0	112.5	550.6	1.2	2,612.4	763.7	-8.7	269.3	9.0	19.9	13.1	0.5	10.7	322.6	0.6	3,690.7

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁵ Pumped storage facility production minus energy used for pumping.

⁶ Wood, black liquor, and other wood waste.

⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁸ Solar thermal and photovoltaic energy.

⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹⁰ Included in "Conventional Hydroelectric Power."

¹¹ Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.05 billion kilowatthours.

Notes: • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary

business is to sell electricity, or electricity and heat, to the public. • See Table 8.2d for commercial and industrial CHP and electricity-only data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>. • For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1949-September 1977—Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • October 1977-1981—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • 1982-1988—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." • 1989-1997—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.2c Electricity Net Generation: Electric Power Sector by Plant Type, 1989-2003

(Breakout of Table 8.2b; Billion Kilowatthours)

Year	Fossil Fuels					Nuclear Electric Power	Hydro-electric Pumped Storage ⁵	Renewable Energy							Other ⁹	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total		
Electricity-Only Plants ¹⁰																
1989	1,554.0	158.3	266.9	0.0	1,979.3	529.4	(¹¹)	269.2	4.2	6.9	14.6	0.3	2.1	297.3	0.0	2,805.9
1990	1,560.2	117.6	264.7	(s)	1,942.4	576.9	-3.5	289.8	5.6	10.4	15.4	0.4	2.8	324.3	0.0	2,840.0
1991	1,551.9	112.2	267.8	(s)	1,931.9	612.6	-4.5	286.0	6.0	12.2	16.0	0.5	3.0	323.7	0.0	2,863.6
1992	1,577.1	90.1	270.9	(s)	1,938.0	618.8	-4.2	250.0	6.6	14.4	16.1	0.4	2.9	290.4	0.0	2,843.1
1993	1,642.1	100.6	267.2	(s)	2,009.9	610.3	-4.0	277.5	7.2	14.9	16.8	0.5	3.0	319.8	0.0	2,935.9
1994	1,639.9	92.1	299.7	(s)	2,031.7	640.4	-3.4	254.0	7.6	15.4	15.5	0.5	3.4	296.5	0.0	2,965.2
1995	1,658.0	62.0	317.4	(s)	2,037.4	673.4	-2.7	305.4	5.9	16.3	13.4	0.5	3.2	344.7	0.0	3,052.8
1996	1,742.8	68.5	272.8	(s)	2,084.1	674.7	-3.1	341.2	6.5	16.1	14.3	0.5	3.2	381.8	0.0	3,137.6
1997	1,793.2	80.3	291.1	(s)	2,164.6	628.6	-4.0	350.6	6.5	16.4	14.7	0.5	3.3	392.0	0.0	3,181.3
1998	1,823.0	115.7	335.9	0.1	2,274.6	673.7	-4.5	317.9	6.6	17.0	14.8	0.5	3.0	359.8	0.0	3,303.6
1999	1,832.1	104.8	356.6	(s)	2,293.6	728.3	-6.1	314.7	7.3	17.1	14.8	0.5	4.5	358.8	0.0	3,374.6
2000	1,910.6	98.0	399.4	0.2	2,408.2	753.9	-5.5	271.3	7.3	17.6	14.1	0.5	5.6	316.4	0.0	3,472.9
2001	1,851.8	113.2	427.0	(s)	2,392.0	768.8	-8.8	213.7	6.6	17.2	13.7	0.5	6.7	258.6	0.0	3,410.5
2002	^R 1,881.2	^R 83.3	^R 456.8	^R 0.2	^R 2,421.5	780.1	^R -8.7	^R 260.5	^R 7.3	^R 17.4	^R 14.5	^R 0.6	^R 10.4	^R 310.5	^R 1.4	^R 3,504.8
2003 ^P	1,916.2	105.6	406.4	(s)	2,428.2	763.7	-8.7	269.3	7.2	16.9	13.1	0.5	10.7	317.8	0.2	3,501.3
Combined-Heat-and-Power Plants ¹²																
1989	8.4	0.7	30.4	0.5	39.9	—	—	0.0	1.3	0.9	—	—	—	2.2	0.3	42.3
1990	11.9	1.3	44.8	0.6	58.7	—	—	0.0	1.4	1.1	—	—	—	2.6	(s)	61.3
1991	16.9	0.6	50.0	0.7	68.2	—	—	0.0	1.7	1.6	—	—	—	3.3	0.4	71.9
1992	20.7	2.2	63.4	1.2	87.4	—	—	0.0	1.9	1.5	—	—	—	3.4	0.5	91.3
1993	23.4	4.8	75.0	1.0	104.2	—	—	0.0	2.0	1.4	—	—	—	3.4	0.4	108.0
1994	26.4	6.6	86.0	1.1	120.1	—	—	0.0	1.6	1.6	—	—	—	3.2	0.2	123.5
1995	28.1	6.1	101.7	1.9	137.9	—	—	0.0	1.7	1.7	—	—	—	3.4	0.2	141.5
1996	29.2	6.3	105.9	1.3	142.7	—	—	0.0	1.9	1.7	—	—	—	3.6	0.2	146.6
1997	27.6	6.2	108.5	1.5	143.7	—	—	0.0	2.2	2.1	—	—	—	4.3	0.1	148.1
1998	27.2	6.6	113.4	2.3	149.4	—	—	0.0	2.0	2.3	—	—	—	4.2	0.2	153.8
1999	26.6	6.7	116.4	1.6	151.2	—	—	0.0	1.7	2.4	—	—	—	4.1	0.1	155.4
2000	32.5	7.2	118.6	1.8	160.2	—	—	0.0	1.6	2.7	—	—	—	4.3	0.1	164.6
2001	31.0	6.0	128.0	0.6	165.5	—	—	0.0	1.7	2.3	—	—	—	4.0	0.0	169.5
2002	^R 29.4	^R 6.5	^R 150.9	^R 1.7	^R 188.5	—	—	0.0	1.7	2.8	—	—	—	^R 4.6	^R 0.6	^R 193.7
2003 ^E	31.8	6.9	144.3	1.2	184.2	—	—	(s)	1.8	2.9	—	—	—	4.8	0.4	189.4

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁵ Pumped storage facility production minus energy used for pumping.

⁶ Wood, black liquor, and other wood waste.

⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁸ Solar thermal and photovoltaic energy.

⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹⁰ Electricity-only plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity to the public. Data also include a small number of electric utility combined-heat-and-power (CHP) plants.

¹¹ Included in "Conventional Hydroelectric Power."

¹² Combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity and heat to the public. Data do not include electric utility CHP plants—these are included under "Electricity-Only Plants."

R=Revised. P=Preliminary. E=Estimate. — = Not applicable. (s)=Less than 0.05 billion kilowatthours.

Notes: • See Table 8.2d for commercial and industrial CHP and electricity-only data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.2d Electricity Net Generation: Commercial and Industrial Sectors, 1989-2003

(Subset of Table 8.2a; Billion Kilowatthours)

Year	Fossil Fuels					Nuclear Electric Power	Hydro-electric Pumped Storage ⁵	Renewable Energy							Other ⁹	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total		
Commercial Sector ¹⁰																
1989	0.7	0.6	2.2	0.1	3.6	—	—	0.1	0.1	0.5	—	—	—	0.7	0.0	4.3
1990	0.8	0.6	3.3	0.1	4.8	—	—	0.1	0.1	0.8	—	—	—	1.1	0.0	5.8
1991	0.8	0.4	3.2	0.1	4.5	—	—	0.1	0.1	0.9	—	—	—	1.1	(s)	5.7
1992	0.7	0.3	3.9	0.1	5.0	—	—	0.1	0.1	1.0	—	—	—	1.2	(s)	6.2
1993	0.9	0.3	4.5	0.1	5.8	—	—	0.1	0.1	1.0	—	—	—	1.2	(s)	7.0
1994	0.8	0.4	4.9	0.1	6.3	—	—	0.1	0.1	1.2	—	—	—	1.3	0.0	7.6
1995	1.0	0.4	5.2	0.0	6.5	—	—	0.1	0.1	1.5	—	—	—	1.7	(s)	8.2
1996	1.1	0.4	5.2	(s)	6.7	—	—	0.1	0.1	2.2	—	—	—	2.4	(s)	9.0
1997	1.0	0.4	4.7	(s)	6.2	—	—	0.1	(s)	2.3	—	—	—	2.5	(s)	8.7
1998	1.0	0.4	4.9	(s)	6.3	—	—	0.1	(s)	2.3	—	—	—	2.5	0.0	8.7
1999	1.0	0.4	4.6	(s)	6.0	—	—	0.1	(s)	2.4	—	—	—	2.5	(s)	8.6
2000	1.1	0.4	4.3	(s)	5.8	—	—	0.1	(s)	2.0	—	—	—	2.1	(s)	7.9
2001	1.0	0.4	4.4	(s)	5.9	—	—	0.1	(s)	1.5	—	—	—	1.5	(s)	7.4
2002	1.0	0.4	R4.3	(s)	R5.7	—	—	R(s)	(s)	R1.6	—	—	—	R1.6	R0.1	R7.4
2003 ^P	1.0	0.5	4.3	(s)	5.8	—	—	0.1	(s)	1.9	—	—	—	2.0	(s)	7.8
Industrial Sector ¹¹																
1989	20.7	5.0	53.2	7.3	86.1	—	—	2.7	21.6	0.9	—	—	—	25.2	3.5	114.8
1990	21.1	7.2	60.0	9.6	97.9	—	—	3.0	25.4	0.9	—	—	—	29.3	3.6	130.8
1991	21.0	6.5	60.6	10.5	98.6	—	—	2.8	25.9	0.9	—	—	—	29.6	4.3	132.6
1992	22.7	7.6	65.9	12.0	108.2	—	—	2.9	27.9	0.9	—	—	—	31.8	3.2	143.3
1993	23.7	7.0	68.2	11.9	110.9	—	—	2.9	28.4	1.1	—	—	—	32.3	3.1	146.3
1994	23.6	6.8	69.6	12.1	112.1	—	—	6.0	28.7	1.0	—	—	—	35.7	3.4	151.2
1995	22.4	6.0	71.7	11.9	112.1	—	—	5.3	28.9	0.9	—	—	—	35.1	3.9	151.0
1996	22.2	6.3	71.0	13.0	112.5	—	—	5.9	28.4	0.9	—	—	—	35.2	3.4	151.0
1997	23.2	5.6	75.1	11.8	115.8	—	—	5.7	28.2	0.9	—	—	—	34.8	3.5	154.1
1998	22.3	6.2	77.1	11.2	116.8	—	—	5.3	27.7	0.9	—	—	—	33.9	3.4	154.1
1999	21.5	6.1	78.8	12.5	118.9	—	—	4.8	28.1	0.7	—	—	—	33.5	3.9	156.3
2000	22.1	5.6	78.8	11.9	118.4	—	—	4.1	28.7	0.8	—	—	—	33.6	4.7	156.7
2001	20.1	5.3	79.8	8.5	113.6	—	—	3.1	26.9	0.8	—	—	—	30.8	4.7	149.2
2002	R21.5	R4.4	R79.0	R9.5	R114.4	—	—	R3.8	R29.6	R1.1	—	—	—	R34.6	R3.6	R152.6
2003 ^P	21.2	5.2	74.3	9.7	110.5	—	—	5.6	27.9	1.1	—	—	—	34.6	4.5	149.5

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁵ Pumped storage facility production minus energy used for pumping.

⁶ Wood, black liquor, and other wood waste.

⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁸ Solar thermal and photovoltaic energy.

⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹⁰ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

¹¹ Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

R=Revised. P=Preliminary. — = Not applicable. (s)=Less than 0.05 billion kilowatthours.

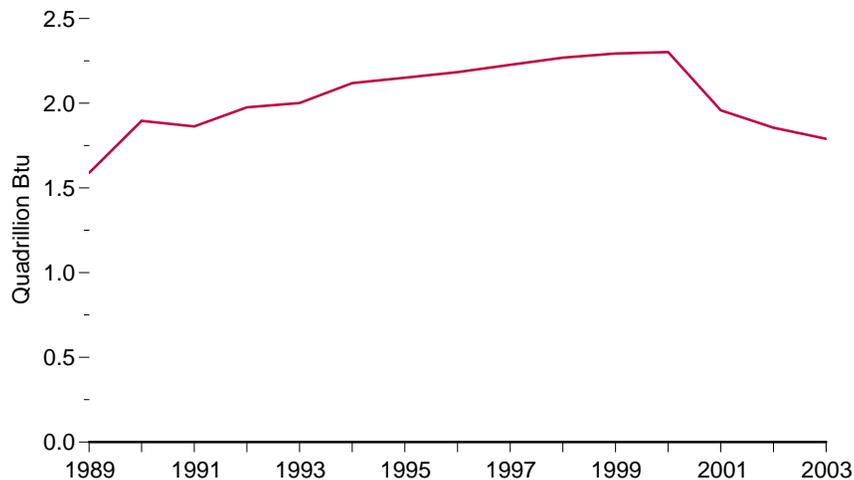
Notes: • See Tables 8.2b and 8.2c for electric power sector electricity-only and CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

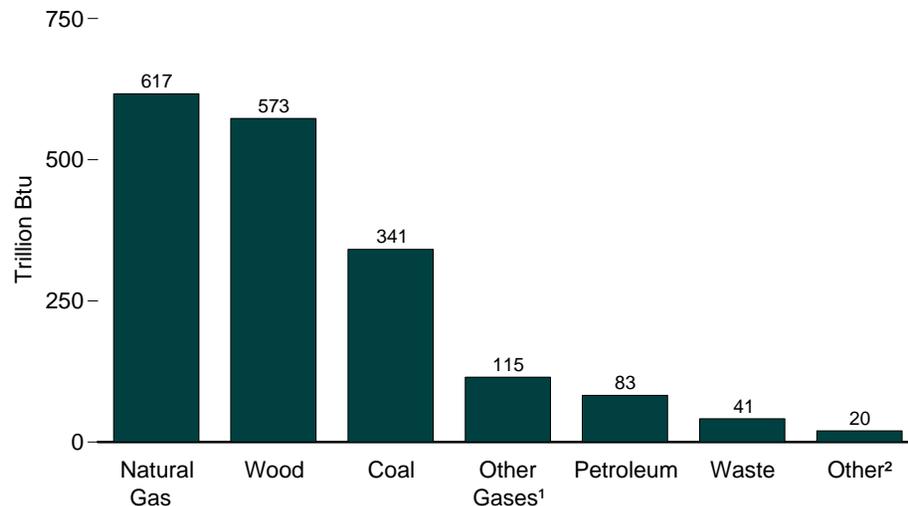
Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Figure 8.3 Useful Thermal Output at Combined-Heat-and-Power Plants

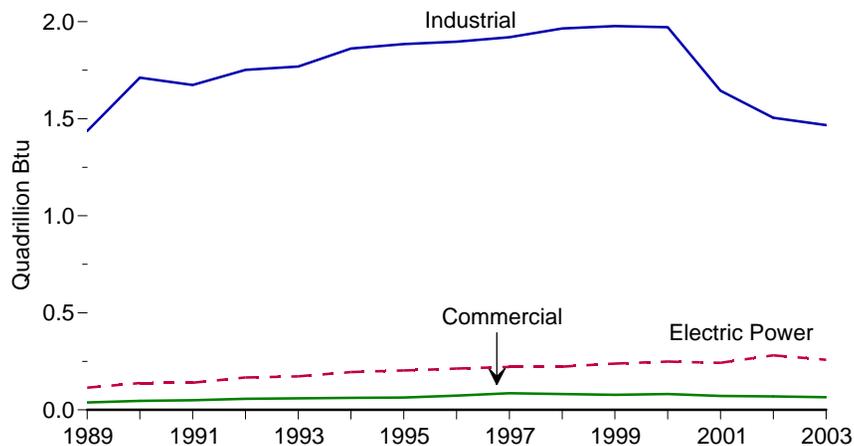
Total (All Sectors), 1989-2003



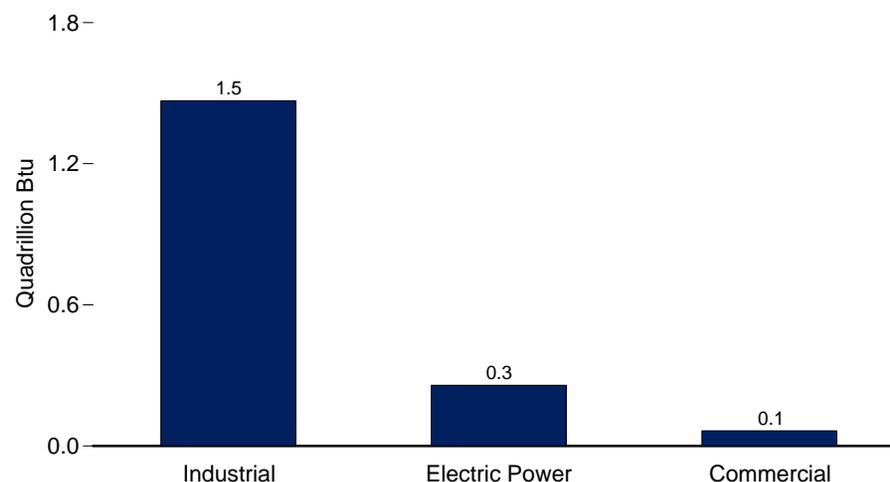
Total (All Sectors) by Source, 2003



By Sector, 1989-2003



By Sector, 2003



¹ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

² Batteries, chemicals hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

Note: Because vertical scales differ, graphs should not be compared.

Sources: Tables 8.3a–8.3c.

Table 8.3a Useful Thermal Output at Combined-Heat-and-Power Plants: Total (All Sectors), 1989-2003
(Sum of Tables 8.3b and 8.3c; Trillion Btu)

Year	Fossil Fuels					Renewable Energy			Other ⁷	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total	Wood ⁵	Waste ⁶	Total		
1989	323	96	462	93	973	546	30	577	39	1,589
1990	363	127	538	141	1,169	651	36	687	40	1,896
1991	352	112	547	148	1,159	623	37	660	44	1,863
1992	367	117	592	160	1,236	658	40	698	42	1,976
1993	373	129	604	142	1,248	668	45	713	41	2,002
1994	388	133	646	144	1,309	722	45	767	42	2,119
1995	386	121	686	145	1,338	721	47	768	44	2,151
1996	392	133	711	150	1,385	701	55	756	43	2,184
1997	389	137	713	150	1,389	731	55	785	53	2,227
1998	382	136	782	167	1,466	700	57	757	46	2,269
1999	386	125	811	179	1,501	690	55	744	48	2,294
2000	384	108	812	184	1,488	707	56	764	50	2,302
2001	354	90	741	133	1,318	556	41	597	42	1,958
2002	337	73	709	118	1,236	546	39	585	35	1,856
2003 ^P	341	83	617	115	1,156	573	41	614	20	1,790

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁵ Wood, black liquor, and other wood waste.

⁶ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁷ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

P=Preliminary.

Notes: • Data do not include electric utility combined-heat-and-power (CHP) plants. • See Note 1, "Coverage of Electricity Statistics," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: Tables 8.3b and 8.3c.

Table 8.3b Useful Thermal Output at Combined-Heat-and-Power Plants: Electric Power Sector, 1989-2003

(Subset of Table 8.3a; Trillion Btu)

Year	Fossil Fuels					Renewable Energy			Other ⁷	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total	Wood ⁵	Waste ⁶	Total		
1989	13	8	67	2	90	19	5	24	1	114
1990	21	9	80	4	114	18	6	25	(s)	138
1991	21	6	82	4	113	17	9	26	1	140
1992	28	6	102	5	140	17	8	25	2	167
1993	30	8	107	3	147	16	8	24	1	173
1994	37	9	119	5	170	15	10	24	1	195
1995	40	13	118	4	176	15	12	27	(s)	203
1996	43	12	121	4	180	16	16	33	(s)	213
1997	39	12	132	8	191	16	14	30	(s)	221
1998	43	6	142	5	196	10	16	26	(s)	222
1999	52	7	146	4	208	10	20	30	(s)	238
2000	53	7	158	5	223	6	19	26	(s)	249
2001	52	6	164	5	226	8	8	16	0	243
2002	^R 40	^R 4	^R 214	6	^R 264	^R 8	^R 10	^R 17	(s)	^R 281
2003 ^P	39	7	192	5	243	7	8	15	(s)	258

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁵ Wood, black liquor, and other wood waste.

⁶ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁷ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

R=Revised. P=Preliminary. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity and heat to the

public. Data do not include electric utility CHP plants. • See Table 8.3c for commercial and industrial CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fueelectric.html>.

Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.3c Useful Thermal Output at Combined-Heat-and-Power Plants: Commercial and Industrial Sectors, 1989-2003
(Subset of Table 8.3a; Trillion Btu)

Year	Fossil Fuels					Renewable Energy			Other ⁷	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total	Wood ⁵	Waste ⁶	Total		
Commercial Sector ⁸										
1989	14	4	10	(s)	27	(s)	10	10	0	38
1990	15	5	16	(s)	36	(s)	10	11	0	46
1991	16	4	21	(s)	41	(s)	9	9	(s)	50
1992	15	4	24	(s)	44	(s)	13	14	(s)	57
1993	18	4	23	(s)	45	(s)	14	14	(s)	59
1994	18	4	26	(s)	48	(s)	14	14	0	62
1995	17	3	29	0	48	(s)	15	15	(s)	63
1996	20	3	33	0	55	1	17	18	0	73
1997	22	4	40	(s)	66	1	19	20	0	86
1998	20	5	39	(s)	64	1	18	18	0	82
1999	20	3	37	0	61	1	17	17	0	78
2000	21	4	39	0	64	1	17	18	0	82
2001	18	4	35	0	58	1	13	14	0	72
2002	^R 18	^R 3	^R 36	0	^R 57	^R 1	^R 11	^R 12	0	^R 69
2003 ^P	20	3	29	0	52	(s)	13	13	0	65
Industrial Sector ⁹										
1989	297	84	385	90	856	527	15	542	38	1,437
1990	327	113	443	137	1,019	632	20	652	40	1,711
1991	315	103	444	144	1,005	606	19	625	44	1,674
1992	324	107	466	155	1,052	641	19	660	40	1,752
1993	325	117	475	139	^R 1,055	^R 652	23	^R 675	39	^R 1,769
1994	333	119	^R 501	138	^R 1,092	707	21	729	41	^R 1,862
1995	329	105	^R 540	140	^R 1,114	706	20	726	44	^R 1,884
1996	329	118	557	146	1,150	684	21	705	43	1,897
1997	328	121	541	142	1,132	713	22	735	53	1,920
1998	318	124	601	162	1,206	689	24	713	46	1,965
1999	313	115	629	175	1,233	679	18	697	48	1,978
2000	309	98	615	179	1,201	700	20	720	50	1,971
2001	284	80	542	128	1,034	548	20	567	42	1,644
2002	^R 278	66	^R 458	^R 112	^R 914	^R 537	^R 19	^R 556	^R 35	^R 1,505
2003 ^P	283	73	395	110	861	566	20	586	19	1,467

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁵ Wood, black liquor, and other wood waste.

⁶ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁷ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

⁸ Commercial combined-heat-and-power (CHP) plants.

⁹ Industrial combined-heat-and-power (CHP) plants.

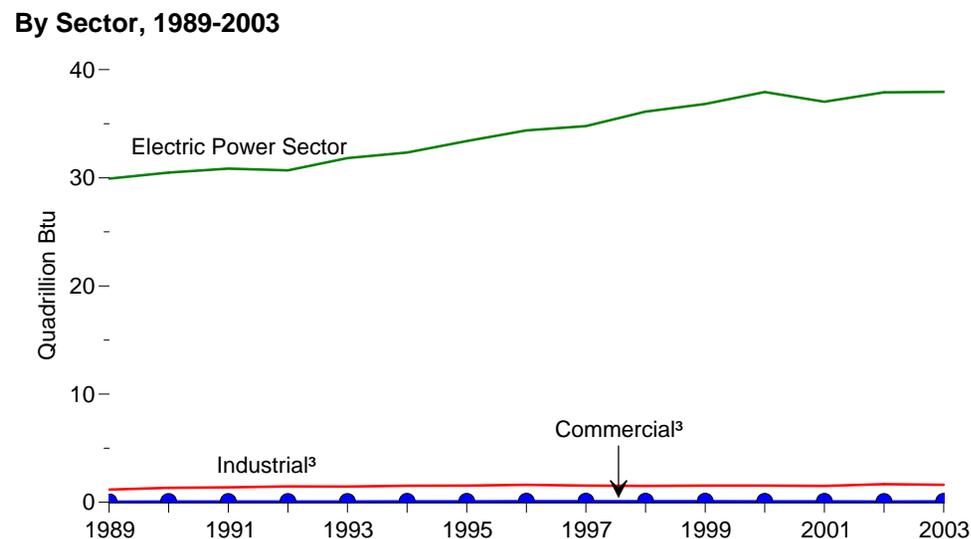
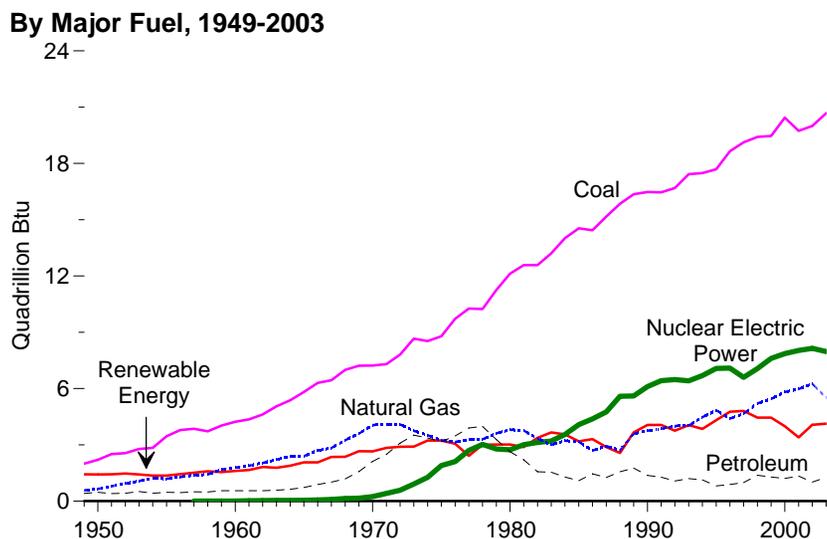
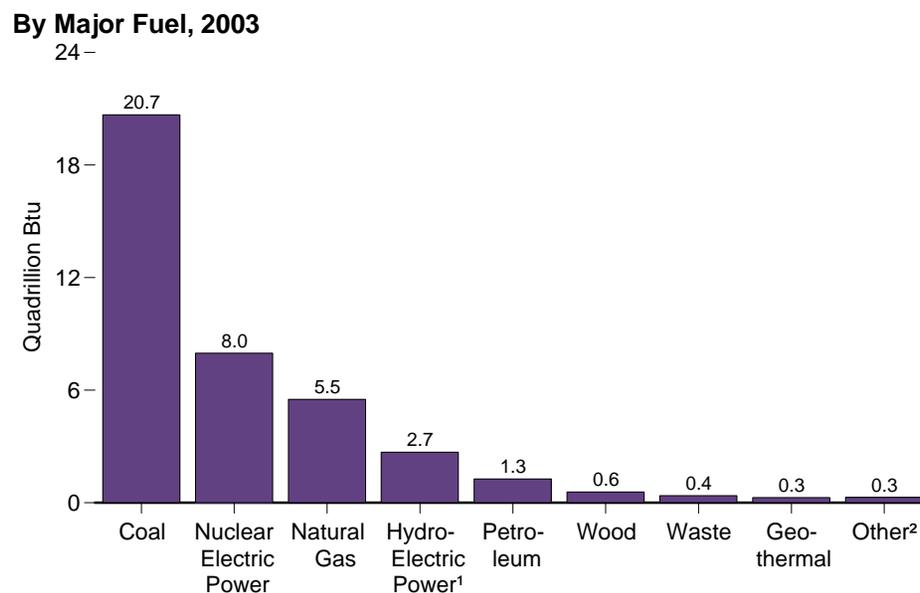
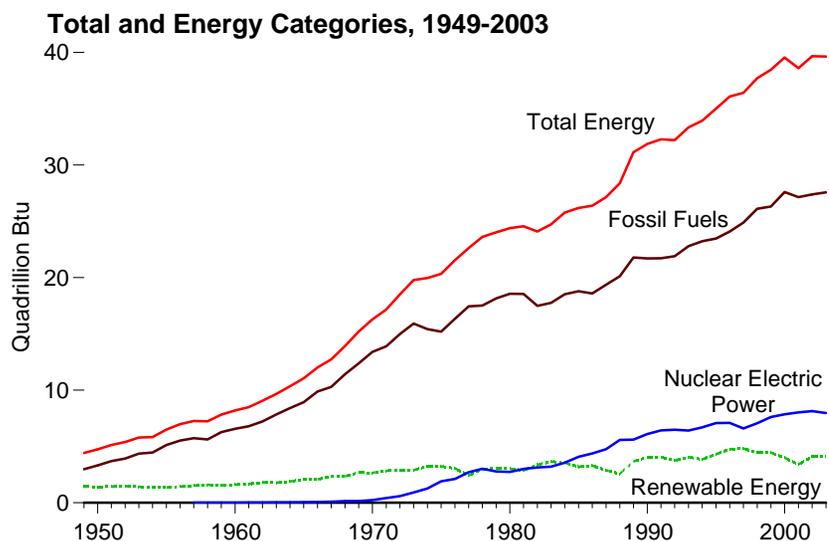
R=Revised. P=Preliminary. (s)=Less than 0.5 trillion Btu.

Notes: • See Table 8.3b for electric power sector CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Figure 8.4 Consumption for Electricity Generation



¹ Conventional hydroelectric power and pumped storage.

² Other gases, solar, wind, batteries, chemical, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and electricity net imports.

³ Combined-heat-and-power plants and a small number of electricity-only plants.

Notes: • Stocks are at end of year. • Because vertical scales differ, graphs should not be compared.

Sources: Tables 8.4a-8.4c.

Table 8.4a Consumption for Electricity Generation by Energy Source: Total (All Sectors), Selected Years, 1949-2003

(Sum of Tables 8.4b and 8.4c; Trillion Btu)

Year	Fossil Fuels					Nuclear Electric Power	Hydro-electric Pumped Storage ⁵	Renewable Energy							Other ⁹	Electricity Net Imports ¹⁰	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total			
1949	1,995	415	569	NA	2,979	0	(¹¹)	1,425	6	NA	NA	NA	NA	1,431	NA	5	4,415
1950	2,199	472	651	NA	3,322	0	(¹¹)	1,415	5	NA	NA	NA	NA	1,421	NA	6	4,749
1955	3,458	471	1,194	NA	5,123	0	(¹¹)	1,360	3	NA	NA	NA	NA	1,363	NA	14	6,500
1960	4,228	553	1,785	NA	6,565	6	(¹¹)	1,608	2	NA	1	NA	NA	1,610	NA	15	8,197
1965	5,821	722	2,395	NA	8,938	43	(¹¹)	2,059	3	NA	4	NA	NA	2,066	NA	(s)	11,047
1970	7,227	2,117	4,054	NA	13,399	239	(¹¹)	2,634	1	2	11	NA	NA	2,649	NA	7	16,293
1971	7,299	2,495	4,099	NA	13,893	413	(¹¹)	2,824	1	2	12	NA	NA	2,839	NA	12	17,158
1972	7,811	3,097	4,084	NA	14,992	584	(¹¹)	2,864	1	2	31	NA	NA	2,899	NA	26	18,501
1973	8,658	3,515	3,748	NA	15,921	910	(¹¹)	2,861	1	2	43	NA	NA	2,907	NA	49	19,788
1974	8,534	3,365	3,519	NA	15,418	1,272	(¹¹)	3,177	1	2	53	NA	NA	3,232	NA	43	19,966
1975	8,786	3,166	3,240	NA	15,191	1,900	(¹¹)	3,155	(s)	2	70	NA	NA	3,227	NA	21	20,339
1976	9,720	3,477	3,152	NA	16,349	2,111	(¹¹)	2,976	1	2	78	NA	NA	3,057	NA	29	21,547
1977	10,262	3,901	3,284	NA	17,446	2,702	(¹¹)	2,333	3	2	77	NA	NA	2,416	NA	59	22,623
1978	10,238	3,987	3,297	NA	17,522	3,024	(¹¹)	2,937	2	1	64	NA	NA	3,005	NA	67	23,618
1979	11,260	3,283	3,613	NA	18,156	2,776	(¹¹)	2,931	3	2	84	NA	NA	3,020	NA	69	24,021
1980	12,123	2,634	3,810	NA	18,567	2,739	(¹¹)	2,900	3	2	110	NA	NA	3,014	NA	71	24,392
1981	12,583	2,202	3,768	NA	18,553	3,008	(¹¹)	2,758	3	1	123	NA	NA	2,885	NA	113	24,559
1982	12,582	1,568	3,342	NA	17,491	3,131	(¹¹)	3,266	2	1	105	NA	NA	3,374	NA	100	24,096
1983	13,213	1,544	2,998	NA	17,754	3,203	(¹¹)	3,527	2	2	129	NA	(s)	3,661	NA	121	24,738
1984	14,019	1,286	3,220	NA	18,526	3,553	(¹¹)	3,386	5	4	165	(s)	(s)	3,560	NA	135	25,774
1985	14,542	1,090	3,160	NA	18,792	4,076	(¹¹)	2,970	8	7	198	(s)	(s)	3,183	NA	140	26,191
1986	14,444	1,452	2,691	NA	18,586	4,380	(¹¹)	3,071	5	7	219	(s)	(s)	3,303	NA	122	26,392
1987	15,173	1,257	2,935	NA	19,365	4,754	(¹¹)	2,635	8	7	229	(s)	(s)	2,879	NA	158	27,157
1988	15,850	1,563	2,709	NA	20,123	5,587	(¹¹)	2,334	10	8	217	(s)	(s)	2,569	NA	108	28,387
1989	¹² 16,359	¹² 1,757	¹² 3,581	90	¹² 21,789	¹² 5,602	(¹¹)	¹³ 2,837	¹² 345	¹² 151	¹² 308	¹² 3	¹² 22	¹² 3,665	39	37	31,132
1990	16,477	1,367	3,752	112	21,708	6,104	-36	3,046	442	211	326	4	29	4,058	36	8	31,878
1991	16,460	1,276	3,861	125	21,723	6,422	-47	3,016	425	247	335	5	31	4,058	59	67	32,281
1992	16,686	1,076	3,999	141	21,903	6,479	-43	2,617	481	283	338	4	30	3,752	40	87	32,218
1993	17,424	1,203	4,027	136	22,790	6,410	-42	2,892	485	288	351	5	31	4,052	34	95	33,339
1994	17,485	1,135	4,476	136	23,233	6,694	-35	2,683	498	301	325	5	36	3,848	40	153	33,933
1995	17,687	813	4,840	133	23,473	7,075	-28	3,205	480	316	280	5	33	4,318	42	134	35,015
1996	18,650	888	4,400	159	24,097	7,087	-32	3,590	513	324	300	5	33	4,765	37	137	36,091
1997	19,128	985	4,658	119	24,890	6,597	-41	3,640	484	339	309	5	34	4,811	36	116	36,410
1998	19,417	1,378	5,205	125	26,124	7,068	-46	3,297	475	332	311	5	31	4,450	36	88	^R 37,722
1999	19,467	1,285	5,441	126	26,320	7,610	-62	3,268	490	332	312	5	46	4,452	41	99	38,459
2000	20,443	1,212	5,818	126	27,599	7,862	-57	2,811	496	330	296	5	57	3,995	46	^R 115	^R 39,561
2001	19,734	1,337	5,982	97	27,150	^R 8,033	-90	2,201	486	347	289	6	68	3,397	41	75	^R 38,606
2002	^R 19,997	^R 1,014	^R 6,250	^R 131	^R 27,392	^R 8,143	^{RP} -88	^{RP} 2,675	^R 605	^R 399	^R 305	^P 6	^{RP} 105	^{RP} 4,094	^R 49	78	^R 39,667
2003	^P 20,675	^P 1,271	^P 5,513	^P 119	^P 27,578	^P 7,973	^P -88	^P 2,779	^P 576	^P 381	^P 276	^P 5	^P 108	^P 4,127	^P 27	^P 22	^P 39,638

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁵ Pumped storage facility production minus energy used for pumping.

⁶ Wood, black liquor, and other wood waste.

⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁸ Solar thermal and photovoltaic energy.

⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹⁰ See Note 3, "Electricity Imports and Exports," at end of section.

¹¹ Included in "Conventional Hydroelectric Power."

¹² Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities,

independent power producers, commercial plants, and industrial plants.

¹³ Through 1988, data are for electric utilities and industrial plants. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for energy consumed to produce electricity. Data also include energy consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>.

• For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1949-1988—Table 8.4b for electric power sector, and Tables 8.1 and A6 for industrial sector.

• 1989 forward—Tables 8.4b and 8.4c.

Table 8.4b Consumption for Electricity Generation by Energy Source: Electric Power Sector, Selected Years, 1949-2003 (Subset of Table 8.4a; Trillion Btu)

Year	Fossil Fuels					Nuclear Electric Power	Hydro-electric Pumped Storage ⁵	Renewable Energy								Electricity Net Imports ¹⁰	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total	Other ⁹		
1949	1,995	415	569	NA	2,979	0	(¹¹)	1,349	6	NA	NA	NA	NA	1,355	NA	5	4,339
1950	2,199	472	651	NA	3,322	0	(¹¹)	1,346	5	NA	NA	NA	NA	1,351	NA	6	4,679
1955	3,458	471	1,194	NA	5,123	0	(¹¹)	1,322	3	NA	NA	NA	NA	1,325	NA	14	6,461
1960	4,228	553	1,785	NA	6,565	6	(¹¹)	1,569	2	NA	1	NA	NA	1,571	NA	15	8,158
1965	5,821	722	2,395	NA	8,938	43	(¹¹)	2,026	3	NA	4	NA	NA	2,033	NA	(s)	11,014
1970	7,227	2,117	4,054	NA	13,399	239	(¹¹)	2,600	1	2	11	NA	NA	2,615	NA	7	16,259
1971	7,299	2,495	4,099	NA	13,893	413	(¹¹)	2,790	1	2	12	NA	NA	2,806	NA	12	17,124
1972	7,811	3,097	4,084	NA	14,992	584	(¹¹)	2,829	1	2	31	NA	NA	2,864	NA	26	18,466
1973	8,658	3,515	3,748	NA	15,921	910	(¹¹)	2,827	1	2	43	NA	NA	2,873	NA	49	19,753
1974	8,534	3,365	3,519	NA	15,418	1,272	(¹¹)	3,143	1	2	53	NA	NA	3,199	NA	43	19,933
1975	8,786	3,166	3,240	NA	15,191	1,900	(¹¹)	3,122	(s)	2	70	NA	NA	3,194	NA	21	20,307
1976	9,720	3,477	3,152	NA	16,349	2,111	(¹¹)	2,943	1	2	78	NA	NA	3,024	NA	29	21,513
1977	10,262	3,901	3,284	NA	17,446	2,702	(¹¹)	2,301	3	2	77	NA	NA	2,383	NA	59	22,591
1978	10,238	3,987	3,297	NA	17,522	3,024	(¹¹)	2,905	2	1	64	NA	NA	2,973	NA	67	23,587
1979	11,260	3,283	3,613	NA	18,156	2,776	(¹¹)	2,897	3	2	84	NA	NA	2,986	NA	69	23,987
1980	12,123	2,634	3,810	NA	18,567	2,739	(¹¹)	2,867	3	2	110	NA	NA	2,982	NA	71	24,359
1981	12,583	2,202	3,768	NA	18,553	3,008	(¹¹)	2,725	3	1	123	NA	NA	2,852	NA	113	24,525
1982	12,582	1,568	3,342	NA	17,491	3,131	(¹¹)	3,233	2	1	105	NA	NA	3,341	NA	100	24,063
1983	13,213	1,544	2,998	NA	17,754	3,203	(¹¹)	3,494	2	2	129	NA	(s)	3,627	NA	121	24,705
1984	14,019	1,286	3,220	NA	18,526	3,553	(¹¹)	3,353	5	4	165	(s)	(s)	3,527	NA	135	25,741
1985	14,542	1,090	3,160	NA	18,792	4,076	(¹¹)	2,937	8	7	198	(s)	(s)	3,150	NA	140	26,158
1986	14,444	1,452	2,691	NA	18,586	4,380	(¹¹)	3,038	5	7	219	(s)	(s)	3,270	NA	122	26,359
1987	15,173	1,257	2,935	NA	19,365	4,754	(¹¹)	2,602	8	7	229	(s)	(s)	2,846	NA	158	27,124
1988	15,850	1,563	2,709	NA	20,123	5,587	(¹¹)	2,302	10	8	217	(s)	(s)	2,536	NA	108	28,354
1989	¹² 16,121	¹²⁴ 1,697	¹²³ 1,107	7	¹² 20,932	¹²⁵ 6,022	(¹¹)	¹² 2,808	¹²⁷ 5	¹²¹²⁶ 180	¹²³⁰⁸ 326	¹²³ 4	¹²²² 29	¹²³ 3,442	2	37	29,916
1990	16,235	1,281	3,224	6	20,746	6,104	-36	3,014	106	180	326	4	29	3,658	(s)	8	30,481
1991	16,223	1,199	3,296	6	20,725	6,422	-47	2,985	104	217	335	5	31	3,677	4	67	30,848
1992	16,431	990	3,407	12	20,840	6,479	-43	2,586	120	252	338	4	30	3,329	3	87	30,695
1993	17,159	1,122	3,426	12	21,719	6,410	-42	2,861	129	255	351	5	31	3,632	3	95	31,818
1994	17,215	1,056	3,851	12	22,134	6,694	-35	2,620	134	269	325	5	36	3,389	2	153	32,337
1995	17,416	743	4,179	18	22,356	7,075	-28	3,149	106	282	280	5	33	3,855	2	134	33,395
1996	18,375	810	3,730	16	22,930	7,087	-32	3,528	117	280	300	5	33	4,264	2	137	34,388
1997	18,855	917	3,981	14	23,768	6,597	-41	3,581	117	292	309	5	34	4,337	1	116	34,777
1998	19,162	1,306	4,520	23	25,011	7,068	-46	3,241	125	287	311	5	31	4,000	2	88	^R 36,123
1999	19,214	1,211	4,742	14	25,181	7,610	-62	3,218	125	290	312	5	46	3,996	1	99	36,825
2000	20,185	1,145	5,120	19	26,470	7,862	-57	2,768	126	294	296	5	57	3,547	1	^R 115	^R 37,939
2001	19,494	1,270	5,271	9	26,044	^R 8,033	-90	2,169	116	314	289	6	68	2,962	0	75	^R 37,024
2002	^R 19,733	^R 955	^R 5,522	^R 25	^R 26,235	^R 8,143	^{RP} -88	^{RP} 2,636	^R 141	^R 353	^R 305	^P 6	^{RP} 105	^{RP} 3,545	^R 7	78	^R 37,919
2003	^P 20,419	^P 1,200	^P 4,805	^P 13	^P 26,437	^P 7,973	^P -88	^P 2,722	^P 152	^P 336	^P 276	^P 5	^P 108	^P 3,600	^P 1	^P 22	^P 37,945

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.
² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.
³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
⁵ Pumped storage facility production minus energy used for pumping.
⁶ Wood, black liquor, and other wood waste.
⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.
⁸ Solar thermal and photovoltaic energy.
⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.
¹⁰ See Note 3, "Electricity Imports and Exports," at end of section.
¹¹ Included in "Conventional Hydroelectric Power."
¹² Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.
R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.5 trillion Btu.
Notes: • Data are for energy consumed to produce electricity. Data also include energy consumed to

produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants.
• The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Table 8.4c for commercial and industrial CHP and electricity-only data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.
Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>.
• For related information, see <http://www.eia.doe.gov/fuelelectric.html>.
Sources: **Electricity Net Imports:** Tables 8.1 and A6. **All Other Data:** • 1949-1988—Tables 8.2b, 8.5b, A1, A4, A5, and A6. • 1989-1997—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

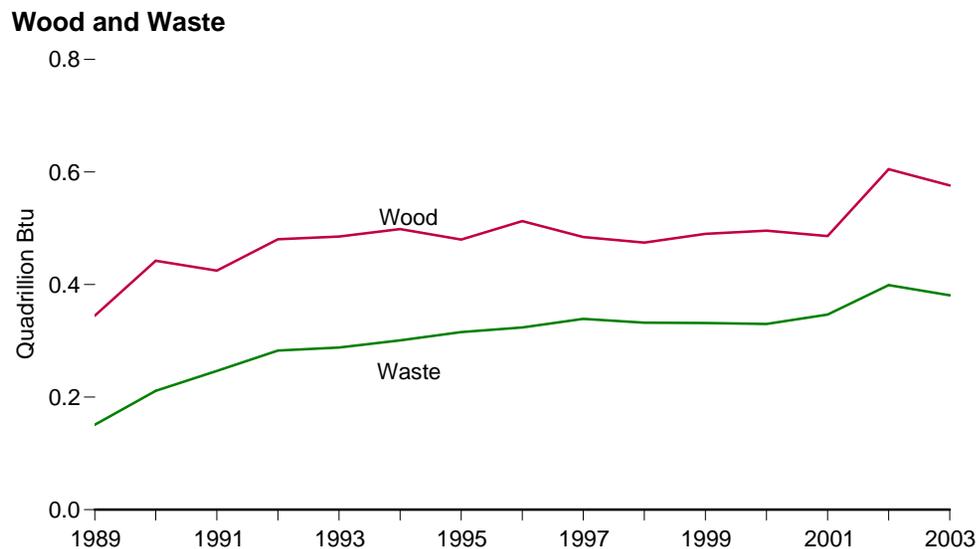
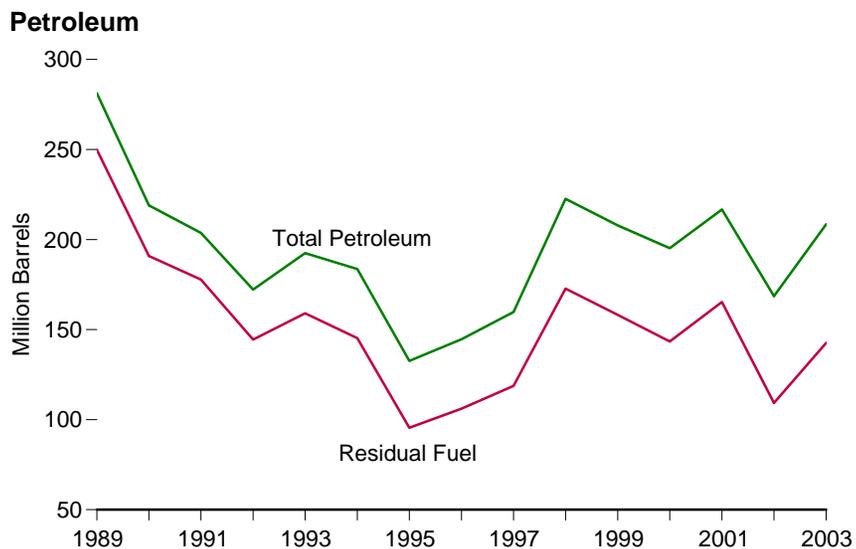
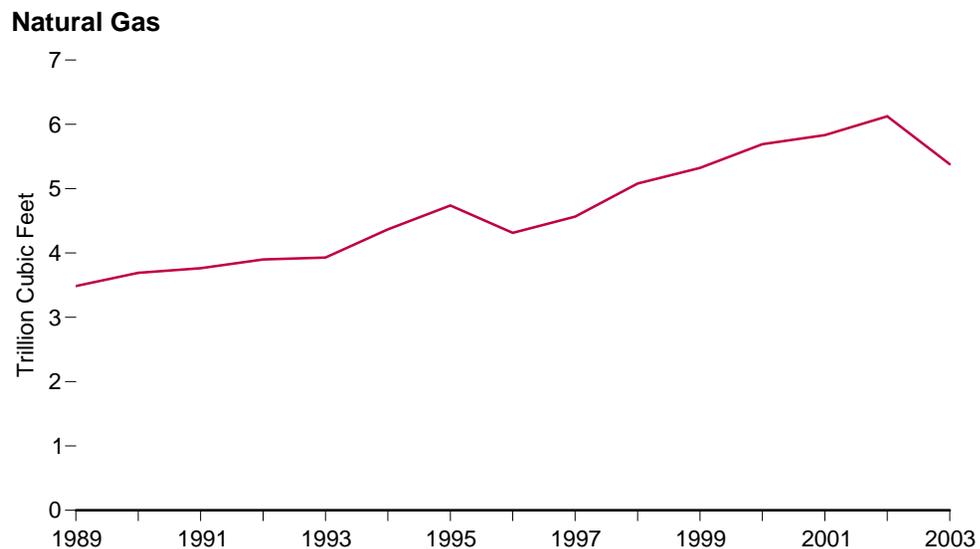
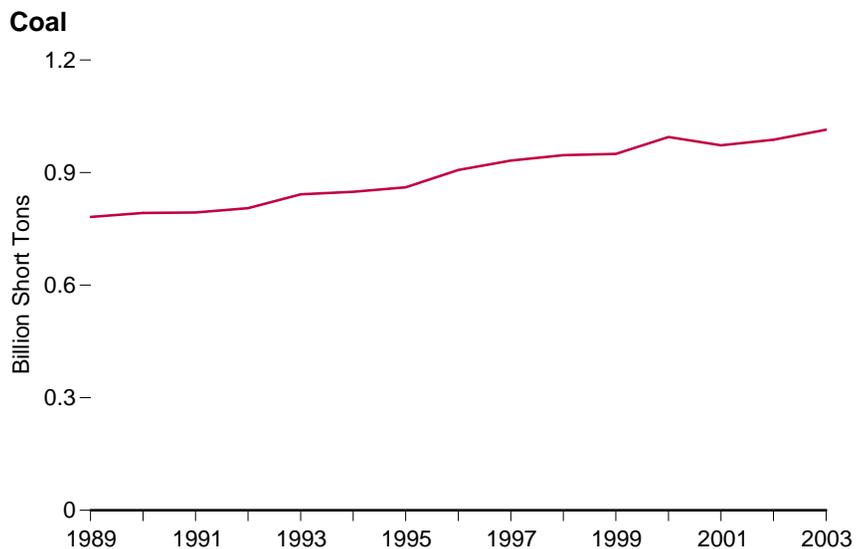
Table 8.4c Consumption for Electricity Generation by Energy Source: Commercial and Industrial Sectors, 1989-2003
(Subset of Table 8.4a; Trillion Btu)

Year	Fossil Fuels					Nuclear Electric Power	Hydro-electric Pumped Storage ⁵	Renewable Energy							Other ⁹	Electricity Net Imports	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Other Gases ⁴	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total			
Commercial Sector ¹⁰																	
1989	9	7	18	1	36	—	—	1	2	9	—	—	—	12	0	—	47
1990	9	6	27	1	43	—	—	1	2	15	—	—	—	18	0	—	61
1991	9	3	28	1	41	—	—	1	2	15	—	—	—	18	(s)	—	59
1992	8	3	33	1	45	—	—	1	1	16	—	—	—	19	(s)	—	64
1993	9	4	38	1	53	—	—	1	1	16	—	—	—	18	0	—	71
1994	9	4	42	1	56	—	—	1	1	17	—	—	—	19	0	—	75
1995	12	4	44	0	60	—	—	1	1	21	—	—	—	23	(s)	—	83
1996	14	4	44	0	62	—	—	1	1	31	—	—	—	33	(s)	—	95
1997	14	5	40	(s)	59	—	—	1	1	34	—	—	—	35	0	—	94
1998	11	5	42	(s)	57	—	—	1	1	32	—	—	—	34	0	—	91
1999	12	6	40	0	57	—	—	1	(s)	33	—	—	—	35	0	—	92
2000	12	5	38	0	55	—	—	1	(s)	26	—	—	—	28	(s)	—	82
2001	13	6	37	0	56	—	—	1	(s)	22	—	—	—	23	0	—	79
2002	^R 9	^R 4	^R 31	0	^R 44	—	—	^{RP} (s)	(s)	^R 28	—	—	—	^{RP} 29	^R 1	—	^R 73
2003	^P 12	^P 7	^P 36	^P 0	^P 55	—	—	^P 1	(s)	^P 32	—	—	—	^P 33	^P 0	—	^P 88
Industrial Sector ¹¹																	
1989	229	53	456	83	821	—	—	28	267	15	—	—	—	311	37	—	1,169
1990	233	80	500	104	918	—	—	31	335	16	—	—	—	382	36	—	1,336
1991	228	74	537	118	957	—	—	30	318	14	—	—	—	362	55	—	1,374
1992	246	84	559	128	1,017	—	—	31	359	15	—	—	—	405	37	—	1,459
1993	256	77	562	123	1,019	—	—	30	355	17	—	—	—	401	31	—	1,451
1994	261	75	584	123	1,043	—	—	62	364	14	—	—	—	440	38	—	1,521
1995	259	66	617	114	1,057	—	—	55	373	13	—	—	—	440	40	—	1,537
1996	261	74	626	143	1,104	—	—	61	394	13	—	—	—	468	35	—	1,607
1997	260	63	637	105	1,064	—	—	58	367	14	—	—	—	439	36	—	1,538
1998	245	67	643	102	1,056	—	—	55	349	13	—	—	—	417	35	—	1,508
1999	242	68	660	112	1,081	—	—	49	364	8	—	—	—	422	39	—	1,542
2000	245	61	660	107	1,074	—	—	42	369	10	—	—	—	421	45	—	1,540
2001	227	62	674	88	1,051	—	—	32	370	10	—	—	—	412	41	—	1,504
2002	^R 255	^R 55	^R 697	^R 106	^R 1,113	—	—	^{RP} 39	^R 464	^R 18	—	—	—	^{RP} 520	^R 41	—	^R 1,675
2003	^P 243	^P 63	^P 673	^P 107	^P 1,086	—	—	^P 57	^P 424	^P 13	—	—	—	^P 494	^P 25	—	^P 1,605

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.
² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.
³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
⁴ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
⁵ Pumped storage facility production minus energy used for pumping.
⁶ Wood, black liquor, and other wood waste.
⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.
⁸ Solar thermal and photovoltaic energy.
⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.
¹⁰ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.
¹¹ Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

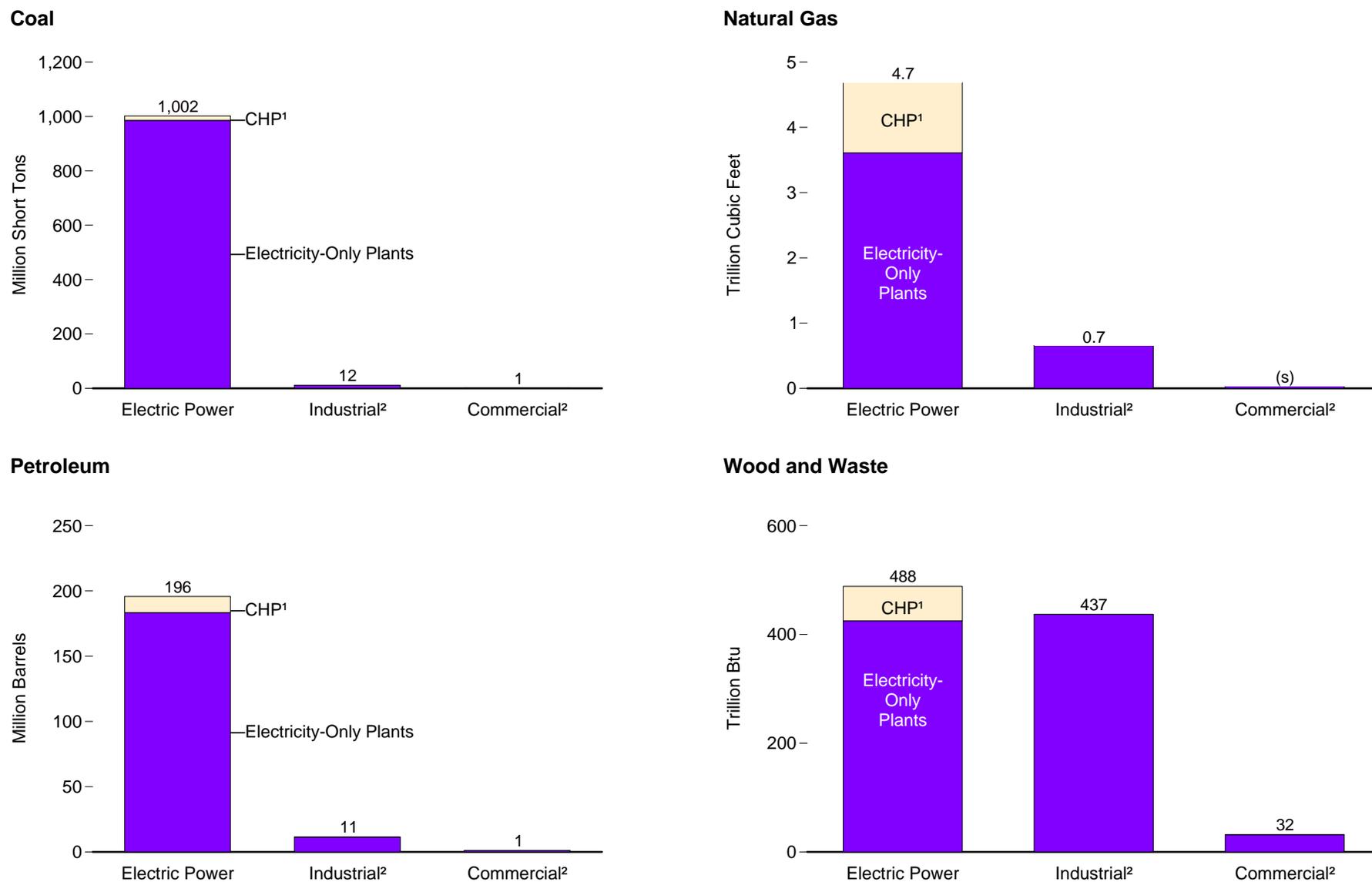
R=Revised. P=Preliminary. — = Not applicable. (s)=Less than 0.5 trillion Btu.
 Notes: • Data are for energy consumed to produce electricity. • See Table 8.4b for electric power sector electricity-only and CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.
 Web Page: For related information, see <http://www.eia.doe.gov/fuelectric.html>.
 Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Figure 8.5a Consumption of Combustible Fuels for Electricity Generation, 1989-2003



Source: Table 8.5a.

Figure 8.5b Consumption of Combustible Fuels for Electricity Generation by Sector, 2003



¹ Combined-heat-and-power plants.

² Combined-heat-and-power and electricity-only plants.

(s)=Less than 0.05 trillion cubic feet.

Sources: Tables 8.5b-8.5d.

Table 8.5a Consumption of Combustible Fuels for Electricity Generation: Total (All Sectors), Selected Years, 1949-2003
(Sum of Tables 8.5b and 8.5d)

Year	Fossil Fuels						Renewable Energy		Other ¹⁰		
	Coal ¹	Petroleum				Natural Gas ⁶	Other Gases ⁷	Wood ⁸		Waste ⁹	
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵						Total ⁵
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu		Trillion Btu	Trillion Btu
1949	83,963	4,767	61,534	NA	NA	66,301	550,121	NA	6	NA	NA
1950	91,871	5,423	69,998	NA	NA	75,421	628,919	NA	5	NA	NA
1955	143,759	5,412	69,862	NA	NA	75,274	1,153,280	NA	3	NA	NA
1960	176,685	3,824	84,371	NA	NA	88,195	1,724,762	NA	2	NA	NA
1965	244,788	4,928	110,274	NA	NA	115,203	2,321,101	NA	3	NA	NA
1970	320,182	24,123	311,381	NA	636	338,686	3,931,860	NA	1	2	NA
1971	327,301	34,283	362,187	NA	605	399,496	3,976,018	NA	1	2	NA
1972	351,768	53,465	440,294	NA	627	496,895	3,976,913	NA	1	2	NA
1973	389,212	47,058	513,190	NA	507	562,781	3,660,172	NA	1	2	NA
1974	391,811	53,128	483,146	NA	625	539,399	3,443,428	NA	1	2	NA
1975	405,962	38,907	467,221	NA	70	506,479	3,157,669	NA	(s)	2	NA
1976	448,371	41,843	514,077	NA	68	556,261	3,080,868	NA	1	2	NA
1977	477,126	48,837	574,869	NA	98	624,193	3,191,200	NA	3	2	NA
1978	481,235	47,520	588,319	NA	398	637,830	3,188,363	NA	2	1	NA
1979	527,051	30,691	492,606	NA	268	524,636	3,490,523	NA	3	2	NA
1980	569,274	29,051	391,163	NA	179	421,110	3,681,595	NA	3	2	NA
1981	596,797	21,313	329,798	NA	139	351,806	3,640,154	NA	3	1	NA
1982	593,666	15,337	234,434	NA	149	250,517	3,225,518	NA	2	1	NA
1983	625,211	16,512	228,984	NA	261	246,804	2,910,767	NA	2	2	NA
1984	664,399	15,190	189,289	NA	252	205,736	3,111,342	NA	5	4	NA
1985	693,841	14,635	158,779	NA	231	174,571	3,044,083	NA	8	7	NA
1986	685,056	14,326	216,156	NA	313	232,046	2,602,370	NA	5	7	NA
1987	717,894	15,367	184,011	NA	348	201,116	2,844,051	NA	8	7	NA
1988	758,372	18,769	229,327	NA	409	250,141	2,635,613	NA	10	8	NA
1989 ¹¹	781,672	27,733	249,820	303	667	281,192	3,485,429	90	345	151	39
1990	792,457	18,143	190,849	437	1,914	218,997	3,691,563	112	442	211	36
1991	793,666	16,564	177,780	380	1,789	203,669	3,764,778	125	425	247	59
1992	805,140	14,493	144,467	759	2,504	172,241	3,899,718	141	481	283	40
1993	842,153	16,845	159,059	715	3,169	192,462	3,928,653	136	485	288	34
1994	848,796	22,365	145,225	929	3,020	183,618	4,367,148	136	498	301	40
1995	860,594	19,615	95,507	680	3,355	132,578	4,737,871	133	480	316	42
1996	907,209	20,252	106,055	1,712	3,322	144,626	4,312,458	159	513	324	37
1997	931,949	20,309	118,741	237	4,086	159,715	4,564,770	119	484	339	36
1998	946,295	25,062	172,728	549	4,860	222,640	5,081,384	125	475	332	36
1999	949,802	25,951	158,187	974	4,552	207,871	5,321,984	126	490	332	41
2000	994,933	31,675	143,381	1,450	3,744	195,228	5,691,481	126	496	330	46
2001	972,691	31,150	165,312	855	3,871	216,672	5,832,305	97	486	347	41
2002	^R 987,583	^R 23,286	^R 109,235	^R 1,894	^R 6,836	^R 168,597	^R 6,126,062	^R 131	^R 605	^R 399	^R 49
2003 ^P	1,014,307	30,290	142,557	3,411	6,435	208,436	5,379,802	119	576	381	27

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Fuel oil nos. 1, 2, and 4. For 1949-1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980-2000, electric utility data also include small amounts of kerosene and jet fuel.

³ Fuel oil nos. 5 and 6. For 1949-1979, data are for steam plant use of petroleum. For 1980-2000, electric utility data also include a small amount of fuel oil no. 4.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁸ Wood, black liquor, and other wood waste.

⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹¹ Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>.

• For related information, see <http://www.eia.doe.gov/fuelectric.html>.

Sources: Tables 8.5b and 8.5d.

Table 8.5b Consumption of Combustible Fuels for Electricity Generation: Electric Power Sector, Selected Years, 1949-2003 (Subset of Table 8.5a)

Year	Fossil Fuels						Renewable Energy			Other ¹⁰	
	Coal ¹	Petroleum					Natural Gas ⁶	Other Gases ⁷	Wood ⁸		Waste ⁹
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵	Total ⁵					
		Thousand Short Tons	Thousand Barrels			Thousand Short Tons					
1949	83,963	4,767	61,534	NA	NA	66,301	550,121	NA	6	NA	NA
1950	91,871	5,423	69,998	NA	NA	75,421	628,919	NA	5	NA	NA
1955	143,759	5,412	69,862	NA	NA	75,274	1,153,280	NA	3	NA	NA
1960	176,685	3,824	84,371	NA	NA	88,195	1,724,762	NA	2	NA	NA
1965	244,788	4,928	110,274	NA	NA	115,203	2,321,101	NA	3	NA	NA
1970	320,182	24,123	311,381	NA	636	338,686	3,931,860	NA	1	2	NA
1971	327,301	34,283	362,187	NA	605	399,496	3,976,018	NA	1	2	NA
1972	351,768	53,465	440,294	NA	627	496,895	3,976,913	NA	1	2	NA
1973	389,212	47,058	513,190	NA	507	562,781	3,660,172	NA	1	2	NA
1974	391,811	53,128	483,146	NA	625	539,399	3,443,428	NA	1	2	NA
1975	405,962	38,907	467,221	NA	70	506,479	3,157,669	NA	(s)	2	NA
1976	448,371	41,843	514,077	NA	68	556,261	3,080,868	NA	1	2	NA
1977	477,126	48,837	574,869	NA	98	624,193	3,191,200	NA	3	2	NA
1978	481,235	47,520	588,319	NA	398	637,830	3,188,363	NA	2	1	NA
1979	527,051	30,691	492,606	NA	268	524,636	3,490,523	NA	3	2	NA
1980	569,274	29,051	391,163	NA	179	421,110	3,681,595	NA	3	2	NA
1981	596,797	21,313	329,798	NA	139	351,806	3,640,154	NA	3	1	NA
1982	593,666	15,337	234,434	NA	149	250,517	3,225,518	NA	2	1	NA
1983	625,211	16,512	228,984	NA	261	246,804	2,910,767	NA	2	2	NA
1984	664,399	15,190	189,289	NA	252	205,736	3,111,342	NA	5	4	NA
1985	693,841	14,635	158,779	NA	231	174,571	3,044,083	NA	8	7	NA
1986	685,056	14,326	216,156	NA	313	232,046	2,602,370	NA	5	7	NA
1987	717,894	15,367	184,011	NA	348	201,116	2,844,051	NA	8	7	NA
1988	758,372	18,769	229,327	NA	409	250,141	2,635,613	NA	10	8	NA
1989 ¹¹	771,551	26,036	242,708	9	517	271,340	3,023,513	7	75	126	2
1990	781,301	16,394	183,285	25	1,008	204,745	3,147,289	6	106	180	(s)
1991	782,653	14,255	171,629	58	974	190,810	3,216,056	6	104	217	4
1992	793,390	12,469	137,681	118	1,490	157,719	3,324,963	12	120	252	3
1993	829,851	14,559	151,407	213	2,571	179,034	3,344,239	12	129	255	3
1994	836,113	20,241	137,198	667	2,256	169,387	3,758,484	12	134	269	2
1995	847,854	18,066	88,895	441	2,452	119,663	4,093,773	18	106	282	2
1996	894,400	18,472	98,795	567	2,467	130,168	3,659,810	16	117	280	2
1997	919,009	18,646	112,423	130	3,201	147,202	3,903,195	14	117	292	1
1998	934,126	23,166	165,875	411	3,999	209,447	4,415,813	23	125	287	2
1999	937,888	23,875	151,921	514	3,607	194,345	4,643,775	14	125	290	1
2000	982,713	29,722	138,047	403	3,155	183,946	5,014,071	19	126	294	1
2001	961,523	29,056	159,150	374	3,308	205,119	5,142,493	9	116	314	0
2002	R975,251	R21,810	R104,577	R1,243	R5,705	R156,154	R5,408,279	R25	R141	R353	R7
2003 ^P	1,002,210	28,062	137,421	1,912	5,685	195,823	4,688,196	13	152	336	1

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.
² Fuel oil nos. 1, 2, and 4. For 1949-1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980-2000, electric utility data also include small amounts of kerosene and jet fuel.
³ Fuel oil nos. 5 and 6. For 1949-1979, data are for steam plant use of petroleum. For 1980-2000, electric utility data also include a small amount of fuel oil no. 4.
⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.
⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.
⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
⁸ Wood, black liquor, and other wood waste.
⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.
¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.
¹¹ Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.
R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.5 trillion Btu.
Notes: • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants.

• The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Table 8.5d for commercial and industrial CHP and electricity-only data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.
Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>.
• For related information, see <http://www.eia.doe.gov/fuelelectric.html>.
Sources: • 1949-September 1977—Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • October 1977-1981—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • 1982-1988—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." • 1989-1997—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.5c Consumption of Combustible Fuels for Electricity Generation: Electric Power Sector by Plant Type, 1989-2003 (Breakout of Table 8.5b)

Year	Fossil Fuels						Renewable Energy		Other ¹⁰		
	Coal ¹	Petroleum				Natural Gas ⁶	Other Gases ⁷	Wood ⁸		Waste ⁹	
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵						Total ⁵
Thousand Short Tons	Thousand Barrels				Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu	Trillion Btu	Trillion Btu	
Electricity-Only Plants ¹¹											
1989	767,378	25,574	241,960	3	517	270,125	2,790,567	0	59	111	0
1990	774,213	14,956	181,231	17	1,008	201,246	2,794,110	(s)	87	162	0
1991	773,183	13,822	171,157	51	974	189,898	2,822,159	(s)	85	195	0
1992	781,186	11,998	135,779	48	1,320	154,428	2,828,996	(s)	94	232	0
1993	816,558	13,460	149,287	11	1,553	170,521	2,755,093	(s)	101	237	0
1994	821,209	16,693	134,666	52	1,193	157,375	3,064,561	(s)	112	248	0
1995	832,928	16,169	86,584	133	1,082	108,297	3,287,571	(s)	84	262	0
1996	878,825	17,361	96,386	50	1,010	118,848	2,823,724	(s)	94	258	0
1997	904,245	17,702	109,989	30	1,687	136,156	3,039,227	1	91	266	0
1998	920,353	22,293	163,541	295	2,202	197,137	3,543,931	1	95	263	0
1999	924,692	22,877	149,193	380	1,891	181,905	3,729,175	1	105	264	0
2000	967,080	28,001	135,419	94	1,457	170,799	4,092,729	2	105	267	0
2001	946,068	27,695	157,090	26	1,827	193,945	4,163,930	(s)	96	277	0
2002	^R 960,077	^R 21,521	^R 102,622	^R 444	^R 3,925	^R 144,212	^R 4,258,467	^R 6	^R 118	^R 309	^R 1
2003 ^P	986,129	26,492	135,641	743	4,108	183,417	3,610,735	(s)	127	298	(s)
Combined-Heat-and-Power Plants ¹²											
1989	4,173	462	747	6	0	1,215	232,946	7	16	16	2
1990	7,088	1,438	2,054	7	0	3,499	353,179	6	18	18	(s)
1991	9,470	433	473	7	0	912	393,898	6	20	22	4
1992	12,204	471	1,902	69	170	3,291	495,967	12	25	20	3
1993	13,293	1,098	2,120	202	1,018	8,513	589,147	12	28	18	3
1994	14,904	3,548	2,531	615	1,063	12,011	693,923	12	22	22	2
1995	14,926	1,898	2,311	307	1,370	11,366	806,202	18	22	20	2
1996	15,575	1,111	2,410	517	1,456	11,320	836,086	15	24	22	2
1997	14,764	944	2,434	100	1,514	11,046	863,968	14	26	26	1
1998	13,773	872	2,334	117	1,797	12,310	871,881	21	30	24	2
1999	13,197	998	2,728	134	1,716	12,440	914,600	14	20	26	1
2000	15,634	1,721	2,627	310	1,698	13,147	921,341	17	21	28	1
2001	15,455	1,360	2,059	347	1,482	11,175	978,563	9	20	37	0
2002	^R 15,174	^R 289	^R 1,955	^R 800	^R 1,780	^R 11,942	^R 1,149,812	^R 20	^R 23	^R 44	^R 6
2003 ^P	16,081	1,571	1,780	1,169	1,577	12,406	1,077,461	13	25	38	1

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

³ Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small amount of fuel oil no. 4.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁸ Wood, black liquor, and other wood waste.

⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹¹ Electricity-only plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity to the public. Data also include a small number of electric utility combined-heat-and-power (CHP) plants.

¹² Combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to

sell electricity and heat to the public. Data do not include electric utility CHP plants—these are included under "Electricity-Only Plants."

R=Revised. P=Preliminary. (s)=Less than 0.5.

Notes: • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants.

• See Table 8.5d for commercial and industrial CHP and electricity-only data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.5d Consumption of Combustible Fuels for Electricity Generation: Commercial and Industrial Sectors, 1989-2003 (Subset of Table 8.5a)

Year	Fossil Fuels							Renewable Energy			Other ¹⁰
	Coal ¹	Petroleum					Natural Gas ⁶	Other Gases ⁷	Wood ⁸	Waste ⁹	
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵	Total ⁵					
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu	Trillion Btu		
Commercial Sector ¹¹											
1989	414	882	282	0	0	1,165	17,987	1	2	9	0
1990	417	580	372	(s)	0	953	27,544	1	2	15	0
1991	403	430	146	(s)	0	576	26,806	1	2	15	(s)
1992	371	289	137	(s)	1	429	32,674	1	1	16	(s)
1993	404	384	279	4	1	672	37,435	1	1	16	0
1994	404	481	209	0	1	694	40,828	1	1	17	0
1995	569	493	152	(s)	1	649	42,700	0	1	21	(s)
1996	656	422	218	(s)	1	645	42,380	0	1	31	(s)
1997	630	583	200	0	1	790	38,975	(s)	1	34	0
1998	440	436	359	0	1	802	40,693	(s)	1	32	0
1999	481	506	421	0	1	931	39,045	0	(s)	33	0
2000	514	505	310	1	1	823	37,029	0	(s)	26	(s)
2001	532	520	469	2	6	1,023	36,248	0	(s)	22	0
2002	^R 477	^R 524	^R 292	^R 10	2	^R 834	^R 32,545	0	(s)	^R 28	^R 1
2003 ^P	501	735	414	1	2	1,161	35,244	0	(s)	32	0
Industrial Sector ¹²											
1989	9,707	815	6,830	294	150	8,688	443,928	83	267	15	37
1990	10,740	1,169	7,192	412	905	13,299	516,729	104	335	16	36
1991	10,610	1,879	6,004	322	815	12,283	521,916	118	318	14	55
1992	11,379	1,735	6,650	642	1,013	14,093	542,081	128	359	15	37
1993	11,898	1,902	7,373	498	597	12,755	546,978	123	355	17	31
1994	12,279	1,644	7,818	263	762	13,537	567,836	123	364	14	38
1995	12,171	1,056	6,460	239	902	12,265	601,397	114	373	13	40
1996	12,153	1,359	7,042	1,145	853	13,813	610,268	143	394	13	35
1997	12,311	1,079	6,118	107	884	11,723	622,599	105	367	14	36
1998	11,728	1,461	6,494	137	860	12,392	624,878	102	349	13	35
1999	11,432	1,571	5,845	460	944	12,595	639,165	112	364	8	39
2000	11,706	1,448	5,024	1,046	588	10,459	640,381	107	369	10	45
2001	10,636	1,574	5,693	479	557	10,530	^R 653,565	88	370	10	41
2002	^R 11,855	^R 952	^R 4,366	^R 640	^R 1,130	^R 11,608	^R 685,239	^R 106	^R 464	^R 18	^R 41
2003 ^P	11,596	1,493	4,722	1,498	748	11,453	656,362	107	424	13	25

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Fuel oil nos. 1, 2, and 4.

³ Fuel oil nos. 5 and 6.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁸ Wood, black liquor, and other wood waste.

⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹¹ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

¹² Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

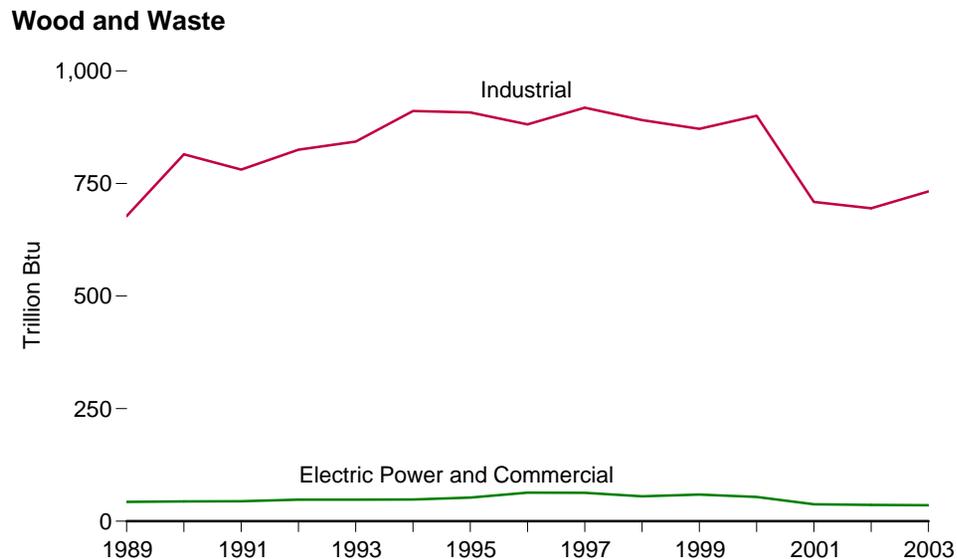
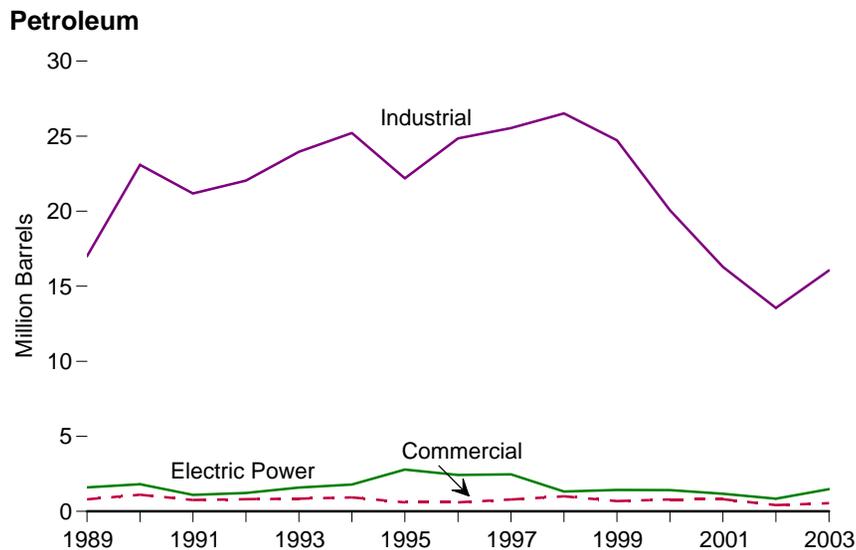
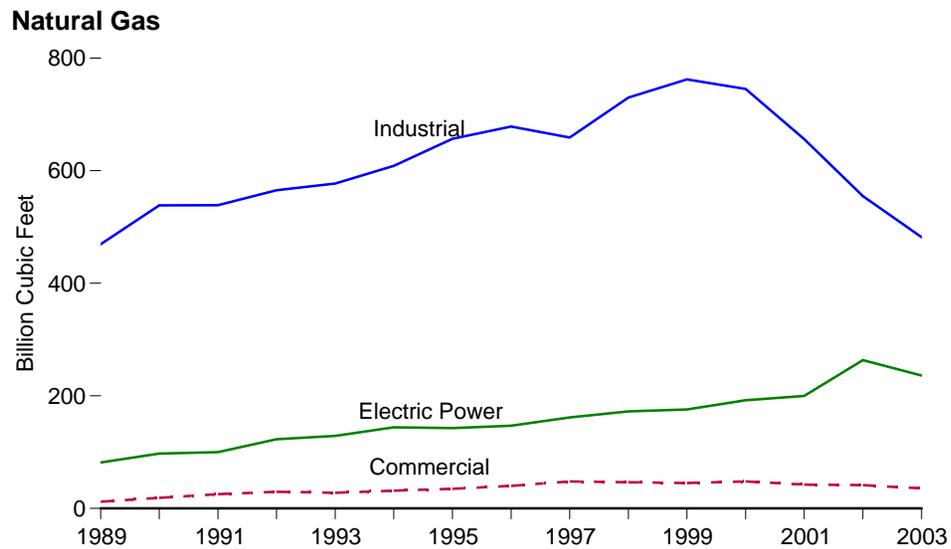
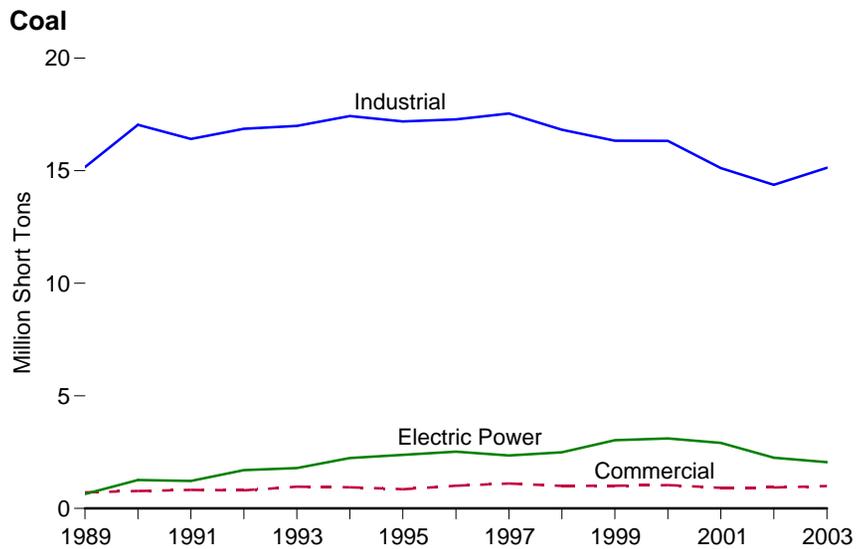
R=Revised. P=Preliminary. (s)=Less than 0.5.

Notes: • Data are for fuels consumed to produce electricity. • See Tables 8.5b and 8.5c for electric power sector electricity-only and CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Figure 8.6 Estimated Consumption of Combustible Fuels for Useful Thermal Output at Combined-Heat-and-Power Plants by Sector, 1989-2003



Sources: Table 8.6b and 8.6c.

Table 8.6a Estimated Consumption of Combustible Fuels for Useful Thermal Output at Combined-Heat-and-Power Plants: Total (All Sectors), 1989-2003 (Sum of Tables 8.6b and 8.6c)

Year	Fossil Fuels							Renewable Energy		Other ¹⁰	
	Coal ¹	Petroleum					Natural Gas ⁶	Other Gases ⁷	Wood ⁸		Waste ⁹
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵	Total ⁵					
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu	Trillion Btu		Trillion Btu
1989	16,510	1,410	16,391	353	247	19,391	563,307	116	683	38	49
1990	19,081	2,050	18,465	895	918	26,002	654,749	176	813	46	50
1991	18,458	3,027	15,293	835	777	23,039	663,963	185	779	46	55
1992	19,372	2,358	16,474	935	862	24,077	717,860	200	822	51	52
1993	19,750	2,449	17,933	857	1,031	26,394	733,584	178	836	56	51
1994	20,609	2,811	18,822	609	1,137	27,929	784,015	180	903	57	53
1995	20,418	2,082	16,661	642	1,235	25,562	834,382	181	902	59	55
1996	20,806	2,192	18,552	756	1,275	27,873	865,774	187	876	69	54
1997	21,005	2,584	15,882	289	2,009	28,802	868,569	188	913	68	67
1998	20,320	4,944	16,539	681	1,336	28,845	949,106	209	875	72	58
1999	20,373	4,665	14,133	838	1,437	26,822	982,958	224	862	68	60
2000	20,466	2,897	13,292	1,455	924	22,266	985,263	230	884	71	63
2001	18,944	2,574	11,826	563	661	18,268	898,286	166	696	51	53
2002	17,561	1,462	9,402	1,363	517	14,811	860,019	147	682	49	43
2003 ^P	18,175	2,320	10,194	1,803	754	18,087	753,431	143	716	52	25

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Fuel oil nos. 1, 2, and 4.

³ Fuel oil nos. 5 and 6.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁸ Wood, black liquor, and other wood waste.

⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

P=Preliminary.

Notes: • Estimates are for fuels consumed to produce useful thermal output; they exclude fuels consumed to produce electricity. • Data do not include electric utility combined-heat-and-power (CHP) plants. • See Note 1, "Coverage of Electricity Statistics," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: Tables 8.6b and 8.6c.

Table 8.6b Estimated Consumption of Combustible Fuels for Useful Thermal Output at Combined-Heat-and-Power Plants: Electric Power Sector, 1989-2003 (Subset of Table 8.6a)

Year	Fossil Fuels							Renewable Energy		Other ¹⁰	
	Coal ¹	Petroleum					Natural Gas ⁶	Other Gases ⁷	Wood ⁸		Waste ⁹
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵	Total ⁵					
Thousand Short Tons	Thousand Barrels				Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu	Trillion Btu	Trillion Btu	
1989	639	120	1,471	1	0	1,591	81,670	3	24	6	1
1990	1,266	173	1,630	2	0	1,805	97,330	5	23	8	(s)
1991	1,221	104	995	1	0	1,101	99,868	5	21	11	1
1992	1,704	154	1,045	10	4	1,229	122,908	6	21	10	2
1993	1,794	290	1,074	27	40	1,591	128,743	4	21	10	2
1994	2,241	371	1,024	104	58	1,791	144,062	6	18	12	1
1995	2,376	486	1,127	58	222	2,784	142,753	5	19	15	(s)
1996	2,520	308	1,155	86	175	2,424	147,091	5	20	21	(s)
1997	2,355	343	1,246	23	171	2,466	161,608	10	20	17	(s)
1998	2,493	134	653	19	103	1,322	172,471	6	12	20	(s)
1999	3,033	183	572	30	128	1,423	175,757	4	13	25	(s)
2000	3,107	294	467	51	120	1,412	192,253	7	8	24	(s)
2001	2,910	^R 219	^R 355	3	119	^R 1,171	^R 199,808	6	10	10	0
2002	^R 2,255	^R 66	^R 197	^R 23	^R 111	^R 841	^R 263,619	^R 7	^R 10	^R 12	(s)
2003 ^P	2,053	228	647	47	112	1,483	235,967	6	8	10	(s)

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Fuel oil nos. 1, 2, and 4.

³ Fuel oil nos. 5 and 6.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁸ Wood, black liquor, and other wood waste.

⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

R=Revised. P=Preliminary. (s)=Less than 0.5.

Notes: • Estimates are for fuels consumed to produce useful thermal output; they exclude fuels

consumed to produce electricity. • Data are for combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity and heat to the public. Data do not include electric utility CHP plants. • See Table 8.6c for commercial and industrial CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.6c Estimated Consumption of Combustible Fuels for Useful Thermal Output at Combined-Heat-and-Power Plants: Commercial and Industrial Sectors, 1989-2003 (Subset of Table 8.6a)

Year	Fossil Fuels							Renewable Energy		Other ¹⁰	
	Coal ¹	Petroleum				Natural Gas ⁶	Other Gases ⁷	Wood ⁸	Waste ⁹		
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵						Total ⁵
Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu	Trillion Btu	Trillion Btu		
Commercial Sector ¹¹											
1989	711	202	601	0	0	803	12,049	(s)	(s)	13	0
1990	773	389	715	(s)	0	1,104	18,913	(s)	(s)	13	0
1991	826	356	405	(s)	0	761	25,295	(s)	(s)	11	(s)
1992	804	259	538	(s)	2	807	29,672	(s)	1	16	(s)
1993	968	272	548	2	4	843	27,738	(s)	(s)	17	(s)
1994	940	534	379	0	4	931	31,457	(s)	(s)	17	0
1995	850	319	261	(s)	3	596	34,964	0	(s)	19	(s)
1996	1,005	260	328	(s)	3	601	40,075	0	1	22	(s)
1997	1,108	470	309	0	3	794	47,941	(s)	1	24	0
1998	1,002	418	573	0	3	1,006	46,527	(s)	1	22	0
1999	1,009	254	412	0	3	682	44,991	0	1	21	0
2000	1,034	403	366	2	4	792	47,844	0	1	21	0
2001	^R 916	^R 505	304	0	0	^R 809	^R 42,407	0	1	17	0
2002	^R 929	^R 248	^R 108	^R 28	^R 6	^R 416	^R 41,430	0	^R 1	^R 14	0
2003 ^P	991	234	277	1	7	546	35,484	0	1	16	0
Industrial Sector ¹²											
1989	15,160	1,088	14,320	352	247	16,997	469,588	113	659	19	48
1990	17,041	1,488	16,120	893	918	23,093	538,506	171	790	25	50
1991	16,412	2,567	13,893	834	777	21,177	538,800	180	758	23	55
1992	16,864	1,945	14,891	925	856	22,041	^R 565,279	194	801	24	50
1993	16,988	1,887	^R 16,311	^R 829	987	^R 23,960	^R 577,103	174	^R 815	29	49
1994	17,428	1,906	^R 17,419	505	1,075	^R 25,207	^R 608,496	173	884	27	52
1995	17,192	1,277	15,272	584	1,010	22,182	^R 656,665	175	882	25	55
1996	17,281	1,624	17,069	670	1,097	24,848	678,608	182	855	26	53
1997	17,542	1,772	14,328	267	1,835	25,541	^R 659,021	178	892	27	67
1998	16,824	4,391	15,313	662	1,230	26,518	730,108	202	862	29	58
1999	16,330	4,228	13,148	808	1,307	24,718	762,210	219	849	23	60
2000	16,325	2,200	12,459	1,402	800	20,062	745,165	223	875	25	63
2001	^R 15,119	^R 1,850	^R 11,167	^R 560	^R 542	^R 16,287	^R 656,071	160	685	25	53
2002	^R 14,377	^R 1,149	^R 9,097	^R 1,312	^R 399	^R 13,555	^R 554,970	^R 139	^R 672	^R 23	^R 43
2003 ^P	15,131	1,857	9,269	1,755	635	16,058	481,981	137	707	25	24

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Fuel oil nos. 1, 2, and 4.

³ Fuel oil nos. 5 and 6.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁸ Wood, black liquor, and other wood waste.

⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹¹ Commercial combined-heat-and-power (CHP) plants.

¹² Industrial combined-heat-and-power (CHP) plants.

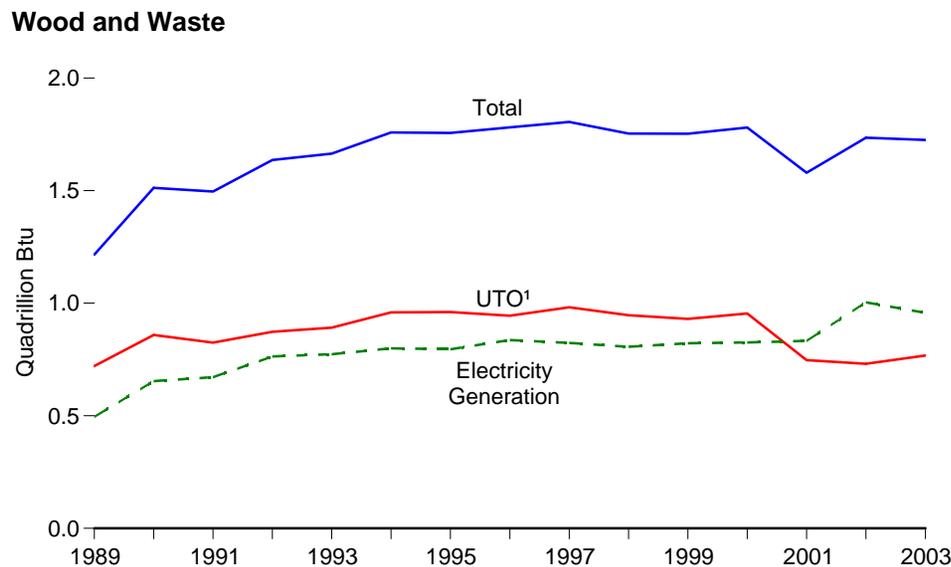
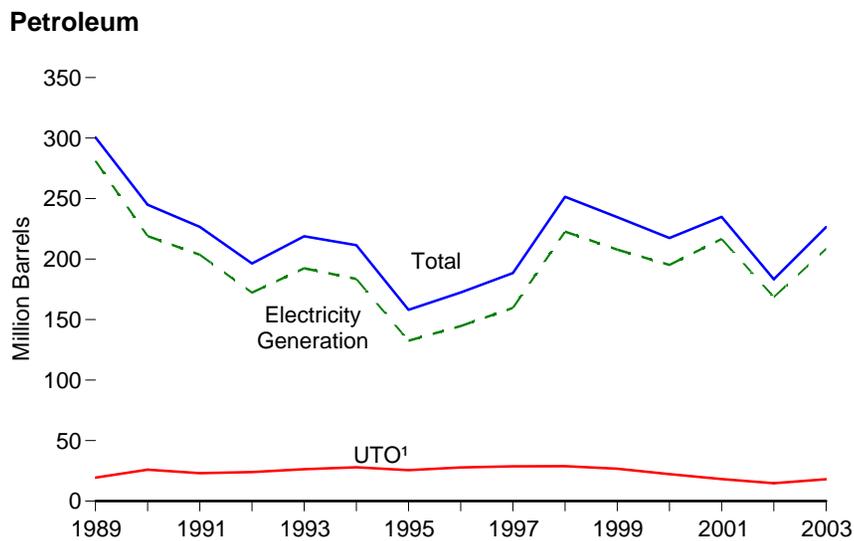
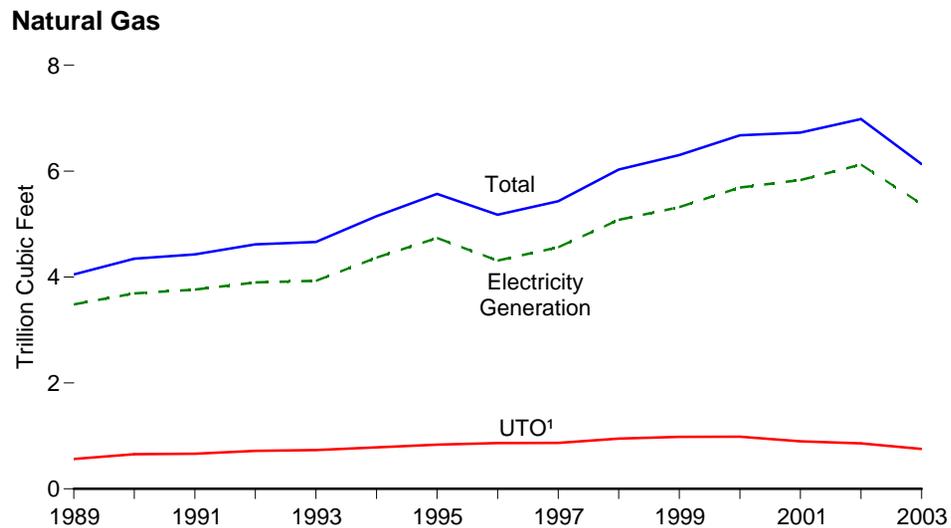
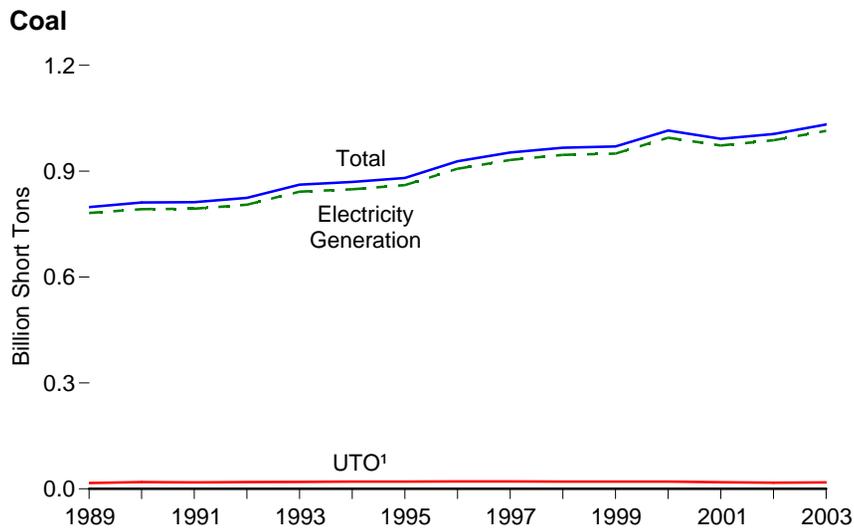
R=Revised. P=Preliminary. (s)=Less than 0.5.

Notes: • Estimates are for fuels consumed to produce useful thermal output; they exclude fuels consumed to produce electricity. • See Table 8.6b for electric power sector CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Figure 8.7 Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output, 1989-2003



¹Useful thermal output.

Sources: Tables 8.5a, 8.6a, and 8.7a.

**Table 8.7a Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output:
Total (All Sectors), 1989-2003** (Sum of Tables 8.7b and 8.7c)

Year	Fossil Fuels							Renewable Energy		Other ¹⁰	
	Coal ¹	Petroleum					Natural Gas ⁶	Other Gases ⁷	Wood ⁸		Waste ⁹
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵	Total ⁵					
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu	Trillion Btu		Trillion Btu
1989	798,181	29,143	266,211	656	915	300,583	4,048,736	206	1,028	189	88
1990	811,538	20,194	209,314	1,332	2,832	244,998	4,346,311	288	1,256	257	86
1991	812,124	^R 19,590	193,073	1,215	2,566	226,708	4,428,742	311	1,204	292	114
1992	824,512	16,852	160,941	1,695	3,366	196,318	^R 4,617,578	341	1,303	333	92
1993	861,904	19,293	176,992	^R 1,571	4,200	^R 218,855	^R 4,662,236	314	^R 1,321	344	85
1994	869,405	25,177	^R 164,047	1,539	4,157	^R 211,547	^R 5,151,163	316	1,401	357	92
1995	881,012	21,697	112,168	1,322	4,590	158,140	^R 5,572,253	313	1,382	374	97
1996	928,015	22,444	124,607	2,468	4,596	172,499	5,178,232	346	1,389	392	91
1997	952,955	22,893	134,623	526	6,095	188,517	^R 5,433,338	307	1,397	407	103
1998	966,615	30,006	189,267	1,230	6,196	251,486	6,030,490	334	1,349	404	95
1999	970,175	30,616	172,319	1,812	5,989	234,694	6,304,942	350	1,352	400	101
2000	1,015,398	34,572	156,673	2,904	4,669	217,494	6,676,744	356	1,380	401	109
2001	991,635	33,724	177,137	1,418	4,532	234,940	6,730,591	263	1,182	398	94
2002	^R 1,005,144	^R 24,748	^R 118,637	^R 3,257	^R 7,353	^R 183,408	^R 6,986,081	^R 278	^R 1,287	^R 448	^R 93
2003 ^P	1,032,482	32,610	152,751	5,214	7,190	226,523	6,133,233	263	1,292	433	51

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

³ Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small amount of fuel oil no. 4.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁸ Wood, black liquor, and other wood waste.

⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

R=Revised. P=Preliminary.

Notes: • Data are for fuels consumed to produce electricity and useful thermal output. • See Note 1, "Coverage of Electricity Statistics," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: Tables 8.7b and 8.7c.

**Table 8.7b Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output:
Electric Power Sector, 1989-2003** (Subset of Table 8.7a)

Year	Fossil Fuels						Renewable Energy		Other ¹⁰		
	Coal ¹	Petroleum				Natural Gas ⁶	Other Gases ⁷	Wood ⁸		Waste ⁹	
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵						Total ⁵
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu		Trillion Btu	Trillion Btu
1989	772,190	26,156	244,179	10	517	272,931	3,105,183	9	100	132	3
1990	782,567	16,567	184,915	26	1,008	206,550	3,244,619	11	129	188	(s)
1991	783,874	14,359	172,625	59	974	191,911	3,315,925	11	126	229	4
1992	795,094	12,623	138,726	128	1,494	158,948	3,447,871	18	140	262	5
1993	831,645	14,849	152,481	239	2,611	180,625	3,472,982	16	150	265	5
1994	838,354	20,612	138,222	771	2,315	171,178	3,902,546	19	152	282	3
1995	850,230	18,553	90,023	499	2,674	122,447	4,236,526	24	125	296	2
1996	896,921	18,780	99,951	653	2,642	132,593	3,806,901	20	138	300	2
1997	921,364	18,989	113,669	152	3,372	149,668	4,064,803	24	137	309	1
1998	936,619	23,300	166,528	431	4,102	210,769	4,588,284	29	137	308	2
1999	940,922	24,058	152,493	544	3,735	195,769	4,819,531	19	138	315	1
2000	985,821	30,016	138,513	454	3,275	185,358	5,206,324	25	134	318	1
2001	964,433	29,274	159,504	377	3,427	206,291	5,342,301	15	126	324	0
2002	^R 977,507	^R 21,876	^R 104,773	^R 1,267	^R 5,816	^R 156,995	^R 5,671,897	^R 33	^R 150	^R 365	^R 7
2003 ^P	1,004,263	28,291	138,069	1,959	5,797	197,306	4,924,162	19	161	346	2

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.
² Fuel oil nos. 1, 2, and 4. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.
³ Fuel oil nos. 5 and 6. Through 2000, electric utility data also include a small amount of fuel oil no. 4.
⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.
⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.
⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
⁸ Wood, black liquor, and other wood waste.
⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.
¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.
R=Revised. P=Preliminary. (s)=Less than 0.5.
Notes: • Data are for fuels consumed to produce electricity and useful thermal output. • The electric

power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Table 8.7c for commercial and industrial CHP and electricity-only data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.
Web Page: For related information, see <http://www.eia.doe.gov/fuelectric.html>.
Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.7c Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Commercial and Industrial Sectors, 1989-2003 (Subset of Table 8.7a)

Year	Fossil Fuels							Renewable Energy			Other ¹⁰
	Coal ¹	Petroleum					Natural Gas ⁶	Other Gases ⁷	Wood ⁸	Waste ⁹	
		Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵	Total ⁵					
Thousand Short Tons	Thousand Barrels				Thousand Short Tons	Thousand Barrels	Million Cubic Feet	Trillion Btu	Trillion Btu		Trillion Btu
Commercial Sector ¹¹											
1989	1,125	1,085	883	0	0	1,967	30,037	1	2	22	0
1990	1,191	969	1,087	(s)	0	2,056	46,458	1	2	28	0
1991	1,228	786	551	(s)	0	1,337	52,101	1	2	26	(s)
1992	1,175	548	675	(s)	2	1,235	62,346	1	2	32	(s)
1993	1,373	656	828	6	5	1,515	65,173	1	2	33	(s)
1994	1,344	1,015	588	0	4	1,625	72,285	1	1	35	0
1995	1,419	812	413	(s)	4	1,245	77,664	0	1	40	(s)
1996	1,660	682	545	(s)	4	1,246	82,455	0	2	53	(s)
1997	1,738	1,053	509	0	4	1,584	86,915	(s)	2	58	0
1998	1,443	854	932	0	4	1,807	87,220	(s)	2	54	0
1999	1,490	759	834	0	4	1,613	84,037	0	1	54	0
2000	1,547	908	676	3	6	1,615	84,874	R0	1	47	(s)
2001	1,448	1,026	773	2	6	1,832	78,655	0	1	39	0
2002	R1,405	R771	R400	R38	R8	R1,250	R73,975	0	1	R42	R1
2003 ^P	1,492	969	690	2	9	1,706	70,728	0	1	48	0
Industrial Sector ¹²											
1989	24,867	1,903	21,150	646	397	25,685	913,516	195	926	35	85
1990	27,781	2,657	23,312	1,305	1,824	36,392	1,055,235	275	1,125	41	86
1991	27,021	4,446	19,897	1,156	1,592	33,460	1,060,716	298	1,076	37	110
1992	28,244	3,680	21,540	1,567	1,870	36,135	R1,107,361	322	1,161	39	87
1993	28,886	3,788	23,684	R1,326	1,583	R36,715	R1,124,081	297	R1,169	46	80
1994	29,707	3,550	R25,238	768	1,838	R38,744	R1,176,332	296	1,248	41	89
1995	29,363	2,333	21,732	823	1,912	34,448	R1,258,063	290	1,255	38	95
1996	29,434	2,983	24,111	1,815	1,950	38,661	1,288,876	325	1,249	39	89
1997	29,853	2,851	20,445	374	2,719	37,265	R1,281,620	283	1,259	41	102
1998	28,553	5,852	21,807	800	2,090	38,910	1,354,986	305	1,211	42	93
1999	27,763	5,799	18,993	1,268	2,251	37,312	1,401,374	331	1,213	31	99
2000	28,031	3,648	17,483	2,448	1,388	30,520	1,385,546	331	1,244	35	108
2001	25,755	3,424	16,860	1,039	1,099	26,817	1,309,636	248	1,054	35	94
2002	R26,232	R2,101	R13,463	R1,953	R1,529	R25,163	R1,240,209	R245	R1,136	R41	R85
2003 ^P	26,727	3,350	13,992	3,253	1,383	27,511	1,138,343	244	1,131	39	50

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Fuel oil nos. 1, 2, and 4.

³ Fuel oil nos. 5 and 6.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁷ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁸ Wood, black liquor, and other wood waste.

⁹ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

¹⁰ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹¹ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

¹² Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

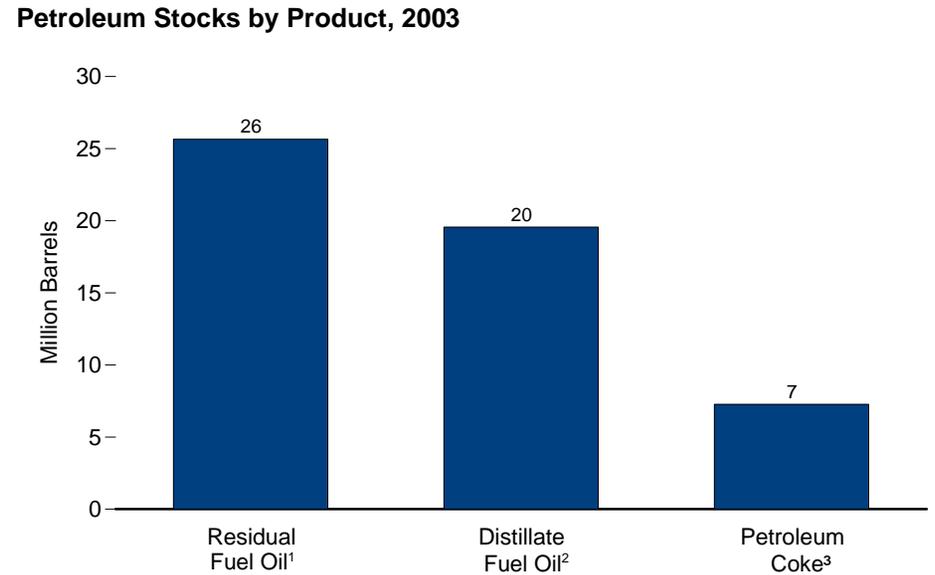
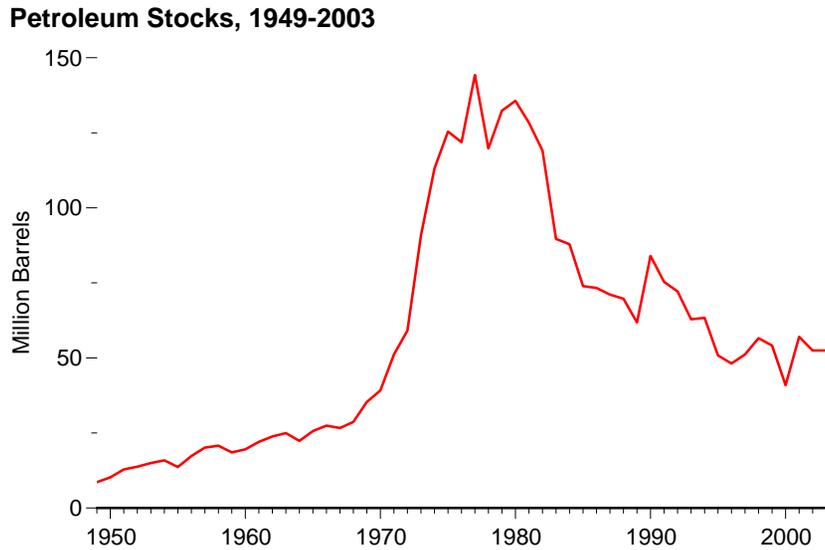
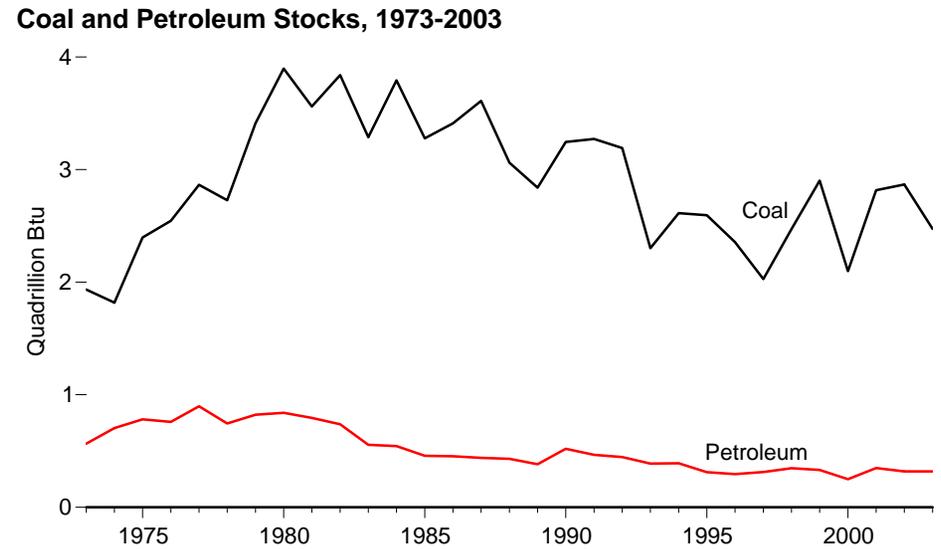
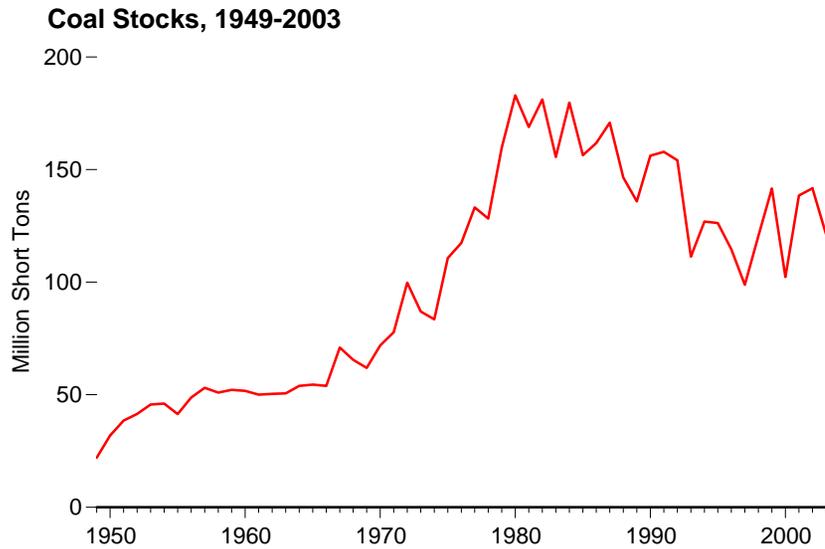
R=Revised. P=Preliminary. (s)=Less than 0.5.

Notes: • Data are for fuels consumed to produce electricity and useful thermal output. • See Table 8.7b for electric power sector electricity-only and CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Useful Thermal Output" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Figure 8.8 Stocks of Coal and Petroleum: Electric Power Sector



¹ Fuel oil nos. 5 and 6.

² Fuel oil nos. 1, 2, and 4.

³ Petroleum coke, which is reported in short tons, is converted at a rate of 5 barrels per short ton.

Notes: • Stocks are at end of year. • Because vertical scales differ, graphs should not be compared.

Sources: Tables 8.8, A3, and A5.

Table 8.8 Stocks of Coal and Petroleum: Electric Power Sector, Selected Years, 1949-2003

Year	Petroleum					Total ⁵
	Coal ¹	Distillate Fuel Oil ²	Residual Fuel Oil ³	Other Liquids ⁴	Petroleum Coke ⁵	
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	
1949	22,054	NA	NA	NA	NA	8,604
1950	31,842	NA	NA	NA	NA	10,201
1955	41,391	NA	NA	NA	NA	13,671
1960	51,735	NA	NA	NA	NA	19,572
1965	54,525	NA	NA	NA	NA	25,647
1970	71,908	NA	NA	NA	239	39,151
1971	77,778	NA	NA	NA	291	51,101
1972	99,722	NA	NA	NA	287	59,090
1973	86,967	10,095	79,121	NA	312	90,776
1974	83,509	15,199	97,718	NA	35	113,091
1975	110,724	16,432	108,825	NA	31	125,413
1976	117,436	14,703	106,993	NA	32	121,857
1977	133,219	19,281	124,750	NA	44	144,252
1978	128,225	16,386	102,402	NA	198	119,778
1979	159,714	20,301	111,121	NA	183	132,338
1980	183,010	30,023	105,351	NA	52	135,635
1981	168,893	26,094	102,042	NA	42	128,345
1982	181,132	23,369	95,515	NA	41	119,090
1983	155,598	18,801	70,573	NA	55	89,652
1984	179,727	19,116	68,503	NA	50	87,870
1985	156,376	16,386	57,304	NA	49	73,933
1986	161,806	16,269	56,841	NA	40	73,313
1987	170,797	15,759	55,069	NA	51	71,084
1988	146,507	15,099	54,187	NA	86	69,714
1989	135,860	13,824	47,446	NA	105	61,795
1990	156,166	16,471	67,030	NA	94	83,970
1991	157,876	16,357	58,636	NA	70	75,343
1992	154,130	15,714	56,135	NA	67	72,183
1993	111,341	15,674	46,770	NA	89	62,890
1994	126,897	16,644	46,344	NA	69	63,333
1995	126,304	15,392	35,102	NA	65	50,821
1996	114,623	15,216	32,473	NA	91	48,146
1997	98,826	15,456	33,336	NA	469	51,138
1998	120,501	16,343	37,451	NA	559	56,591
1999 ⁶	141,604	17,995	34,256	NA	372	54,109
2000	102,296	15,127	24,748	NA	211	40,932
2001	138,496	20,486	34,594	NA	390	57,031
2002	^R 141,714	^R 17,413	^R 25,723	800	^R 1,711	^R 52,490
2003 ^P	121,371	19,563	25,653	NA	1,455	52,489

¹ Anthracite, bituminous coal, subbituminous coal, and lignite.

² Fuel oil nos. 1, 2, and 4. For 1949-1979, data are for gas turbine and internal combustion plant stocks of petroleum. For 1980-2000, electric utility data also include small amounts of kerosene and jet fuel.

³ Fuel oil nos. 5 and 6. For 1949-1979, data are for steam plant stocks of petroleum. For 1980-2000, electric utility data also include a small amount of fuel oil no. 4.

⁴ Jet fuel, kerosene, other petroleum liquids, and waste oil.

⁵ Petroleum coke is converted from short tons to barrels by multiplying by 5.

⁶ Through 1998, data are for electric utilities only. Beginning in 1999, data are for electric utilities and independent power producers.

R=Revised. P=Preliminary. NA=Not available.

Notes: • Stocks are at end of year. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note

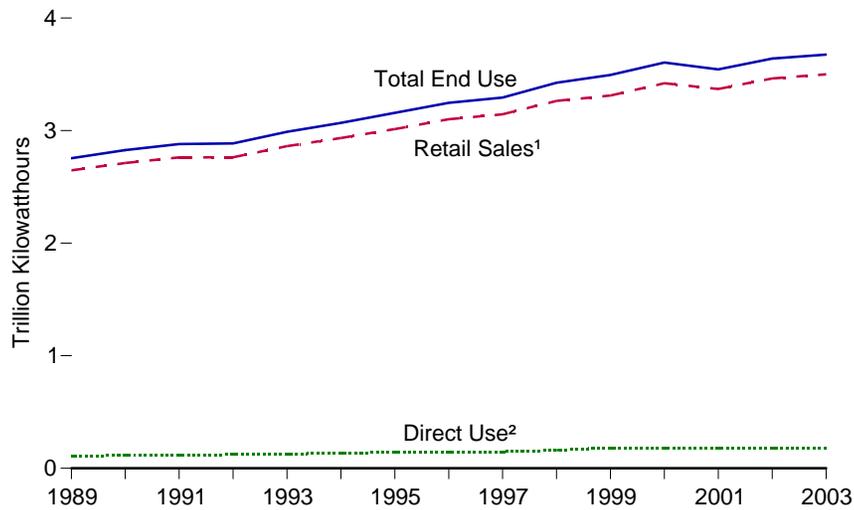
1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.

Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>. • For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

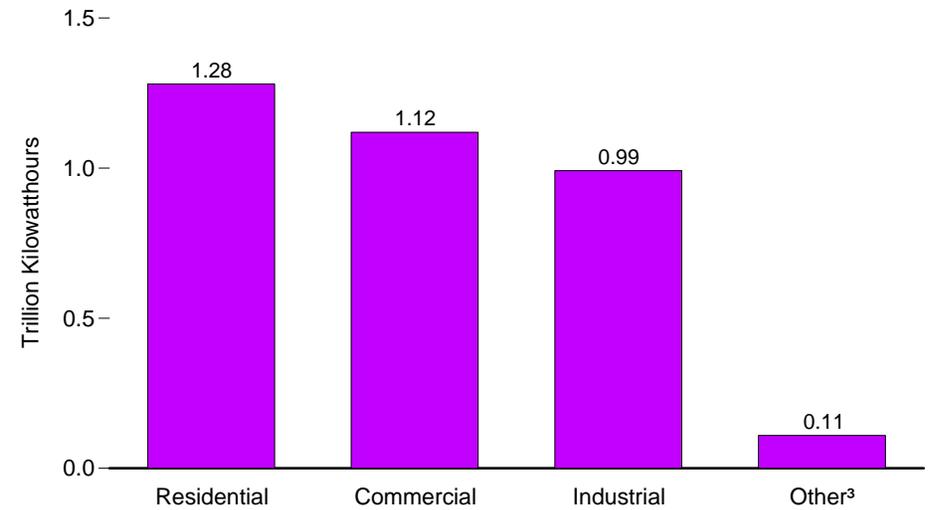
Sources: • 1949-September 1977—Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • October 1977-1981—Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • 1982-1988—Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." • 1989-1997—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-759, "Monthly Power Plant Report" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Figure 8.9 Electricity End Use

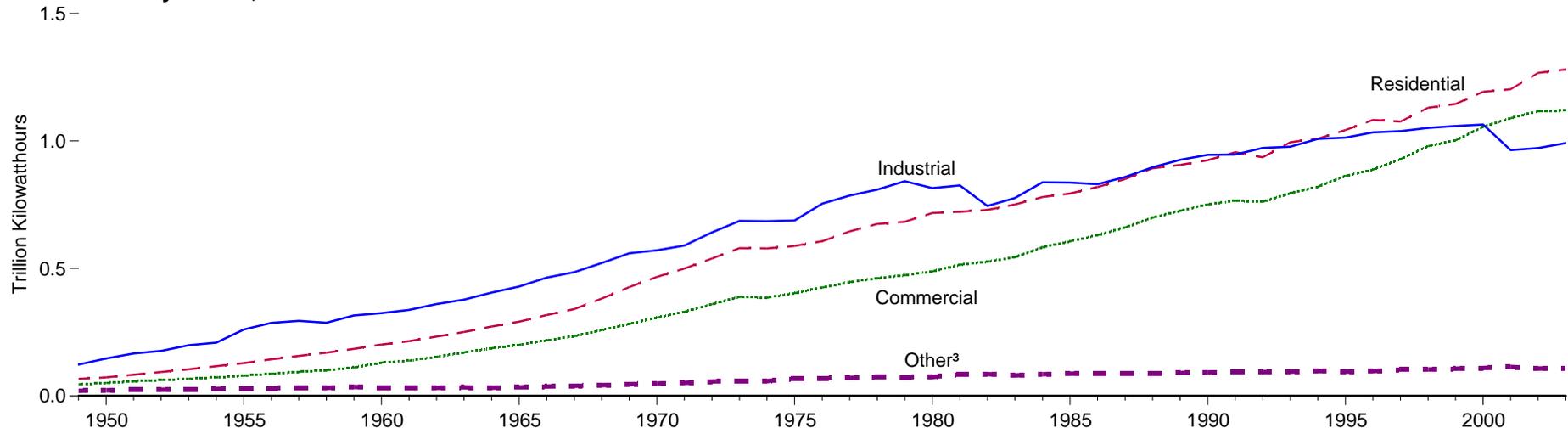
Overview, 1989-2003



Retail Sales¹ by Sector, 2003



Retail Sales¹ by Sector, 1949-2003



¹ Electricity retail sales to ultimate customers by electric utilities and, beginning in 1996, other energy service providers.

² Commercial and industrial facility use of onsite net electricity generation; and electricity sales among adjacent or co-located facilities for which revenue information is not available.

³ Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Note: Because vertical scales differ, graphs should not be compared.
Source: Table 8.9.

Table 8.9 Electricity End Use, Selected Years, 1949-2003
(Billion Kilowatthours)

Year	Retail Sales ¹					Direct Use ⁴	Total
	Residential	Commercial ²	Industrial ²	Other ³	Total		
1949	67	45	123	20	255	NA	255
1950	72	51	146	22	291	NA	291
1955	128	79	260	29	497	NA	497
1960	201	131	324	32	688	NA	688
1965	291	200	429	34	954	NA	954
1970	466	307	571	48	1,392	NA	1,392
1971	500	329	589	51	1,470	NA	1,470
1972	539	359	641	56	1,595	NA	1,595
1973	579	388	686	59	1,713	NA	1,713
1974	578	385	685	58	1,706	NA	1,706
1975	588	403	688	68	1,747	NA	1,747
1976	606	425	754	70	1,855	NA	1,855
1977	645	447	786	71	1,948	NA	1,948
1978	674	461	809	73	2,018	NA	2,018
1979	683	473	842	73	2,071	NA	2,071
1980	717	488	815	74	2,094	NA	2,094
1981	722	514	826	85	2,147	NA	2,147
1982	730	526	745	86	2,086	NA	2,086
1983	751	544	776	80	2,151	NA	2,151
1984	780	583	838	85	2,286	NA	2,286
1985	794	606	837	87	2,324	NA	2,324
1986	819	631	831	89	2,369	NA	2,369
1987	850	660	858	88	2,457	NA	2,457
1988	893	699	896	90	2,578	NA	2,578
1989	906	726	926	90	2,647	108	2,755
1990	924	751	946	92	2,713	114	2,827
1991	955	766	947	94	2,762	118	2,880
1992	936	761	973	93	2,763	122	2,886
1993	995	795	977	95	2,861	128	2,989
1994	1,008	820	1,008	98	2,935	134	3,069
1995	1,043	863	1,013	95	3,013	144	3,157
1996	1,083	887	1,034	98	3,101	146	3,247
1997	1,076	929	1,038	103	3,146	148	3,294
1998	1,130	979	1,051	104	3,264	161	3,425
1999	1,145	1,002	1,058	107	3,312	183	3,495
2000	1,192	1,055	1,064	109	3,421	183	3,605
2001	1,203	1,089	964	114	3,370	RE174	R3,544
2002	R1,267	R1,116	R972	R107	R3,463	RE178	R3,641
2003	P1,280	P1,119	P991	P109	P3,500	E175	P3,675

¹ Electricity retail sales to ultimate customers by electric utilities and, beginning in 1996, other energy service providers.

² Retail customers are classified as "Commercial" or "Industrial" based on NAICS (North American Industry Classification System) codes or usage falling within specified limits by rate schedule.

³ Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

⁴ Commercial and industrial facility use of onsite net electricity generation; and electricity sales among adjacent or co-located facilities for which revenue information is not available.

R=Revised. P=Preliminary. E=Estimate. NA=Not available.

Note: Totals may not equal sum of components due to independent rounding.

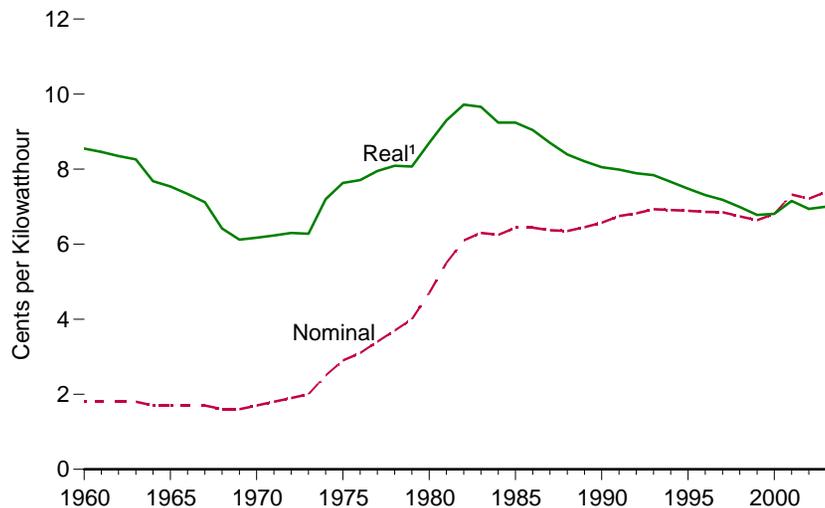
Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>.

• For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

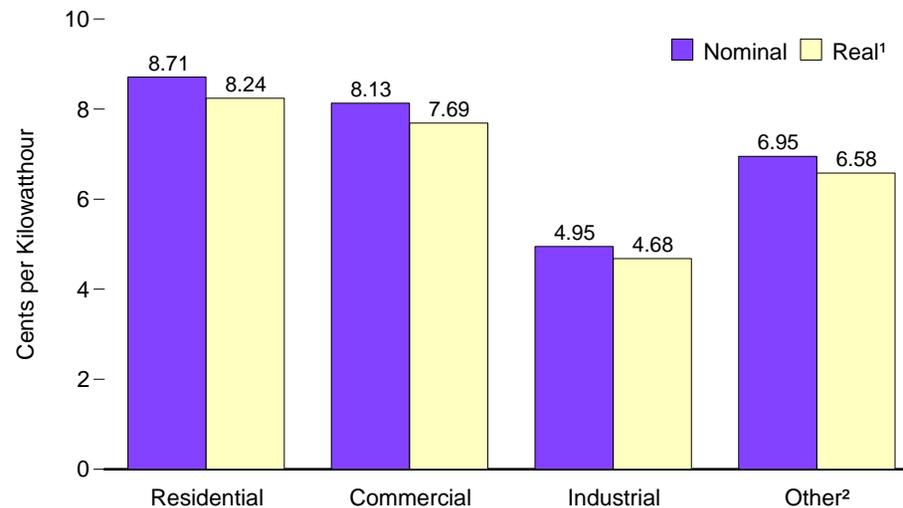
Sources: **Retail Sales:** • 1949-September 1977—Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income." • October 1977-February 1980—Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income." • March 1980-1982—FERC, Form FPC-5, "Electric Utility Company Monthly Statement." • 1983—Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement." • 1984-1989—EIA, Form EIA-861, "Annual Electric Utility Report." • 1990 forward—EIA, *Electric Power Monthly* (March 2004), Table 5.1. **Direct Use:** • 1989-1997—EIA, Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 forward—Estimates are based on the 2000 value adjusted by the percentage increase in commercial and industrial net generation on Table 8.1.

Figure 8.10 Average Retail Prices of Electricity

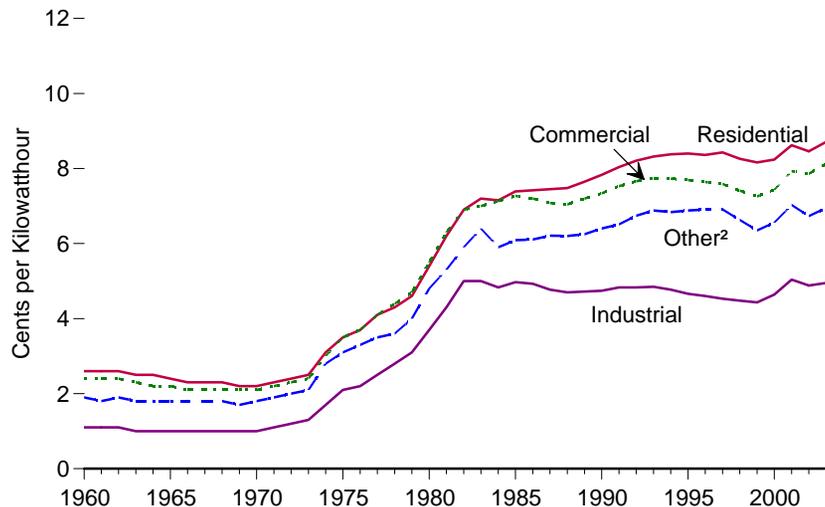
Total, 1960-2003



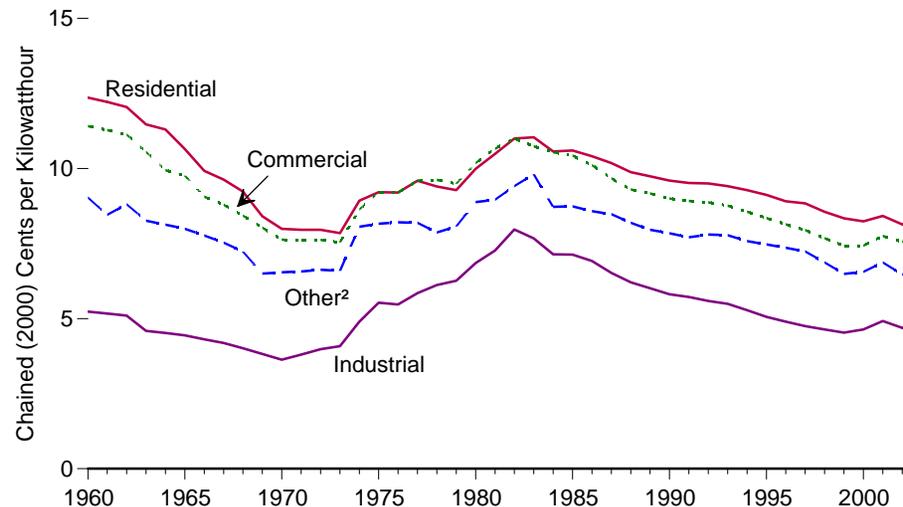
By Sector, 2003



Nominal, 1960-2003



Real¹, 1960-2003



¹ In chained (2000) dollars, calculated by using gross domestic product implicit price deflators. See Table D1.

² Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

Note: Because vertical scales differ, graphs should not be compared.
Source: Table 8.10.

Table 8.10 Average Retail Prices of Electricity, 1960-2003
(Cents per Kilowatthour)

Year	Residential		Commercial ¹		Industrial ¹		Other ²		Total	
	Nominal	Real ³	Nominal	Real ³	Nominal	Real ³	Nominal	Real ³	Nominal	Real ³
1960	2.6	R12.4	2.4	R11.4	1.1	R5.2	1.9	R9.0	1.8	R8.6
1961	2.6	R12.2	2.4	R11.3	1.1	R5.2	1.8	R8.5	1.8	R8.5
1962	2.6	R12.0	2.4	R11.1	1.1	R5.1	1.9	R8.8	1.8	R8.4
1963	2.5	R11.5	2.3	R10.6	1.0	R4.6	1.8	R8.3	1.8	R8.3
1964	2.5	R11.3	2.2	R9.9	1.0	R4.5	1.8	R8.1	1.7	R7.7
1965	2.4	R10.6	2.2	R9.8	1.0	R4.4	1.8	R8.0	1.7	R7.5
1966	2.3	R9.9	2.1	R9.1	1.0	R4.3	1.8	R7.8	1.7	R7.3
1967	2.3	R9.6	2.1	R8.8	1.0	R4.2	1.8	R7.5	1.7	R7.1
1968	2.3	R9.2	2.1	R8.4	1.0	R4.0	1.8	R7.2	1.6	R6.4
1969	2.2	R8.4	2.1	R8.0	1.0	R3.8	1.7	R6.5	1.6	R6.1
1970	2.2	R8.0	2.1	R7.6	1.0	R3.6	1.8	R6.5	1.7	R6.2
1971	2.3	R8.0	2.2	R7.6	1.1	R3.8	1.9	R6.6	1.8	R6.2
1972	2.4	R8.0	2.3	R7.6	1.2	R4.0	2.0	R6.6	1.9	R6.3
1973	2.5	R7.8	2.4	R7.5	1.3	R4.1	2.1	R6.6	2.0	R6.3
1974	3.1	R8.9	3.0	R8.6	1.7	R4.9	2.8	R8.1	2.5	R7.2
1975	3.5	R9.2	3.5	R9.2	2.1	R5.5	3.1	R8.2	2.9	R7.6
1976	3.7	R9.2	3.7	R9.2	2.2	R5.5	3.3	R8.2	3.1	R7.7
1977	4.1	R9.6	4.1	R9.6	2.5	R5.8	3.5	R8.2	3.4	R8.0
1978	4.3	R9.4	4.4	R9.6	2.8	R6.1	3.6	R7.9	3.7	R8.1
1979	4.6	R9.3	4.7	R9.5	3.1	R6.3	4.0	R8.1	4.0	R8.1
1980	5.4	R10.0	5.5	R10.2	3.7	R6.8	4.8	R8.9	4.7	R8.7
1981	6.2	R10.5	6.3	R10.7	4.3	R7.3	5.3	R9.0	5.5	R9.3
1982	6.9	R11.0	6.9	R11.0	5.0	R8.0	5.9	R9.4	6.1	R9.7
1983	7.2	R11.0	7.0	R10.7	5.0	R7.7	6.4	R9.8	6.3	R9.7
1984	7.15	R10.57	7.13	R10.54	4.83	R7.14	5.90	R8.72	6.25	R9.24
1985	7.39	R10.60	7.27	R10.43	4.97	R7.13	6.09	R8.74	6.44	R9.24
1986	7.42	R10.41	7.20	R10.11	4.93	R6.92	6.11	R8.58	6.44	R9.04
1987	7.45	R10.18	7.08	R9.67	4.77	R6.52	6.21	R8.48	6.37	R8.70
1988	7.48	R9.88	7.04	R9.30	4.70	R6.21	6.20	R8.19	6.35	R8.39
1989	7.65	R9.74	7.20	R9.17	4.72	R6.01	6.25	R7.96	6.45	R8.21
1990	7.83	R9.60	7.34	R9.00	4.74	R5.81	6.40	R7.84	6.57	R8.05
1991	8.04	R9.52	7.53	R8.92	4.83	R5.72	6.51	R7.71	6.75	R7.99
1992	8.21	R9.50	7.66	R8.87	4.83	R5.59	6.74	R7.80	6.82	R7.89
1993	8.32	R9.41	7.74	R8.76	4.85	R5.49	6.88	R7.78	6.93	R7.84
1994	8.38	R9.28	7.73	R8.56	4.77	R5.28	6.84	R7.58	6.91	R7.66
1995	8.40	R9.12	7.69	R8.35	4.66	R5.06	6.88	R7.47	6.89	R7.48
1996	8.36	R8.91	7.64	R8.14	4.60	R4.90	6.91	R7.36	6.86	R7.31
1997	8.43	R8.84	7.59	R7.95	4.53	R4.75	6.91	R7.24	6.85	R7.18
1998	8.26	R8.56	7.41	R7.68	4.48	R4.64	6.63	R6.87	6.74	R6.99
1999	8.16	R8.34	7.26	R7.42	4.43	R4.53	6.35	R6.49	6.64	R6.78
2000	8.24	R8.24	7.43	R7.43	4.64	R4.64	6.56	R6.56	6.81	R6.81
2001	8.62	R8.42	7.93	R7.75	5.04	R4.92	7.03	R6.87	7.32	R7.15
2002	R8.46	R8.14	R7.86	R7.56	R4.88	R4.69	R6.73	R6.47	R7.21	R6.94
2003	8.71	8.24	8.13	7.69	4.95	4.68	6.95	6.58	7.40	7.00

¹ Retail customers are classified as "Commercial" or "Industrial" based on NAICS (North American Industry Classification System) codes or usage falling within specified limits by rate schedule.

² Public street and highway lighting, other sales to public authorities, sales to railroads and railways, and interdepartmental sales.

³ In chained (2000) dollars, calculated by using gross domestic product implicit price deflators. See Table D1.

R=Revised.

Notes: • Data represent revenue from electricity retail sales divided by electricity retail sales. • Through 1979, data are for Classes A and B privately owned electric utilities only. For 1980-1982, data are for selected Class A utilities whose electric operating revenues were \$100 million or more during the previous

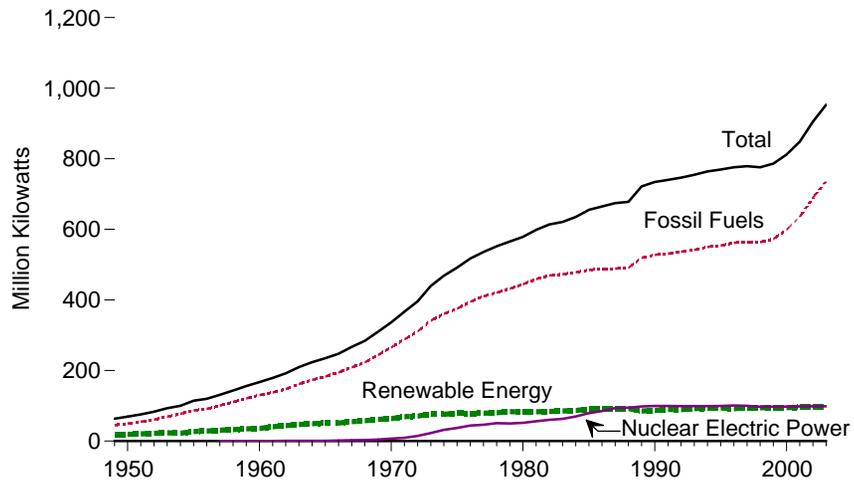
year. For 1983, data are for a selected sample of electric utilities. Beginning in 1984, data are for a census of electric utilities. Beginning in 1996, data also include energy service providers selling to retail customers.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

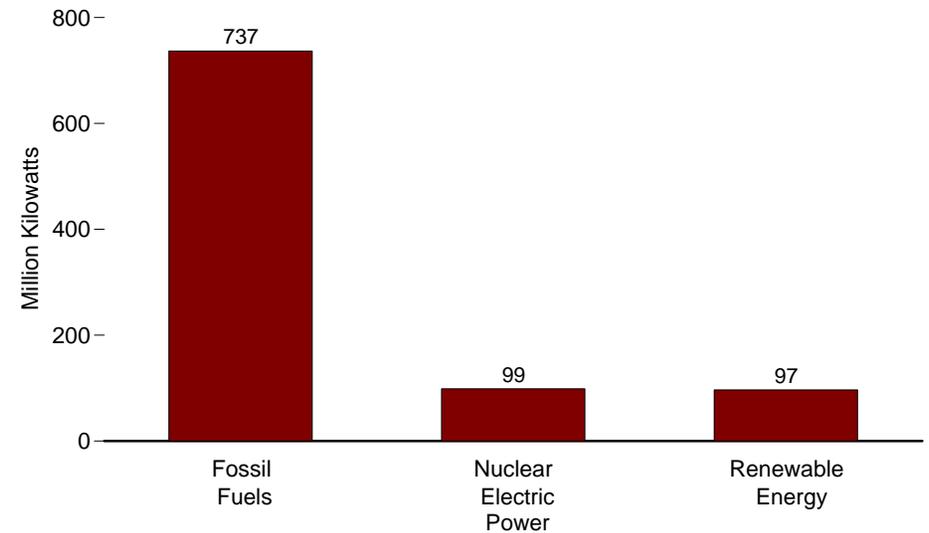
Sources: • 1960-September 1977—Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • October 1977-February 1980—Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • March 1980-1982—FERC, Form FERC-5, "Electric Utility Company Monthly Statement." • 1983—Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement." • 1984-1989—EIA, Form EIA-861, "Annual Electric Utility Report." • 1990 forward—EIA, *Electric Power Monthly* (March 2004), Table 5.3.

Figure 8.11a Electric Net Summer Capacity, Total (All Sectors)

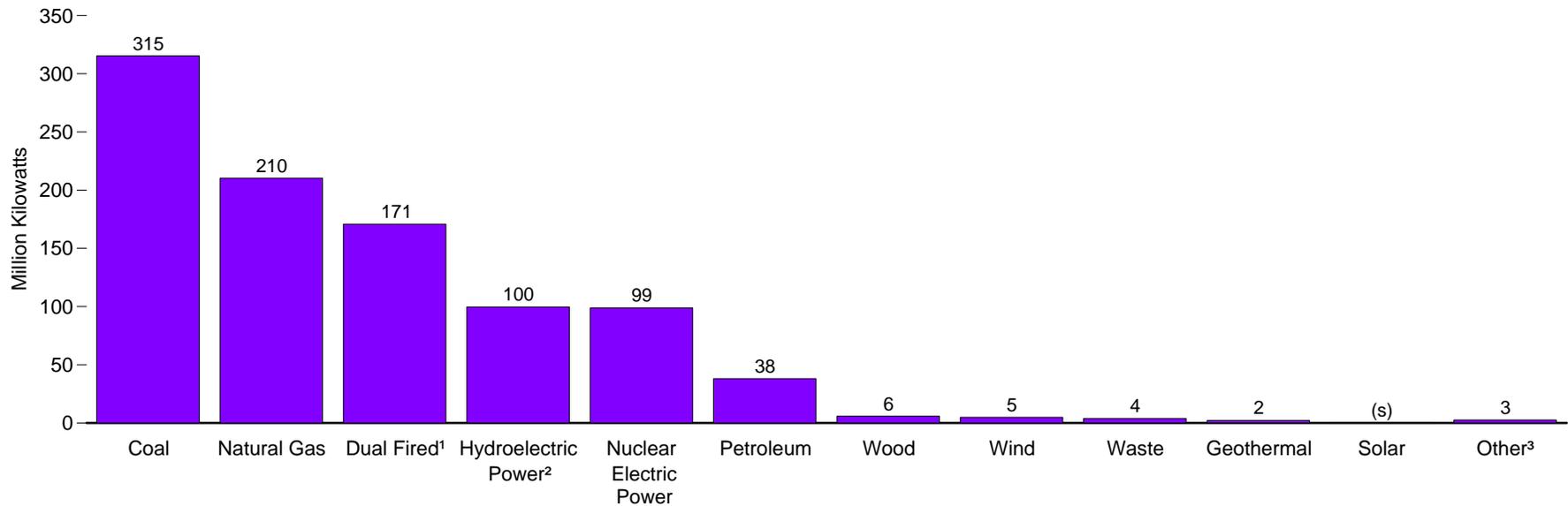
Total, 1949-2003



By Major Category, 2003



By Source, 2003



¹ Petroleum and natural gas.

² Conventional and pumped storage.

³ Other gases, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

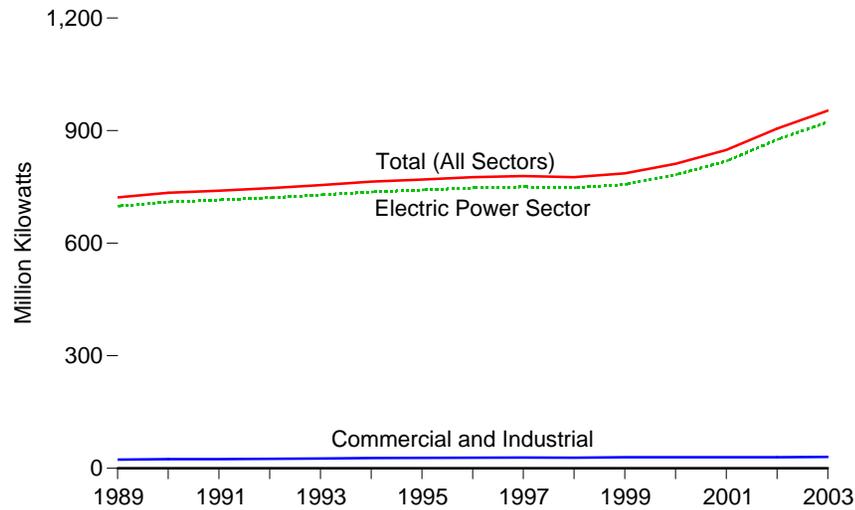
(s)=Less than 0.5 million kilowatts.

Note: Because vertical scales differ, graphs should not be compared.

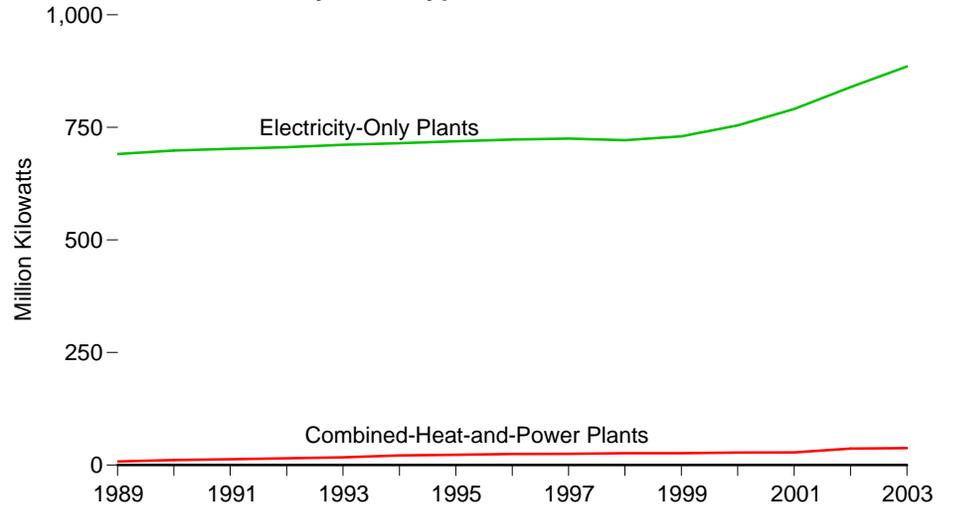
Source: Table 8.11a.

Figure 8.11b Electric Net Summer Capacity by Sector

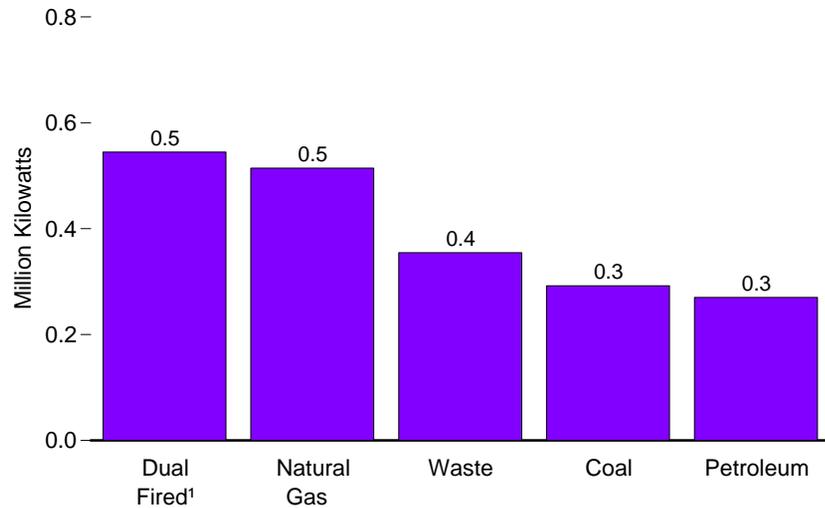
Total (All Sectors) and Sectors, 1989-2003



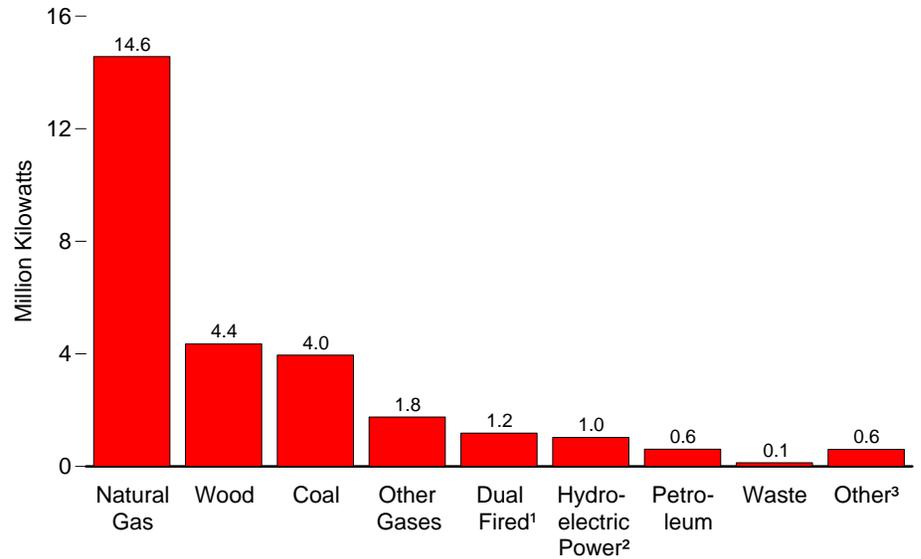
Electric Power Sector by Plant Type, 1989-2003



Commercial Sector, 2003



Industrial Sector, 2003



¹ Petroleum and natural gas.

² Conventional.

³ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

Note: Because vertical scales differ, graphs should not be compared.

Sources: Tables 8.11a-8.11d.

Table 8.11a Electric Net Summer Capacity: Total (All Sectors), Selected Years, 1949-2003

(Sum of Tables 8.11b and 8.11d; Million Kilowatts)

Year	Fossil Fuels						Nuclear Electric Power	Hydro-electric Pumped Storage	Renewable Energy							Other ⁹	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Dual Fired ⁴	Other Gases ⁵	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total		
1949	NA	NA	NA	NA	NA	44.9	0.0	(¹⁰)	18.5	(s)	(¹¹)	NA	NA	NA	18.5	NA	63.4
1950	NA	NA	NA	NA	NA	50.0	0.0	(¹⁰)	19.2	(s)	(¹¹)	NA	NA	NA	19.2	NA	69.2
1955	NA	NA	NA	NA	NA	86.8	0.0	(¹⁰)	27.4	(s)	(¹¹)	NA	NA	NA	27.4	NA	114.2
1960	NA	NA	NA	NA	NA	130.8	0.4	(¹⁰)	35.8	0.1	(¹¹)	(s)	NA	NA	35.9	NA	167.1
1965	NA	NA	NA	NA	NA	182.9	0.8	(¹⁰)	51.0	0.1	(¹¹)	(s)	NA	NA	51.1	NA	234.8
1970	NA	NA	NA	NA	NA	265.4	7.0	(¹⁰)	63.8	0.1	(¹¹)	0.1	NA	NA	63.9	NA	336.4
1971	NA	NA	NA	NA	NA	288.0	9.0	(¹⁰)	69.1	0.1	(¹¹)	0.2	NA	NA	69.4	NA	366.4
1972	NA	NA	NA	NA	NA	310.7	14.5	(¹⁰)	70.5	0.1	(¹¹)	0.3	NA	NA	70.9	NA	396.0
1973	NA	NA	NA	NA	NA	341.2	22.7	(¹⁰)	75.4	0.1	(¹¹)	0.4	NA	NA	75.9	NA	439.8
1974	NA	NA	NA	NA	NA	360.7	31.9	(¹⁰)	75.5	0.1	(¹¹)	0.4	NA	NA	76.0	NA	468.5
1975	NA	NA	NA	NA	NA	375.1	37.3	(¹⁰)	78.4	0.1	(¹¹)	0.5	NA	NA	79.0	NA	491.3
1976	NA	NA	NA	NA	NA	394.8	43.8	(¹⁰)	78.0	0.1	(¹¹)	0.5	NA	NA	78.6	NA	517.2
1977	NA	NA	NA	NA	NA	410.4	46.3	(¹⁰)	78.6	0.1	(¹¹)	0.5	NA	NA	79.2	NA	535.9
1978	NA	NA	NA	NA	NA	420.8	50.8	(¹⁰)	79.9	0.1	(¹¹)	0.5	NA	NA	80.5	NA	552.1
1979	NA	NA	NA	NA	NA	432.1	49.7	(¹⁰)	82.9	0.1	(¹¹)	0.7	NA	NA	83.6	NA	565.5
1980	NA	NA	NA	NA	NA	444.1	51.8	(¹⁰)	81.7	0.1	(¹¹)	0.9	NA	NA	82.7	NA	578.6
1981	NA	NA	NA	NA	NA	458.9	56.0	(¹⁰)	82.4	0.1	(¹¹)	0.9	NA	(s)	83.4	NA	598.3
1982	NA	NA	NA	NA	NA	469.6	60.0	(¹⁰)	83.0	0.1	(¹¹)	1.0	NA	(s)	84.1	NA	613.7
1983	NA	NA	NA	NA	NA	472.8	63.0	(¹⁰)	83.9	0.2	(¹¹)	1.2	NA	(s)	85.3	NA	621.1
1984	NA	NA	NA	NA	NA	478.6	69.7	(¹⁰)	85.3	0.3	(¹¹)	1.2	(¹²)	(s)	86.9	NA	635.1
1985	NA	NA	NA	NA	NA	485.0	79.4	(¹⁰)	88.9	0.2	0.2	1.6	(¹²)	(s)	90.8	NA	655.2
1986	NA	NA	NA	NA	NA	488.3	85.2	(¹⁰)	89.3	0.2	0.2	1.6	(¹²)	(s)	91.2	NA	664.8
1987	NA	NA	NA	NA	NA	488.8	93.6	(¹⁰)	89.7	0.2	0.2	1.5	(¹²)	(s)	91.7	NA	674.1
1988	NA	NA	NA	NA	NA	490.6	94.7	(¹⁰)	90.3	0.2	0.2	1.7	(¹²)	(s)	92.4	NA	677.7
1989 ¹³	303.1	48.8	54.1	111.8	1.5	519.4	98.2	18.1	74.1	5.2	2.1	2.6	0.2	1.5	85.7	0.5	721.8
1990	307.4	49.0	56.2	113.6	1.6	527.8	99.6	19.5	73.9	5.5	2.5	2.7	0.3	1.8	86.8	0.5	734.1
1991	307.4	47.3	60.8	113.7	2.1	531.4	99.6	18.4	76.0	6.1	2.9	2.6	0.3	1.9	89.9	0.5	739.9
1992	309.4	45.6	60.7	118.9	2.1	536.7	99.0	21.2	74.8	6.2	3.0	2.9	0.3	1.8	89.1	0.5	746.5
1993	310.1	44.0	65.5	120.2	1.9	541.8	99.0	21.1	77.4	6.5	3.1	2.9	0.3	1.8	92.1	0.5	754.6
1994	311.4	42.7	70.7	123.1	2.1	550.0	99.1	21.2	78.0	6.7	3.3	3.0	0.3	1.7	93.1	0.5	764.0
1995	311.4	43.7	75.4	122.0	1.7	554.2	99.5	21.4	78.6	6.7	3.5	3.0	0.3	1.7	93.9	0.5	769.5
1996	313.4	43.6	74.5	128.6	1.7	561.7	100.8	21.1	76.4	6.8	3.6	2.9	0.3	1.7	91.7	0.5	775.9
1997	313.6	43.2	76.3	129.4	1.5	564.1	99.7	19.3	79.4	6.9	3.6	2.9	0.3	1.6	94.8	0.8	778.6
1998	315.8	40.4	75.8	130.4	1.5	563.9	97.1	19.5	79.2	6.8	3.7	2.9	0.3	1.7	94.6	0.8	775.9
1999	315.5	35.6	73.6	146.0	1.9	572.6	97.4	19.6	79.4	6.8	3.7	2.8	0.4	2.3	95.3	1.0	785.9
2000	^R 315.1	^R 35.9	95.7	149.8	2.3	^R 598.9	97.9	19.5	79.4	6.1	3.9	2.8	0.4	2.4	94.9	0.5	^R 811.7
2001	314.2	39.7	125.8	153.5	1.7	634.9	98.2	19.1	79.5	5.9	3.8	2.2	0.4	3.9	95.7	0.4	848.3
2002	^R 315.4	^R 38.2	^R 171.7	^R 162.3	^R 2.0	^R 689.5	^R 98.7	^R 20.4	^R 79.4	^R 5.8	3.8	^R 2.3	0.4	^R 4.4	^R 96.1	^R 0.6	^R 905.3
2003 ^P	315.4	38.1	210.3	170.9	2.0	736.7	98.8	20.4	79.4	5.9	3.9	2.3	0.4	4.9	96.7	0.6	953.2

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Petroleum and natural gas.

⁵ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁶ Wood, black liquor, and other wood waste.

⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁸ Solar thermal and photovoltaic energy.

⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹⁰ Included in "Conventional Hydroelectric Power."

¹¹ Included in "Wood."

¹² Included in "Wind."

¹³ Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.05 million kilowatts.

Notes: • Data are at end of year. • For plants that use multiple sources of energy, capacity is assigned to the predominant energy source. • See Note 1, "Coverage of Electricity Statistics," at end of section. • See "Generator Net Summer Capacity" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>.

• For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: Tables 8.11b and 8.11d.

Table 8.11b Electric Net Summer Capacity: Electric Power Sector, Selected Years, 1949-2003

(Subset of Table 8.11a; Million Kilowatts)

Year	Fossil Fuels						Nuclear Electric Power	Hydro-electric Pumped Storage	Renewable Energy							Other ⁹	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Dual Fired ⁴	Other Gases ⁵	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total		
1949	NA	NA	NA	NA	NA	44.9	0.0	(¹⁰)	18.5	(s)	(¹¹)	NA	NA	NA	18.5	NA	63.4
1950	NA	NA	NA	NA	NA	50.0	0.0	(¹⁰)	19.2	(s)	(¹¹)	NA	NA	NA	19.2	NA	69.2
1955	NA	NA	NA	NA	NA	86.8	0.0	(¹⁰)	27.4	(s)	(¹¹)	NA	NA	NA	27.4	NA	114.2
1960	NA	NA	NA	NA	NA	130.8	0.4	(¹⁰)	35.8	0.1	(¹¹)	(s)	NA	NA	35.9	NA	167.1
1965	NA	NA	NA	NA	NA	182.9	0.8	(¹⁰)	51.0	0.1	(¹¹)	(s)	NA	NA	51.1	NA	234.8
1970	NA	NA	NA	NA	NA	265.4	7.0	(¹⁰)	63.8	0.1	(¹¹)	0.1	NA	NA	63.9	NA	336.4
1971	NA	NA	NA	NA	NA	288.0	9.0	(¹⁰)	69.1	0.1	(¹¹)	0.2	NA	NA	69.4	NA	366.4
1972	NA	NA	NA	NA	NA	310.7	14.5	(¹⁰)	70.5	0.1	(¹¹)	0.3	NA	NA	70.9	NA	396.0
1973	NA	NA	NA	NA	NA	341.2	22.7	(¹⁰)	75.4	0.1	(¹¹)	0.4	NA	NA	75.9	NA	439.8
1974	NA	NA	NA	NA	NA	360.7	31.9	(¹⁰)	75.5	0.1	(¹¹)	0.4	NA	NA	76.0	NA	468.5
1975	NA	NA	NA	NA	NA	375.1	37.3	(¹⁰)	78.4	0.1	(¹¹)	0.5	NA	NA	79.0	NA	491.3
1976	NA	NA	NA	NA	NA	394.8	43.8	(¹⁰)	78.0	0.1	(¹¹)	0.5	NA	NA	78.6	NA	517.2
1977	NA	NA	NA	NA	NA	410.4	46.3	(¹⁰)	78.6	0.1	(¹¹)	0.5	NA	NA	79.2	NA	535.9
1978	NA	NA	NA	NA	NA	420.8	50.8	(¹⁰)	79.9	0.1	(¹¹)	0.5	NA	NA	80.5	NA	552.1
1979	NA	NA	NA	NA	NA	432.1	49.7	(¹⁰)	82.9	0.1	(¹¹)	0.7	NA	NA	83.6	NA	565.5
1980	NA	NA	NA	NA	NA	444.1	51.8	(¹⁰)	81.7	0.1	(¹¹)	0.9	NA	NA	82.7	NA	578.6
1981	NA	NA	NA	NA	NA	458.9	56.0	(¹⁰)	82.4	0.1	(¹¹)	0.9	NA	(s)	83.4	NA	598.3
1982	NA	NA	NA	NA	NA	469.6	60.0	(¹⁰)	83.0	0.1	(¹¹)	1.0	NA	(s)	84.1	NA	613.7
1983	NA	NA	NA	NA	NA	472.8	63.0	(¹⁰)	83.9	0.2	(¹¹)	1.2	NA	(s)	85.3	NA	621.1
1984	NA	NA	NA	NA	NA	478.6	69.7	(¹⁰)	85.3	0.3	(¹¹)	1.2	(¹²)	(s)	86.9	NA	635.1
1985	NA	NA	NA	NA	NA	485.0	79.4	(¹⁰)	88.9	0.2	0.2	1.6	(¹²)	(s)	90.8	NA	655.2
1986	NA	NA	NA	NA	NA	488.3	85.2	(¹⁰)	89.3	0.2	0.2	1.6	(¹²)	(s)	91.2	NA	664.8
1987	NA	NA	NA	NA	NA	488.8	93.6	(¹⁰)	89.7	0.2	0.2	1.5	(¹²)	(s)	91.7	NA	674.1
1988	NA	NA	NA	NA	NA	490.6	94.7	(¹⁰)	90.3	0.2	0.2	1.7	(¹²)	(s)	92.4	NA	677.7
1989 ¹³	298.0	48.0	46.1	109.4	0.4	501.9	98.2	18.1	73.6	1.1	1.7	2.6	0.2	1.5	80.7	0.0	698.8
1990	302.3	48.0	47.9	110.8	0.4	509.3	99.6	19.5	73.3	1.2	2.1	2.7	0.3	1.8	81.4	(s)	709.9
1991	302.5	46.4	52.9	110.9	0.7	513.3	99.6	18.4	75.4	1.3	2.5	2.6	0.3	1.9	84.0	0.0	715.3
1992	304.3	44.7	52.0	116.1	0.7	517.9	99.0	21.2	74.2	1.4	2.5	2.9	0.3	1.8	83.1	0.0	721.2
1993	305.0	43.1	56.1	117.6	0.7	522.5	99.0	21.1	76.8	1.5	2.6	2.9	0.3	1.8	85.9	0.0	728.6
1994	306.1	41.7	61.1	120.2	0.7	529.8	99.1	21.2	76.9	1.7	2.7	3.0	0.3	1.7	86.4	0.0	736.5
1995	306.0	42.7	65.6	119.1	0.3	533.7	99.5	21.4	77.4	1.8	3.0	3.0	0.3	1.7	87.3	0.0	741.8
1996	308.1	42.6	64.5	125.7	0.1	540.9	100.8	21.1	75.3	1.7	2.9	2.9	0.3	1.7	84.9	0.0	747.7
1997	308.5	42.0	65.7	126.7	0.2	543.1	99.7	19.3	78.3	1.8	2.9	2.9	0.3	1.6	87.8	0.2	750.1
1998	310.9	39.2	64.4	128.5	0.1	543.0	97.1	19.5	78.0	1.8	3.0	2.9	0.3	1.7	87.8	0.2	747.6
1999	310.7	34.5	61.6	143.7	0.2	550.7	97.4	19.6	78.3	1.8	3.0	2.8	0.4	2.3	88.6	0.2	756.5
2000	^R 310.2	34.9	82.6	147.9	0.3	^R 575.9	97.9	19.5	78.2	1.7	3.3	2.8	0.4	2.4	88.8	(s)	^R 782.1
2001	309.8	38.4	111.1	152.0	0.3	611.6	98.2	19.1	78.4	1.6	3.3	2.2	0.4	^R 3.9	89.9	(s)	818.8
2002	^R 311.0	^R 37.3	^R 157.4	^R 160.4	^R 0.3	^R 666.5	^R 98.7	^R 20.4	^R 78.3	1.6	3.4	^R 2.3	0.4	^R 4.4	^R 90.3	(s)	^R 875.8
2003 ^P	311.2	37.3	195.2	169.1	0.3	713.0	98.8	20.4	78.3	1.6	3.4	2.3	0.4	4.9	90.8	(s)	923.0

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.

² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.

³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.

⁴ Petroleum and natural gas.

⁵ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.

⁶ Wood, black liquor, and other wood waste.

⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

⁸ Solar thermal and photovoltaic energy.

⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.

¹⁰ Included in "Conventional Hydroelectric Power."

¹¹ Included in "Wood."

¹² Included in "Wind."

¹³ Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

R=Revised. P=Preliminary. NA=Not available. (s)=Less than 0.05 million kilowatts.

Notes: • Data are at end of year. • For plants that use multiple sources of energy, capacity is assigned

to the predominant energy source. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Table 8.11d for commercial and industrial CHP and electricity-only data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Generator Net Summer Capacity" in Glossary. • Totals may not equal sum of components due to independent rounding.

Web Pages: • For data not shown for 1951-1969, see <http://www.eia.doe.gov/emeu/aer/elect.html>. • For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

Sources: • 1949-1984—Energy Information Administration (EIA) estimates. • 1985-1988—EIA, Form EIA-860, "Annual Electric Generator Report." • 1989-1997—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860A, "Annual Electric Generator Report—Utility" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.11c Electric Net Summer Capacity: Electric Power Sector by Plant Type, 1989-2003

(Breakout of Table 8.11b; Million Kilowatts)

Year	Fossil Fuels						Nuclear Electric Power	Hydro-electric Pumped Storage	Renewable Energy							Other ⁹	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Dual Fired ⁴	Other Gases ⁵	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total		
Electricity-Only Plants ¹⁰																	
1989	296.5	47.9	43.2	106.2	0.4	494.2	98.2	18.1	73.6	0.9	1.5	2.6	0.2	1.5	80.3	0.0	690.7
1990	299.9	47.8	44.1	106.4	0.4	498.6	99.6	19.5	73.3	1.0	1.9	2.7	0.3	1.8	80.9	(s)	698.6
1991	299.6	46.0	48.4	106.1	0.7	500.8	99.6	18.4	75.4	1.1	2.2	2.6	0.3	1.9	83.6	0.0	702.4
1992	300.8	44.4	47.7	109.5	0.7	503.1	99.0	21.2	74.2	1.2	2.3	2.9	0.3	1.8	82.7	0.0	706.0
1993	301.2	42.8	49.8	111.2	0.7	505.7	99.0	21.1	76.8	1.2	2.4	2.9	0.3	1.8	85.5	0.0	711.3
1994	301.6	41.4	51.5	113.5	0.7	508.7	99.1	21.2	76.9	1.5	2.5	3.0	0.3	1.7	85.9	0.0	715.0
1995	301.3	42.4	55.5	112.1	0.3	511.5	99.5	21.4	77.4	1.5	2.7	3.0	0.3	1.7	86.6	0.0	719.1
1996	303.1	42.2	52.9	118.6	0.1	516.9	100.8	21.1	75.3	1.4	2.6	2.9	0.3	1.7	84.2	0.0	723.0
1997	303.6	41.7	54.1	119.1	0.2	518.7	99.7	19.3	78.3	1.5	2.5	2.9	0.3	1.6	87.1	0.2	725.0
1998	305.9	38.8	50.3	122.5	0.1	517.5	97.1	19.5	78.0	1.4	2.6	2.9	0.3	1.7	87.0	0.2	721.4
1999	305.5	34.2	49.8	135.2	0.2	525.0	97.4	19.6	78.3	1.5	2.6	2.8	0.4	2.3	87.8	0.2	730.0
2000	^R 305.2	^R 34.4	67.6	141.8	0.1	^R 549.0	97.9	19.5	78.2	1.5	2.8	2.8	0.4	2.4	88.1	(s)	^R 754.5
2001	305.2	38.1	^R 93.0	^R 148.2	0.1	^R 584.5	98.2	19.1	78.4	1.5	3.0	2.2	0.4	3.6	89.1	(s)	^R 790.8
2002	^R 305.8	^R 36.5	^R 135.5	^R 152.5	0.1	^R 630.4	^R 98.7	^R 20.4	^R 78.3	^R 1.4	^R 2.9	^R 2.3	0.4	^R 4.4	^R 89.7	(s)	^R 839.2
2003 ^P	305.5	36.4	172.9	161.0	0.1	675.8	98.8	20.4	78.3	1.4	3.0	2.3	0.4	4.9	90.2	(s)	885.2
Combined-Heat-and-Power Plants ¹¹																	
1989	1.5	0.1	2.8	3.3	0.0	7.7	—	—	0.0	0.2	0.2	0.0	—	0.0	0.4	0.0	8.1
1990	2.4	0.1	3.9	4.4	0.0	10.7	—	—	0.0	0.2	0.2	0.0	—	0.0	0.5	0.0	11.2
1991	2.9	0.3	4.5	4.8	0.0	12.5	—	—	0.0	0.2	0.2	0.0	—	0.0	0.5	0.0	12.9
1992	3.5	0.3	4.3	6.6	(s)	14.7	—	—	0.0	0.2	0.2	0.0	—	0.0	0.5	0.0	15.2
1993	3.8	0.3	6.3	6.4	0.0	16.8	—	—	0.0	0.2	0.2	0.0	—	0.0	0.5	0.0	17.3
1994	4.5	0.3	9.6	6.8	0.0	21.0	—	—	0.0	0.3	0.2	0.0	—	0.0	0.5	0.0	21.5
1995	4.8	0.3	10.0	7.0	0.0	22.1	—	—	0.0	0.4	0.2	0.0	—	0.0	0.6	0.0	22.7
1996	5.0	0.3	11.5	7.2	0.0	24.0	—	—	0.0	0.3	0.3	0.0	—	0.0	0.6	0.0	24.6
1997	4.9	0.3	11.6	7.6	(s)	24.4	—	—	0.0	0.3	0.4	0.0	—	0.0	0.7	0.0	25.1
1998	5.0	0.4	14.1	6.0	0.0	25.5	—	—	0.0	0.4	0.4	0.0	—	0.0	0.7	0.0	26.2
1999	5.2	0.2	11.8	8.4	0.0	25.7	—	—	0.0	0.4	0.4	0.0	—	0.0	0.7	0.0	26.5
2000	^R 5.0	0.4	15.1	6.1	0.3	^R 26.9	—	—	0.0	0.2	0.5	0.0	—	0.0	0.7	0.0	^R 27.7
2001	4.6	0.4	^R 18.0	^R 3.8	0.3	^R 27.1	—	—	(s)	0.1	0.4	(s)	—	0.3	0.8	(s)	^R 27.9
2002	^R 5.2	^R 0.8	^R 21.9	^R 7.9	^R 0.2	^R 36.1	—	—	^R 0.0	0.1	0.4	0.0	—	0.0	^R 0.6	^R 0.0	^R 36.6
2003 ^P	5.7	0.9	22.4	8.1	0.2	37.2	—	—	0.0	0.2	0.4	0.0	—	0.0	0.6	(s)	37.8

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.
² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.
³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
⁴ Petroleum and natural gas.
⁵ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
⁶ Wood, black liquor, and other wood waste.
⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.
⁸ Solar thermal and photovoltaic energy.
⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.
¹⁰ Electricity-only plants within the NAICS (North American Industry Classification System) 22 category whose primary business is to sell electricity to the public. Data also include a small number of electric utility combined-heat-and-power (CHP) plants.
¹¹ Combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity and heat to the public. Data do not include electric utility CHP plants—these are included

under "Electricity-Only Plants."
R=Revised. P=Preliminary. — = Not applicable. (s)=Less than 0.05 million kilowatts.
Notes: • Data are at end of year. • For plants that use multiple sources of energy, capacity is assigned to the predominant energy source. • See Table 8.11d for commercial and industrial CHP and electricity-only data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Generator Net Summer Capacity" in Glossary.
• Totals may not equal sum of components due to independent rounding.
Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.
Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-860, "Annual Electric Generator Report" and Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860A, "Annual Electric Generator Report—Utility" and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Table 8.11d Electric Net Summer Capacity: Commercial and Industrial Sectors, 1989-2003

(Subset of Table 8.11a; Million Kilowatts)

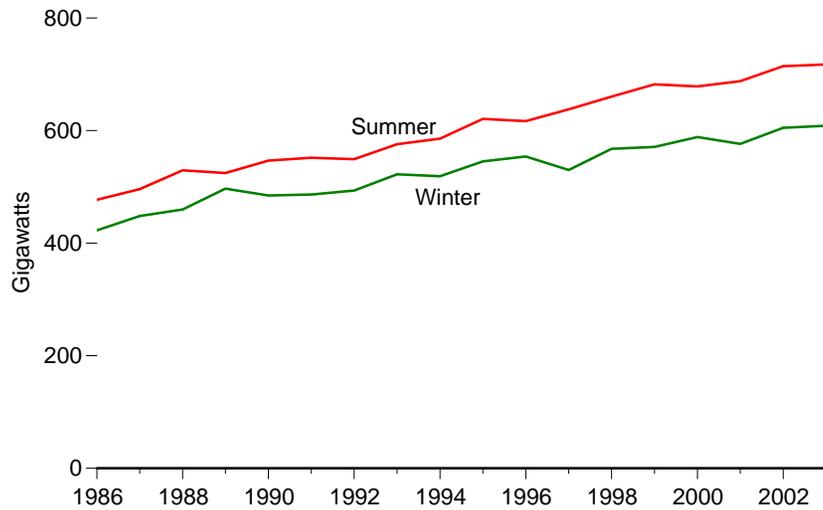
Year	Fossil Fuels						Nuclear Electric Power	Hydro electric Pumped Storage	Renewable Energy							Other ⁹	Total
	Coal ¹	Petroleum ²	Natural Gas ³	Dual Fired ⁴	Other Gases ⁵	Total			Conventional Hydroelectric Power	Wood ⁶	Waste ⁷	Geo-thermal	Solar ⁸	Wind	Total		
Commercial Sector ¹⁰																	
1989	0.3	0.1	0.1	0.6	—	1.0	—	0.0	(s)	(s)	0.2	—	—	—	0.2	—	1.2
1990	0.3	0.2	0.2	0.6	—	1.2	—	0.0	(s)	(s)	0.2	—	—	—	0.2	—	1.4
1991	0.2	0.1	0.2	0.6	—	1.1	—	0.0	(s)	(s)	0.2	—	—	—	0.3	—	1.3
1992	0.2	0.1	0.3	0.6	—	1.2	—	0.0	(s)	(s)	0.2	—	—	—	0.3	—	1.5
1993	0.3	0.1	0.3	0.6	—	1.3	—	0.0	(s)	(s)	0.3	—	—	—	0.3	—	1.6
1994	0.3	0.2	0.3	0.9	—	1.7	—	0.0	(s)	(s)	0.3	—	—	—	0.3	—	2.1
1995	0.3	0.2	0.3	1.0	—	1.8	—	0.0	(s)	(s)	0.3	—	—	—	0.3	—	2.1
1996	0.3	0.2	0.4	0.9	—	1.8	—	0.0	(s)	(s)	0.4	—	—	—	0.5	—	2.3
1997	0.3	0.2	0.4	0.9	—	1.9	—	0.0	(s)	(s)	0.4	—	—	—	0.5	—	2.3
1998	0.3	0.2	0.6	0.7	—	1.8	—	0.0	(s)	(s)	0.5	—	—	—	0.5	—	2.3
1999	0.3	0.3	0.5	0.8	—	1.8	—	0.0	(s)	(s)	0.5	—	—	—	0.5	—	2.3
2000	0.3	0.3	0.6	0.6	—	1.8	—	0.0	(s)	(s)	0.4	—	—	—	0.4	—	2.2
2001	0.3	0.3	1.4	0.6	—	2.5	—	(s)	(s)	(s)	0.3	—	—	—	0.4	—	2.9
2002	0.3	0.3	^R 0.5	^R 0.7	—	^R 1.8	—	(s)	(s)	(s)	^R 0.4	—	—	—	0.4	—	^R 2.2
2003 ^P	0.3	0.3	0.5	0.5	—	1.6	—	(s)	(s)	(s)	0.4	—	—	—	0.4	—	2.0
Industrial Sector ¹¹																	
1989	4.8	0.7	7.9	1.8	1.2	16.5	—	—	0.5	4.1	0.2	—	—	—	4.8	0.5	21.8
1990	4.8	0.9	8.1	2.2	1.3	17.3	—	—	0.6	4.3	0.2	—	—	—	5.1	0.5	22.9
1991	4.7	0.8	7.8	2.3	1.4	17.1	—	—	0.6	4.8	0.2	—	—	—	5.6	0.5	23.2
1992	4.8	0.8	8.4	2.2	1.4	17.6	—	—	0.6	4.8	0.3	—	—	—	5.6	0.5	23.8
1993	4.9	0.8	9.1	1.9	1.2	18.0	—	—	0.6	5.0	0.3	—	—	—	5.8	0.5	24.3
1994	5.0	0.9	9.3	1.9	1.4	18.5	—	—	1.1	5.0	0.3	—	—	—	6.3	0.5	25.4
1995	5.0	0.8	9.5	1.9	1.4	18.7	—	—	1.1	4.9	0.2	—	—	—	6.3	0.5	25.5
1996	5.0	0.8	9.6	1.9	1.6	19.0	—	—	1.1	5.1	0.2	—	—	—	6.4	0.5	25.9
1997	4.8	1.0	10.3	1.7	1.3	19.2	—	—	1.1	5.1	0.2	—	—	—	6.5	0.6	26.2
1998	4.6	1.0	10.8	1.3	1.5	19.1	—	—	1.1	5.0	0.2	—	—	—	6.3	0.6	26.0
1999	4.4	0.8	11.5	1.6	1.7	20.1	—	—	1.1	5.0	0.2	—	—	—	6.2	0.8	27.1
2000	4.6	0.8	12.5	1.3	2.0	21.2	—	—	1.1	4.4	0.2	—	—	—	5.7	0.5	27.3
2001	4.2	1.0	13.3	0.9	1.3	20.7	—	—	1.0	4.2	0.1	—	—	—	5.4	0.4	26.6
2002	^R 4.0	^R 0.6	^R 13.7	^R 1.1	^R 1.8	^R 21.2	—	—	1.0	^R 4.3	0.1	—	—	—	^R 5.5	^R 0.6	^R 27.3
2003 ^P	4.0	0.6	14.6	1.2	1.8	22.1	—	—	1.0	4.4	0.1	—	—	—	5.5	0.6	28.2

¹ Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and synthetic coal.
² Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, and waste oil.
³ Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
⁴ Petroleum and natural gas.
⁵ Blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels.
⁶ Wood, black liquor, and other wood waste.
⁷ Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.
⁸ Solar thermal and photovoltaic energy.
⁹ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, and miscellaneous technologies.
¹⁰ Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.
¹¹ Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

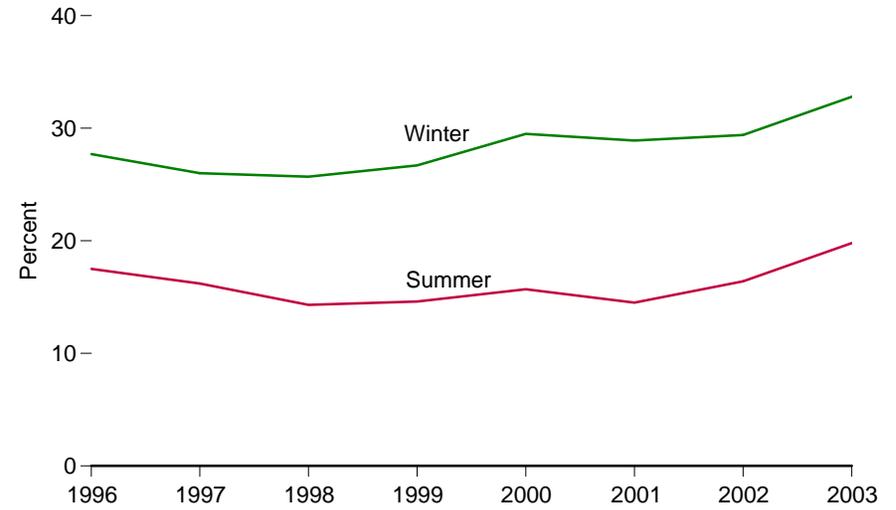
R=Revised. P=Preliminary. — = Not applicable. (s)=Less than 0.05 million kilowatts.
 Notes: • Data are at end of year. • For plants that use multiple sources of energy, capacity is assigned to the predominant energy source. • See Tables 8.11b and 8.11c for electric power sector electricity-only and CHP data. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • See "Generator Net Summer Capacity" in Glossary.
 • Totals may not equal sum of components due to independent rounding.
 Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.
 Sources: • 1989-1997—Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • 1998-2000—EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • 2001 and 2002—EIA, Form EIA-860, "Annual Electric Generator Report" and Form EIA-906, "Power Plant Report." • 2003—EIA, Form EIA-906, "Power Plant Report."

Figure 8.12 Electric Noncoincident Peak Load and Capacity Margin

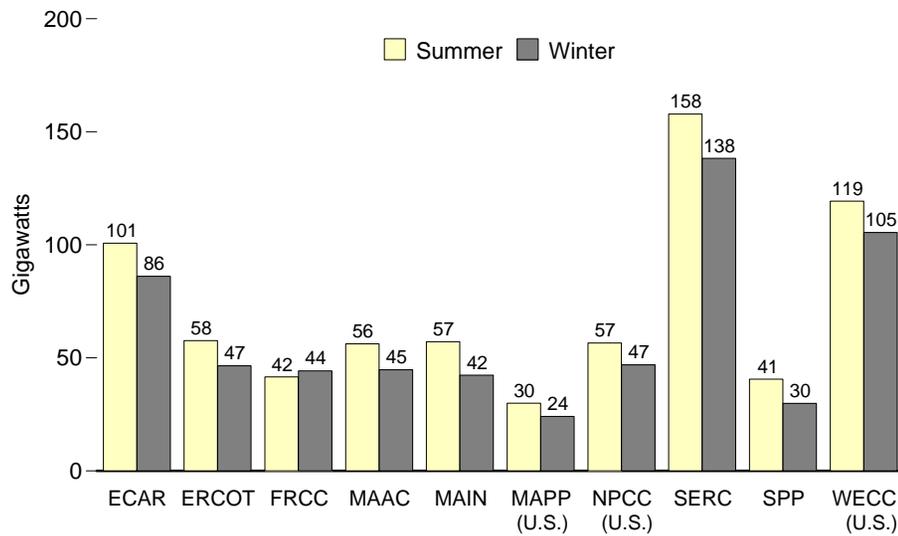
U.S. Peak Load, 1986-2003



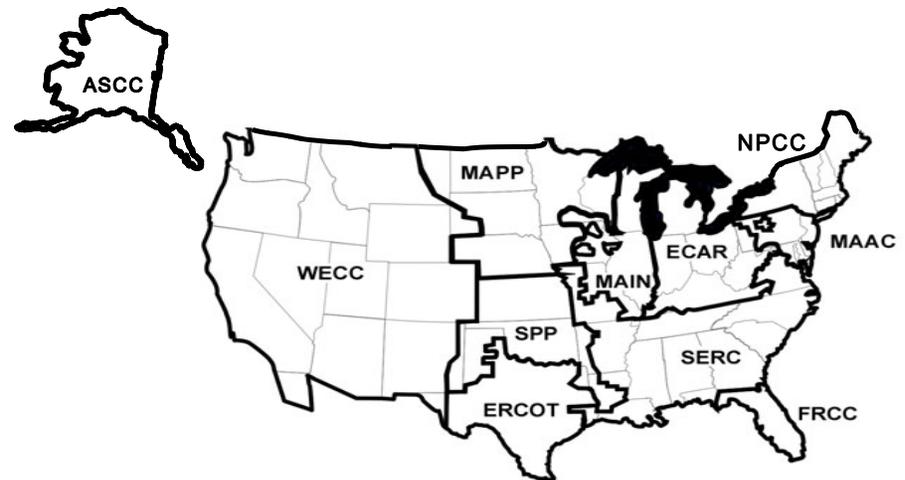
Capacity Margin, 1996-2003



U.S. Peak Load by NERC Region, 2003



North American Electric Reliability Council Map for the United States



Notes: • Noncoincident peak load is the sum of two or more peak loads on individual systems that do not occur at the same time interval. See Glossary for information on North American Electric Reliability Council (NERC).

• Because vertical scales differ, graphs should not be compared.
Source: Table 8.12.

Table 8.12 Electric Noncoincident Peak Load and Capacity Margin, 1986-2003

(Megawatts, Except as Noted)

Year	Noncoincident Peak Load														Capacity Margin ³ (percent)
	North American Electric Reliability Council Regions ¹										Contiguous United States	ASCC (Alaska)	Hawaii	U.S. Total	
	ECAR	ERCOT	FRCC	MAAC	MAIN	MAPP (U.S.)	NPCC (U.S.)	SERC	SPP	WECC ² (U.S.)					
Summer															
1986	69,606	39,335	—	37,564	35,943	21,029	39,026	105,570	47,123	81,787	476,983	(⁴)	(⁵)	476,983	NA
1987	72,561	39,339	—	40,526	37,446	23,162	42,651	109,798	47,723	82,967	496,173	(⁴)	(⁵)	496,173	NA
1988	79,149	40,843	—	43,110	41,139	24,899	45,245	115,168	49,356	90,551	529,460	(⁴)	(⁵)	529,460	NA
1989	75,442	40,402	—	41,614	39,460	24,336	45,031	117,729	49,439	90,657	524,110	456	(⁵)	524,566	NA
1990	79,258	42,737	—	42,613	40,740	24,994	44,116	121,943	52,541	97,389	546,331	463	(⁵)	546,794	21.6
1991	81,224	41,870	—	45,937	41,598	25,498	46,594	124,716	51,885	92,096	551,418	471	(⁵)	551,889	20.9
1992	78,550	42,619	—	43,658	38,819	22,638	43,658	128,236	51,324	99,205	548,707	504	(⁵)	549,211	20.5
1993	80,930	44,255	—	46,494	41,956	24,396	46,706	135,704	57,106	97,809	575,356	511	(⁵)	575,867	19.9
1994	87,165	44,162	—	46,019	42,562	27,000	47,581	132,584	56,035	102,212	585,320	524	(⁵)	585,844	18.7
1995	92,619	46,618	—	48,577	45,782	29,192	47,705	146,569	59,595	103,592	620,249	622	(⁵)	620,871	18.9
1996	90,798	47,480	—	44,302	46,402	28,253	45,094	145,650	60,072	108,739	616,790	(⁵)	(⁵)	616,790	17.5
1997	93,492	50,541	35,375	49,464	45,887	29,787	49,269	137,382	36,479	110,001	637,677	(⁵)	(⁵)	637,677	16.2
1998	93,784	54,666	38,730	48,445	47,509	30,722	49,566	143,226	37,724	115,921	660,293	(⁵)	(⁵)	660,293	14.3
1999	99,239	55,529	37,493	51,645	51,535	31,903	52,855	149,685	38,609	113,629	682,122	(⁵)	(⁵)	682,122	14.6
2000	92,033	57,606	37,194	49,477	52,552	28,605	50,057	156,088	40,199	114,602	678,413	(⁵)	(⁵)	678,413	15.7
2001	100,235	55,201	39,062	54,015	56,344	28,321	55,949	149,293	40,273	109,119	687,812	(⁵)	(⁵)	687,812	14.5
2002	^R 102,996	^R 56,248	^R 40,696	^R 55,569	^R 56,396	^R 29,119	^R 56,012	^R 158,767	^R 39,688	^R 119,074	^R 714,565	(⁵)	(⁵)	^R 714,565	^R 16.4
2003 ^F	100,714	57,639	41,618	56,257	57,169	29,957	56,550	157,864	40,564	119,320	717,652	(⁵)	(⁵)	717,652	19.8
Winter															
1986	64,561	28,730	—	32,807	28,036	18,850	37,976	101,849	33,877	76,171	422,857	(⁴)	(⁵)	422,857	NA
1987	68,118	31,399	—	35,775	30,606	19,335	41,902	105,476	34,472	81,182	448,265	(⁴)	(⁵)	448,265	NA
1988	67,771	34,621	—	36,363	30,631	20,162	42,951	108,649	35,649	82,937	459,734	(⁴)	(⁵)	459,734	NA
1989	73,080	38,388	—	38,161	33,770	21,360	42,588	121,995	42,268	84,768	496,378	626	(⁵)	497,004	NA
1990	67,097	35,815	—	36,551	32,461	21,113	40,545	117,448	38,949	94,252	484,231	613	(⁵)	484,844	NA
1991	71,181	35,448	—	37,983	33,420	21,432	41,866	119,575	38,759	86,097	485,761	622	(⁵)	486,383	NA
1992	72,885	35,055	—	37,915	31,289	21,866	41,125	121,250	39,912	91,686	492,983	635	(⁵)	493,618	NA
1993	81,846	35,407	—	41,406	34,966	21,955	42,063	133,635	41,644	88,811	521,733	632	(⁵)	522,365	NA
1994	75,638	36,180	—	40,653	33,999	23,033	42,547	132,661	42,505	91,037	518,253	641	(⁵)	518,894	NA
1995	83,465	36,965	—	40,790	35,734	23,429	42,755	142,032	44,624	94,890	544,684	676	(⁵)	545,360	NA
1996	84,534	38,868	—	40,468	37,162	24,251	41,208	143,060	49,095	95,435	554,081	(⁵)	(⁵)	554,081	27.7
1997	75,670	37,966	33,076	37,217	34,973	25,390	41,338	122,649	27,437	94,158	529,874	(⁵)	(⁵)	529,874	26.0
1998	84,401	41,876	39,975	36,532	37,410	26,080	44,199	127,416	27,847	101,822	567,558	(⁵)	(⁵)	567,558	25.7
1999	86,239	39,164	40,178	40,220	39,081	25,200	45,227	128,563	27,963	99,080	570,915	(⁵)	(⁵)	570,915	26.7
2000	84,546	44,641	38,606	43,256	41,943	24,536	43,852	139,146	30,576	97,324	588,426	(⁵)	(⁵)	588,426	29.5
2001	85,485	44,015	40,922	39,458	40,529	21,815	42,670	135,182	29,614	96,622	576,312	(⁵)	(⁵)	576,312	28.9
2002	^R 87,300	^R 45,414	^R 45,635	^R 46,551	^R 42,412	^R 23,645	^R 46,009	^R 141,882	^R 30,187	^R 95,951	^R 604,986	(⁵)	(⁵)	^R 604,986	^R 29.4
2003 ^F	86,120	46,538	44,266	44,748	42,332	24,148	46,903	138,291	29,891	105,492	608,729	(⁵)	(⁵)	608,729	32.8

¹ See Glossary for information on the North American Electric Reliability Council (NERC) Regions. Data include the U.S. portion of NERC only. See Figure 8.12 for an illustration of NERC regions.

² WECC was renamed from WSCC in 2002.

³ The percent by which planned generating capacity resources are expected to be greater (or less) than estimated net internal demand at the time of expected peak summer (or winter) demand. Net internal demand does not include estimated demand for direct control load management and customers with interruptible service agreements. Data are for the contiguous United States only.

⁴ Data submission for ASCC (Alaska) began in 1989.

⁵ Data were not filed.

R=Revised. F=Forecast. NA=Not available. — = Not applicable.

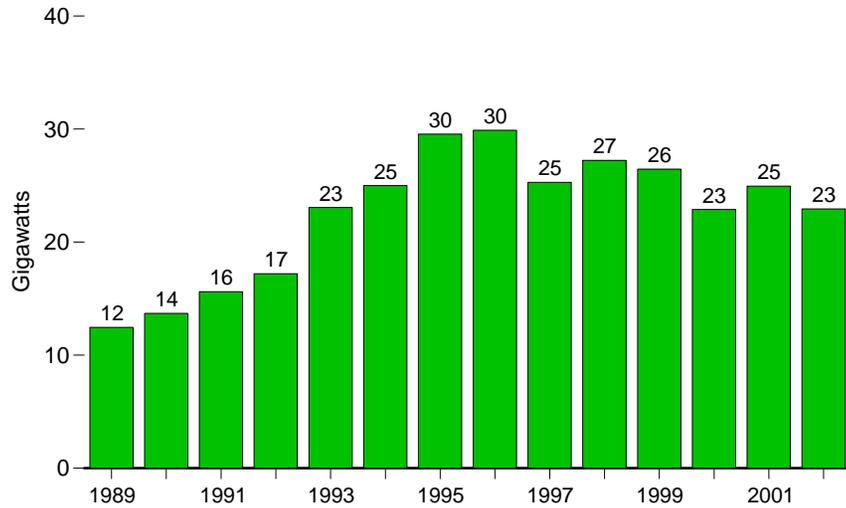
Note: Noncoincident peak load is the sum of two or more peak loads on individual systems that do not occur at the same time interval.

Web Page: For related information, see <http://www.eia.doe.gov/fuelelectric.html>.

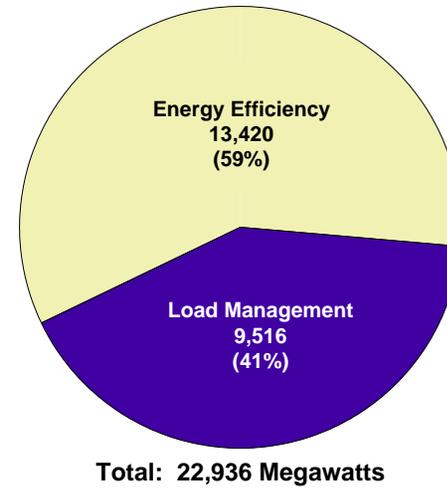
Sources: Energy Information Administration (EIA), *Electric Power Annual 2002* (December 2003), Tables 3.1-3.4; and EIA, Form EIA-411, "Coordinated Bulk Power Supply Program Report" and predecessor forms.

Figure 8.13 Electricity Utility Demand-Side Management Programs

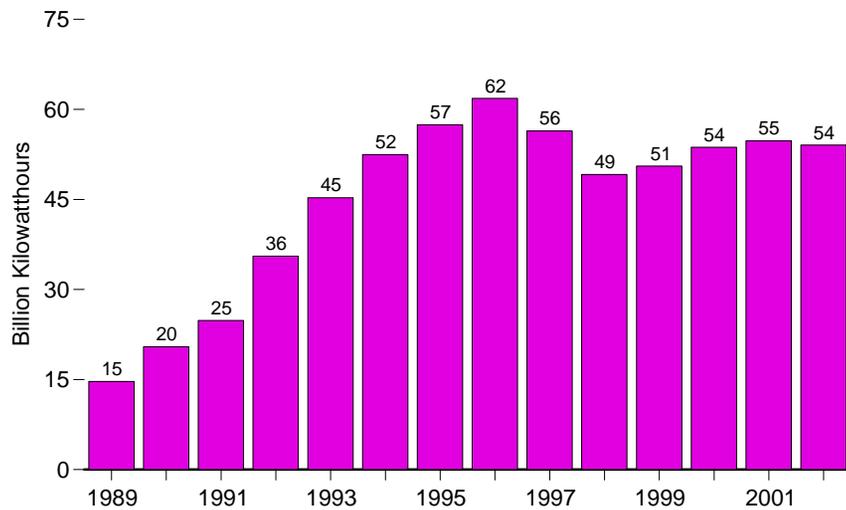
Actual Peakload Reductions Total, 1989-2002



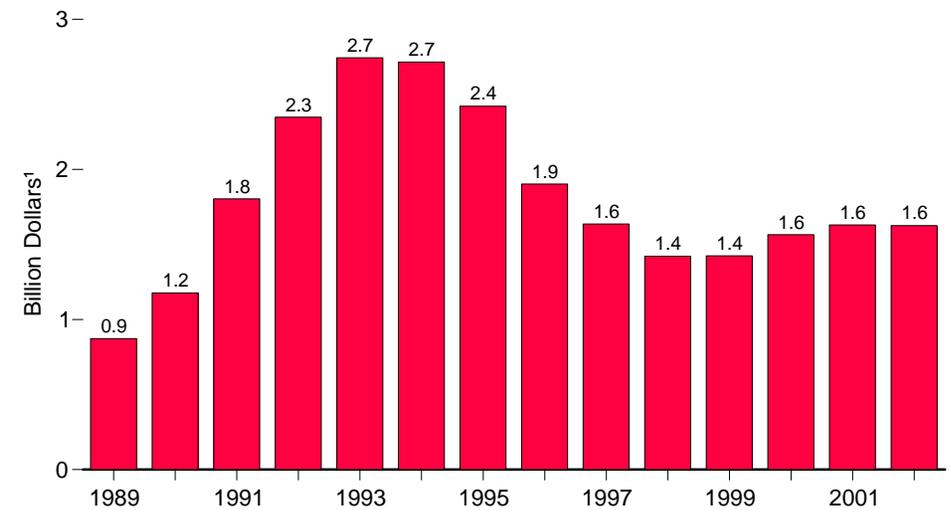
Actual Peakload Reductions, 2002



Energy Savings, 1989-2002



Costs, 1989-2002



¹ Nominal dollars.

Source: Table 8.13.

Table 8.13 Electric Utility Demand-Side Management Programs, 1989-2002

Year	Actual Peakload Reductions ¹ (megawatts)			Energy Savings (million kilowatthours)	Costs (thousand dollars ⁴)
	Energy Efficiency ²	Load Management ³	Total		
1989	NA	NA	12,463	14,672	872,935
1990	NA	NA	13,704	20,458	1,177,457
1991	NA	NA	15,619	24,848	1,803,773
1992	7,890	9,314	17,204	35,563	2,348,094
1993	10,368	12,701	23,069	45,294	2,743,533
1994	11,662	13,340	25,001	52,483	2,715,657
1995	13,212	16,347	29,561	57,421	^R 2,421,284
1996	14,243	15,650	29,893	61,842	1,902,197
1997	13,326	11,958	25,284	56,406	1,636,020
1998	13,591	13,640	27,231	49,167	1,420,920
1999	13,452	13,003	26,455	50,563	1,423,644
2000	12,873	10,027	22,901	53,701	1,564,901
2001	13,027	11,928	24,955	54,762	^R 1,630,286
2002	13,420	9,516	22,936	54,075	1,625,537

¹ The actual reduction in peak load reflects the change in demand for electricity that results from a utility demand-side management (DSM) program that is in effect at the time that the utility experiences its actual peak load as opposed to the potential installed peakload reduction capacity. Differences between actual and potential peak reduction result from changes in weather, economic activity, and other variable conditions.

² "Energy Efficiency" refers to programs that are aimed at reducing the energy used by specific end-use devices and systems, typically without affecting the services provided. These programs reduce overall electricity consumption, often without explicit consideration for the timing of program-induced savings. Such savings are generally achieved by substituting technically more advanced equipment to produce the same level of end-use services (e.g., lighting, heating, motor drive) with less electricity. Examples include high-efficiency appliances, efficient lighting programs, high-efficiency heating, ventilating, and air conditioning systems or control modifications, efficient building design, advanced electric motor drives, and heat recovery systems.

³ "Load Management" includes programs such as "Direct Load Control," "Interruptible Load Control," and "Other Types" of DSM programs. "Direct Load Control" refers to program activities that can interrupt consumer load at the time of annual peak load by direct control of the utility system operator by interrupting power supply to individual appliances or equipment on consumer premises. This type of control usually involves residential consumers. "Interruptible Load Control" refers to program activities that, in accordance with contractual arrangements, can interrupt consumer load at times of seasonal peak load by direct control

of the utility system operator or by action of the consumer at the direct request of the system operator. It usually involves commercial and industrial consumers. In some instances, the load reduction may be affected by direct action of the system operator (remote tripping) after notice to the consumer in accordance with contractual provisions. "Other Types" are programs that limit or shift peak loads from on-peak to off-peak time periods, such as space heating and water heating storage systems.

⁴ Nominal dollars.

R=Revised. NA=Not available.

Note: This table reports on the results of DSM programs operated by electric utilities. The decrease since 1998 in peakload reductions from DSM programs can be attributed in part to utilities cutting back or terminating these programs due to industry deregulation. Some State governments have created new programs to promote DSM. Examples include the "Energy Smart Loan Fund" administered by the New York Energy Research and Development Authority and the "Efficiency Vermont" program of the Vermont Public Service Board. Data on energy savings attributable to these non-utility programs are not collected by the Energy Information Administration.

Web Page: For related information, see <http://www.eia.doe.gov/fueelectric.html>.

Sources: • 1989 and 1990—Energy Information Administration (EIA), Form EIA-861, "Annual Electric Utility Report." • 1991 forward—EIA, *Electric Power Annual 2002* (December 2003), Tables 9.1, 9.6, and 9.7.

Electricity

Note 1. Coverage of Electricity Statistics. Through 1984, data for electric utilities also include institutions (such as universities) and military facilities that generated electricity primarily for their own use; beginning in 1985, data for electric utilities exclude institutions and military facilities. Data for independent power producers, commercial plants, and industrial plants include plants with a generator nameplate capacity of 1 megawatt or greater; they exclude plants with a generator nameplate capacity less than 1 megawatt. Also excluded from the electricity statistics in Section 8 are data for residential and commercial self-generation from solar energy, except for the small amount sold to the grid and included in data for the electric power sector.

Note 2. Classification of Power Plants Into Energy-Use Sectors. The Energy Information Administration (EIA) classifies power plants (both electricity-only and combined-heat-and-power plants) into energy-use sectors based on the North American Industry Classification System (NAICS), which replaced the Standard Industrial Classification (SIC) system in 1997. Plants with a NAICS code of 22 are assigned to the Electric Power Sector. Those with NAICS codes beginning with 11 (agriculture, forestry, fishing, and hunting); 21 (mining, including oil and gas

extraction); 23 (construction); 31-33 (manufacturing); 2212 (natural gas distribution); and 22131 (water supply and irrigation systems) are assigned to the Industrial Sector. Those with all other codes are assigned to the Commercial Sector. Form EIA-860, "Annual Electric Generator Report," asks respondents to indicate the primary purpose of the facility by assigning a NAICS code from the universal list at: www.census.gov/epcd/naics02/naicod02.htm.

Note 3. Electricity Imports and Exports. Through the *Annual Energy Review (AER)* 2001, EIA estimated the proportions of traded electricity from fossil fuels and hydropower (and applied the fossil-fuel steam-electric-plant heat rate to convert from kilowatthours to Btu) and from geothermal (and applied the heat rate for geothermal energy plants). Beginning with the *AER* 2002, because of inadequate data, EIA is applying an overall rate of 3,412 Btu per kilowatthour to all traded electricity. In addition, electricity net imports derived from hydroelectric power and geothermal energy are no longer included in renewable energy consumption data. They continue to be included in total U.S. energy consumption as components of electricity net imports, with energy sources unspecified (see Tables 1.3 and 2.1f). This change between *AER* 2001 and *AER* 2002 resulted in a 0.0-to-0.5 quadrillion Btu drop in total renewable energy consumption from 1949 forward.