

ELECTRIC LIGHT AND POWER

No. 331.—CENTRAL ELECTRIC STATIONS: EQUIPMENT, EMPLOYEES, OUTPUT, AND SALES

[NOTE.—A central electric station is one selling current to public or private consumers, or a municipal plant supplying current for streets, public buildings, etc. Isolated or private plants operated solely for the benefit of the owner in connection with factories, mines, stores, hotels, institutions, etc., which in the aggregate produce great quantities of current, are not included. The business of electric street railways is shown only so far as that portion of their business relating to the sale of current can be segregated. Electric plants operated by the Federal or State Governments are excluded even when they sell current to private consumers. One central electric station often sells current to another, so that there is considerable duplication in total sales. Net sales are considerably less than current generated because of wire losses, self consumption, etc. Part of the sales reported as made to other public-service corporations, however, go to street railways, and the exact amount of duplication in the central station sales is not known. The separate data given for hydroelectric stations relate only to those with a capacity of 1,000 horsepower or more.]

	All central electric stations				Commer- cial stations, 1922	Municipal stations, 1922	Larger hydro- electric stations, 1922 ¹
	1907	1912	1917	1922			
Number of stations ²	4,714	5,221	6,542	6,355	3,774	2,581	267
Prime movers, horsepower, total.....	4,098,188	7,530,044	12,936,755	20,296,235	19,016,107	1,280,128	8,444,288
Steam engines.....	1,875,863	1,895,382	1,701,677	1,816,665	1,496,055	320,610	163,439
Steam turbines.....	817,410	3,054,396	6,747,399	12,354,557	11,815,231	539,326	2,646,294
Water wheels and turbines.....	1,349,087	2,409,231	4,277,273	5,822,018	5,515,298	306,810	5,628,065
Internal-combustion engines.....	55,828	111,035	210,406	302,995	189,613	113,382	6,490
Dynamos:							
Number.....	12,173	12,610	13,428	12,701	9,082	3,619	2,645
Kilowatt capacity.....	2,709,225	5,165,439	8,994,407	14,313,438	13,407,041	906,397	5,915,435
Output, 1,000 kilowatt hours.....		14,182,613	31,044,049	50,274,312	47,833,036	2,441,176	22,070,101
Generated.....	5,862,277	11,569,110	25,438,303	40,291,536	38,413,240	1,878,296	18,700,047
Purchased.....	(³)	2,613,503	5,605,746	9,982,676	9,419,796	562,880	3,370,054
Sold, total.....	(³)	(³)	25,751,965	41,994,785	39,912,345	2,052,440	18,758,289
For light.....	(³)	(³)	5,112,517	9,777,114	8,483,425	1,293,689	2,573,194
Per capita ⁴			50.0	92.9	81.1	11.8	27.0
For power.....	(³)	(³)	13,174,827	18,613,387	17,918,135	695,252	9,565,718
Per capita ⁴			128.9	170.4	164.0	6.4	87.6
To other public service corporations.....	(³)	(³)	7,464,621	13,574,284	13,510,785	63,499	6,619,377
Stationary motors served:							
Number.....	167,184	435,473	555,924	(³)	(³)	(³)	(³)
Horsepower capacity.....	1,649,026	4,130,619	9,216,330	(³)	(³)	(³)	(³)
Number of customers.....	1,946,979	3,837,518	7,178,703	12,709,868	11,065,124	1,644,744	3,305,684
Salaried employees.....number.....	12,990	26,093	35,406	55,112	50,667	4,445	⁵ 33,602
Salaries.....dollars.....	11,735,787	24,307,304	36,787,701	86,951,301	81,338,448	5,612,853	(³)
Wage earners.....number.....	⁶ 34,642	⁷ 53,242	⁸ 70,135	⁹ 95,650	85,438	10,212	(³)
Wages.....dollars.....	23,686,537	36,854,637	58,454,157	125,481,354	112,809,673	12,671,681	(³)

Source: Bureau of the Census, Department of Commerce.

¹ Data related to stations of 1,000 or more horsepower capacity.

² The term "station" as here used may represent a single electric station or a number of stations operated under the same ownership.

³ Figures not available.

⁴ Based on estimated total population of the United States.

⁵ Wage earners included.

⁶ Average number for the year.

⁷ Number Sept. 16, 1912, or nearest representative day.

⁸ Number Sept. 29, 1917, or nearest representative day.

⁹ Number June 30, 1922, or nearest representative day.

Section 19

Energy and Utilities

This section presents statistics on fuel resources, energy production and consumption, electric energy, hydroelectric power, nuclear power, solar energy, wood energy, and the electric and gas utility industries. The principal sources are the U.S. Department of Energy's Energy Information Administration (EIA), the Edison Electric Institute, Washington, DC, and the American Gas Association, Arlington, VA. The Department of Energy was created in October 1977 and assumed and centralized the responsibilities of all or part of several agencies including the Federal Power Commission (FPC), the U.S. Bureau of Mines, the Federal Energy Administration, and the U.S. Energy Research and Development Administration. For additional data on transportation, see Section 23; on fuels, see Section 18; and on energy-related housing characteristics, see Section 20.

The EIA, in its *Annual Energy Review*, provides statistics and trend data on energy supply, demand, and prices. Information is included on petroleum and natural gas, coal, electricity, hydroelectric power, nuclear power, solar, wood, and geothermal energy. Among its annual reports are *Annual Energy Review*, *Electric Power Annual*, *Natural Gas Annual*, *Petroleum Supply Annual*, *State Energy Data Report*, *State Energy Price and Expenditure Report*, *Performance Profiles of Major Energy Producers*, *Annual Energy Outlook*, and *International Energy Annual*. These various publications contain state, national, and international data on production of electricity, net summer capability of generating plants, fuels used in energy production, energy sales and consumption, and hydroelectric power. The EIA also issues the *Monthly Energy Review*, which presents current supply, disposition, and price data and monthly publications on petroleum, coal, natural

gas, and electric power. Data on residential energy consumption, expenditures, and conservation activities are available from EIA's Residential Energy Consumption Survey and are published every 4 years.

The Edison Electric Institute's monthly bulletin and annual *Statistical Year Book of the Electric Utility Industry for the Year* contain data on the distribution of electric energy by public utilities; information on the electric power supply, expansion of electric generating facilities, and the manufacture of heavy electric power equipment is presented in the annual *Year-End Summary of the Electric Power Situation in the United States*. The American Gas Association, in its monthly and quarterly bulletins and its yearbook, *Gas Facts*, presents data on gas utilities and financial and operating statistics.

Btu conversion factors—Various energy sources are converted from original units to the thermal equivalent using British thermal units (Btu). A Btu is the amount of energy required to raise the temperature of 1 pound of water 1 degree Fahrenheit (F) at or near 39.2 degrees F. Factors are calculated annually from the latest final annual data available; some are revised as a result. The following list provides conversion factors used in 2002 for production and consumption, in that order, for various fuels: Petroleum, 5,800 and 5,324 mil. Btu per barrel; total coal, 20,620 and 20,814 mil. Btu per short ton; and natural gas (dry), 1,027 Btu per cubic foot for both. The factors for the production of nuclear power and geothermal power were 10,442 and 21,017 Btu per kilowatt-hour, respectively. The fossil fuel steam-electric power plant generation factor of 10,119 Btu per kilowatt-hour was used for hydroelectric power generation and for wood and waste, wind, photovoltaic, and solar thermal energy consumed at electric utilities.

In the past few years, EIA has restructured the industry categories it once used to gather and report electricity statistics. The electric power industry, previously divided into electric utilities and non-utilities, now consists of the Electric Power Sector, the Commercial Sector, and the Industrial Sector (see Table 904).

The Electric Power Sector is composed of electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat to the public.

Electricity-only plants are composed of traditional electric utilities, and nontraditional participants, including energy service providers, power marketers, independent power producers (IPPs), and the portion of combined-heat-and-power plants (CHPs) that produce only electricity.

A utility is defined as a corporation, person, agency, authority, or other legal entity or instrumentality aligned with distribution facilities for delivery of electric energy for use primarily by the public. Electric utilities include investor-owned electric utilities, municipal and state utilities, federal electric utilities, and rural electric cooperatives. In total, there are more than 3,100 electric utilities in the United States.

An independent power producer is an entity defined as a corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities whose primary business is to produce electricity for use by the public. They are not generally aligned with distribution facilities and are not considered electric utilities.

Combined-heat-and-power producers are plants designed to produce both heat and electricity from a single heat source. These types of electricity producers can be independent power producers or industrial or commercial establishments. As some independent power producers are combined-heat-and-power producers, their information is included in the data for the combined-heat-and-power sector. There are approximately 2,800 unregulated independent power producers and combined-heat-and-power plants in the United States.

The Commercial Sector consists of commercial CHP and commercial electricity-only plants. Industrial CHP and industrial electricity-only plants make up the Industrial Sector. For more information, please refer to the *Electric Power Annual 2003* Web site located at http://www.eia.doe.gov/cneaf/electricity/epa/epa_sum.html.

Table 886. Utilities—Establishments, Revenue, Payroll, and Employees by Kind of Business (NAICS Basis): 2002

[478,268 represents \$478,268,000,000. See headnote, Table 737 and Appendix III]

Kind of business	NAICS code ¹	Establishments (number)	Revenue		Annual payroll		Paid employee for pay period including March 12 (number)
			Total (mil. dol.)	Per paid employee (dol.)	Total (mil. dol.)	Per paid employee (dol.)	
Utilities	22	18,594	478,268	647,524	45,111	61,076	738,611
Electric power generation, transmission, & distribution	2211	9,676	337,033	625,827	35,921	66,701	538,540
Electric power generation	22111	2,138	78,163	641,913	9,195	75,513	121,766
Hydroelectric power generation	221111	416	3,260	425,084	483	62,952	7,668
Fossil fuel electric power generation	221112	1,233	53,329	792,480	4,945	73,484	67,294
Nuclear electric power generation	221113	78	11,909	375,696	2,507	79,094	31,698
Other electric power generation	221119	411	9,666	639,857	1,260	83,415	15,106
Electric power transmission, control & distribution	22112	7,538	258,870	621,128	26,726	64,126	416,774
Electric bulk power transmission & control	221121	158	12,738	847,369	1,173	78,021	15,032
Electric power distribution	221122	7,380	246,132	612,662	25,553	63,606	401,742
Natural gas distribution	2212	2,431	71,827	771,772	5,973	64,179	93,068
Water, sewage, & other systems	2213	5,780	7,594	166,333	1,600	35,040	45,654
Water supply & irrigation systems	22131	4,830	5,860	162,575	1,252	34,731	36,046
Sewage treatment facilities	22132	866	1,051	137,443	241	31,472	7,647
Steam & air-conditioning supply	22133	84	683	348,056	107	54,628	1,961

¹ North American Industry Classification System, 2002; see text, Section 15.

Source: U.S. Census Bureau, *2002 Economic Census*, Series EC02-221-US, issued December 2004. See also <<http://www.census.gov/econ/census02/>>.

Table 887. Private Utilities—Employees, Annual Payroll, and Establishments by Industry: 2002

[41,845 represents 41,845,000,000. Excludes government employees, railroad employees, self-employed persons, etc. See "General Explanation" in source for definitions and statement on reliability of data. An establishment is a single physical location where business is conducted or where services or industrial operations are performed. See Appendix III]

Year and industry	NAICS code ¹	Number of employ-ees ²	Annual payroll (mil. dol.)	Average payroll per em-ployee (dol.)	Establishment by employment size-class				
					Total	Under 20 em- ployees	20 to 99 em- ployees	100 to 499 em- ployees	500 and over employ-ees
Utilities, total	22	648,254	41,845	64,550	18,432	13,216	3,869	1,166	181
Electric power generation, transmission and distribution	2211	515,769	34,828	67,527	9,493	5,449	2,941	938	165
Electric power generation	22111	135,521	9,766	72,060	2,349	1,394	654	251	60
Hydroelectric power generation	221111	7,597	522	68,776	428	339	71	18	-
Fossil fuel electric power generation	221112	78,790	5,558	70,547	1,427	744	466	207	10
Nuclear electric power generation	221113	34,904	2,769	79,339	80	21	12	14	33
Other electric power generation.	221119	14,230	916	64,340	414	290	105	12	7
Electric power transmission, control and distribution	22112	380,248	25,063	65,912	7,144	4,055	2,287	687	115
Electric bulk power transmission and control	221121	18,590	1,365	73,441	217	131	54	21	11
Electric power distribution.	221122	361,658	23,697	65,525	6,927	3,924	2,233	666	104
Natural gas distribution	2212	86,890	5,342	61,482	2,897	2,100	600	182	15
Water, sewage & other systems	2213	45,595	1,674	36,718	6,042	5,667	328	46	1
Water supply & irrigation systems	22131	37,041	1,357	36,625	5,114	4,829	246	38	1
Sewage treatment facilities	22132	7,022	233	33,240	831	769	55	7	-
Steam & air-conditioning supply	22133	1,532	84	54,906	97	69	27	1	-

- Represents zero. ¹ North American Industry Classification System, 2002. ² Covers full- and part-time employees who are on the payroll in the pay period including March 12.

Source: U.S. Census Bureau, *County Business Patterns 2002*. See also <<http://censtats.census.gov/cgi-bin/cbpnaic/cbpdet.pl>> (accessed March 2005).

Table 888. Energy Supply and Disposition by Type of Fuel: 1960 to 2003

[In quadrillion British thermal units (Btu) (42.80 represents 42,800,000,000,000 Btu). For Btu conversion factors, see source and text, this section]

Year	Production									Net imports ⁶ _{total}	Consumption					
	Total ¹	Crude oil ²	Natural gas	Coal	Nuclear power ³	Renewable energy ⁴					Total ¹	Petroleum ⁷	Natural gas ⁸	Coal	Nuclear power	Renewable energy ⁴ _{total}
						Total ¹	Hydro-electric power	Biofuel ⁵	Solar energy							
1960	42.80	14.93	12.66	10.82	(Z)	2.93	1.61	1.32	(NA)	2.71	45.09	19.92	12.39	9.84	(Z)	2.93
1970	63.50	20.40	21.67	14.61	0.24	4.08	2.63	1.43	(NA)	5.71	67.84	29.52	21.79	12.26	0.24	4.08
1973	63.58	19.49	22.19	13.99	0.91	4.43	2.86	1.53	(NA)	12.58	75.71	34.84	22.51	12.97	0.91	4.43
1974	62.37	18.57	21.21	14.07	1.27	4.77	3.18	1.54	(NA)	12.10	73.99	33.45	21.73	12.66	1.27	4.77
1975	61.36	17.73	19.64	14.99	1.90	4.72	3.15	1.50	(NA)	11.71	72.00	32.73	19.95	12.66	1.90	4.72
1976	61.60	17.26	19.48	15.65	2.11	4.77	2.98	1.71	(NA)	14.59	76.01	35.17	20.35	13.58	2.11	4.77
1977	62.05	17.45	19.57	15.75	2.70	4.25	2.33	1.84	(NA)	17.90	78.00	37.12	19.93	13.92	2.70	4.25
1978	63.14	18.43	19.49	14.91	3.02	5.04	2.94	2.04	(NA)	17.19	79.99	37.97	20.00	13.77	3.02	5.04
1979	65.95	18.10	20.08	17.54	2.78	5.17	2.93	2.15	(NA)	16.60	80.90	37.12	20.67	15.04	2.78	5.17
1980	67.24	18.25	19.91	18.60	2.74	5.49	2.90	2.48	(NA)	12.10	78.29	34.20	20.39	15.42	2.74	5.49
1981	67.01	18.15	19.70	18.38	3.01	5.47	2.76	2.59	(NA)	9.41	76.34	31.93	19.93	15.91	3.01	5.47
1982	66.57	18.31	18.32	18.64	3.13	5.99	3.27	2.62	(NA)	7.25	73.25	30.23	18.51	15.32	3.13	5.99
1983	64.11	18.39	16.59	17.25	3.20	6.49	3.53	2.83	(NA)	8.06	73.10	30.05	17.36	15.89	3.20	6.49
1984	68.83	18.85	18.01	19.72	3.55	6.43	3.39	2.88	(Z)	8.68	76.74	31.05	18.51	17.07	3.55	6.43
1985	67.65	18.99	16.98	19.33	4.08	6.03	2.97	2.86	(Z)	7.58	76.47	30.92	17.83	17.48	4.08	6.03
1986	67.09	18.38	16.54	19.51	4.38	6.13	3.07	2.84	(Z)	10.13	76.78	32.20	16.71	17.26	4.38	6.13
1987	67.61	17.67	17.14	20.14	4.75	5.69	2.63	2.82	(Z)	11.59	79.23	32.87	17.74	18.01	4.75	5.69
1988	68.95	17.28	17.60	20.74	5.59	5.49	2.33	2.94	(Z)	12.93	82.84	34.22	18.55	18.85	5.59	5.49
1989 ⁹	69.36	16.12	17.85	21.35	5.60	6.29	2.84	3.06	0.06	14.11	84.96	34.21	19.71	19.07	5.60	6.29
1990	70.73	15.57	18.33	22.46	6.10	6.13	3.05	2.66	0.06	14.06	84.67	33.55	19.73	19.17	6.10	6.13
1991	70.36	15.70	18.23	21.59	6.42	6.16	3.02	2.70	0.06	13.19	84.60	32.85	20.15	18.99	6.42	6.16
1992	69.93	15.22	18.38	21.63	6.48	5.91	2.62	2.85	0.06	14.44	85.95	33.53	20.84	19.12	6.48	5.91
1993	68.26	14.49	18.58	20.25	6.41	6.16	2.89	2.80	0.07	17.01	87.58	33.84	21.35	19.84	6.41	6.16
1994	70.68	14.10	19.35	22.11	6.69	6.06	2.68	2.94	0.07	18.33	89.25	34.67	21.84	19.91	6.69	6.06
1995	71.16	13.89	19.08	22.03	7.08	6.67	3.21	3.07	0.07	17.75	91.22	34.55	22.78	20.09	7.08	6.67
1996	72.47	13.72	19.34	22.68	7.09	7.14	3.59	3.13	0.07	19.07	94.22	35.76	23.20	21.00	7.09	7.14
1997	72.39	13.66	19.39	23.21	6.60	7.08	3.64	3.01	0.07	20.70	94.73	36.27	23.33	21.45	6.60	7.08
1998	72.79	13.24	19.61	23.94	7.07	6.56	3.30	2.83	0.07	22.28	95.15	36.93	22.94	21.66	7.07	6.56
1999	71.65	12.45	19.34	23.19	7.61	6.60	3.27	2.89	0.07	23.54	96.77	37.96	23.01	21.62	7.61	6.60
2000	71.22	12.36	19.66	22.62	7.86	6.16	2.81	2.91	0.07	24.97	98.90	38.40	23.92	22.58	7.86	6.16
2001	71.79	12.28	20.20	23.53	8.03	5.29	2.20	2.64	0.07	26.39	96.38	38.33	22.91	21.95	8.03	5.29
2002	70.93	12.16	19.49	22.70	8.14	5.96	2.67	2.79	0.06	25.74	98.03	38.40	23.66	21.98	8.14	5.96
2003 ¹⁰	70.47	12.15	19.64	22.31	7.97	6.15	2.78	2.88	0.06	26.97	98.16	39.07	22.51	22.71	7.97	6.15

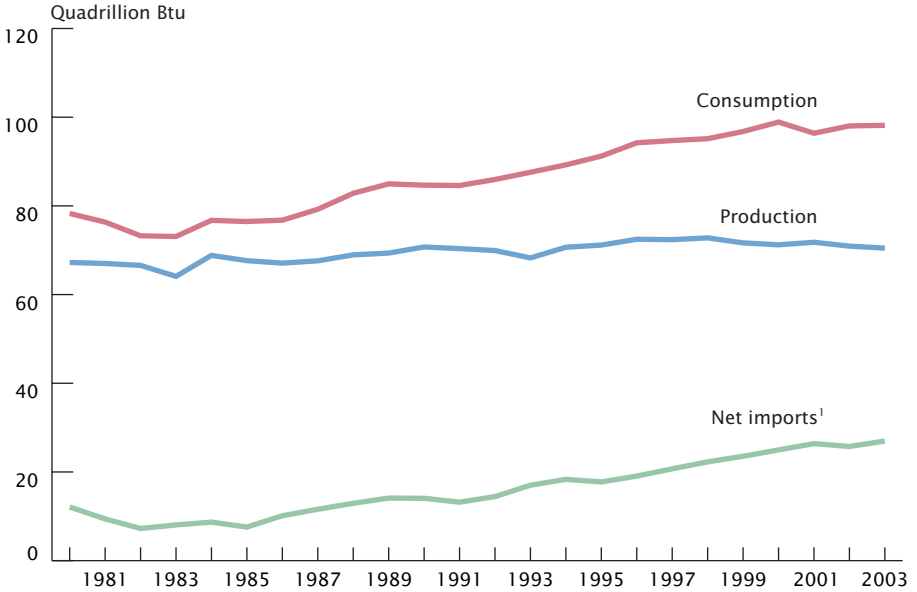
NA Not available. Z Less than 5 trillion. ¹ Includes types of fuel not shown separately. ² Includes lease condensate. ³ Data on the generation of electricity in the United States represent net generation, which is gross output of electricity (measured at the generator terminals) minus power plant use. Nuclear electricity generation data are gross outputs of electricity. ⁴ End-use consumption and electricity net generation.

⁵ Wood, waste, and alcohol (ethanol blended into motor gasoline). ⁶ Imports minus exports. ⁷ Petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel. ⁸ Includes supplemental gaseous fuels. ⁹ There is a discontinuity in this time series between 1989 and 1990 due to the expanded coverage of nonelectric utility use of renewable energy beginning in 1990. ¹⁰ Preliminary.

Source: U.S. Energy Information Administration, *Annual Energy Review 2003*. See also <<http://www.eia.doe.gov/emeu/aer/overview.html>> (released September 2004).

Figure 19.1

Energy Production, Trade, and Consumption: 1980 to 2003



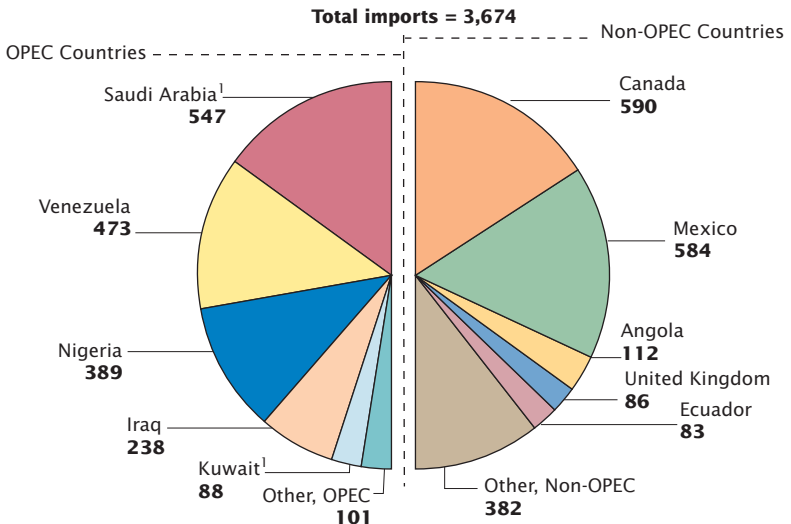
¹Imports minus exports.

Source: Figure 19.1 prepared by U.S. Census Bureau. For data, see Table 888.

Figure 19.2

Top Suppliers of U.S. Crude Oil Imports: 2004

(In millions of barrels)



¹Imports from the neutral zone between Kuwait and Saudi Arabia are included in Saudi Arabia.

Source: Figure 19.2 prepared by U.S. Census Bureau. For data, see Table 900.

Table 889. Energy Supply and Disposition by Type of Fuel—Estimates, 2002 and 2003, and Projections, 2005 to 2020

[Quadrillion Btu (71.94 represents 71,940,000,000,000) per year. Btu = British thermal unit. Projections are "reference" or mid-level forecasts. See report for methodology and assumptions used in generating projections]

Type of fuel	2002	2003	Projections			
			2005	2010	2015	2020
Production, total	71.94	71.42	74.44	77.79	77.73	80.35
Crude oil and lease condensate	12.15	12.03	12.19	12.75	11.63	11.03
Natural gas plant liquids	2.56	2.34	2.48	2.66	2.67	2.80
Natural gas, dry	19.48	19.58	19.80	20.97	21.33	22.48
Coal	22.70	22.66	24.15	25.10	25.56	27.04
Nuclear power	8.14	7.97	8.31	8.49	8.62	8.67
Renewable energy ¹	5.79	5.89	6.49	6.85	7.13	7.57
Other ²	1.12	0.93	1.02	0.97	0.78	0.77
Imports, total	29.35	30.95	32.74	37.38	44.37	49.22
Crude oil ³	19.93	21.08	21.92	24.69	28.98	32.29
Petroleum products ⁴	4.75	5.16	5.86	6.06	6.32	6.83
Natural gas	4.11	4.02	4.22	5.71	8.00	8.95
Other imports ⁵	0.56	0.69	0.75	0.92	1.07	1.15
Exports, total	3.60	3.95	4.17	3.86	3.90	4.01
Petroleum ⁶	2.05	2.13	2.20	2.14	2.21	2.26
Natural gas	0.52	0.70	0.76	0.65	0.81	0.86
Coal	1.03	1.12	1.21	1.06	0.88	0.89
Consumption, total	97.99	98.22	101.85	111.27	118.29	125.60
Petroleum products	38.41	39.09	40.81	44.84	48.07	51.30
Natural gas	23.59	22.54	22.92	26.11	28.69	30.73
Coal	21.98	22.71	23.30	24.95	25.71	27.27
Nuclear power	8.14	7.97	8.31	8.49	8.62	8.67
Renewable energy ¹ , other ⁸	5.86	5.91	6.51	6.88	7.20	7.62
Net imports of petroleum	22.64	24.10	25.57	28.61	33.10	36.87
Prices (1999 dollars per unit): ⁹						
World oil price (dol. per bbl.) ¹⁰	24.10	27.73	33.99	25.00	26.75	28.50
Gas wellhead price (dol. per mcf.) ¹⁰	3.06	4.98	5.30	3.64	4.16	4.53
Coal minemouth price (dol. per ton)	18.23	17.93	18.61	17.30	16.89	17.25
Average electric price (cents per kWh)	7.4	7.4	7.4	6.6	6.9	7.2

¹ Includes grid-connected electricity from conventional hydroelectric; wood and wood waste; landfill gas; municipal solid waste; other biomass; wind; photovoltaic and solar thermal sources; non-electric energy from renewable sources, such as active and passive solar systems, and wood; and both the ethanol and gasoline components of E85, but not the ethanol components of blends less than 85 percent. Excludes electricity imports using renewable sources and nonmarketed renewable energy. See Table A18 of source for selected nonmarketed residential and commercial renewable energy. ² Includes liquid hydrogen, methanol, supplemental natural gas, and some domestic inputs to refineries. ³ Includes imports of crude oil for the Strategic Petroleum Reserve. ⁴ Includes imports of finished petroleum products, imports of unfinished oils, alcohols, ethers, and blending components. ⁵ Includes coal, coal coke (net), and electricity (net). ⁶ Includes crude oil and petroleum products. ⁷ Includes natural gas plant liquids, crude oil consumed as a fuel, and nonpetroleum-based liquids for blending, such as ethanol. ⁸ Includes net electricity imports, methanol, and liquid hydrogen. ⁹ Average refiner acquisition cost for imported crude oil. ¹⁰ Represents lower 48 onshore and offshore supplies.

Source: U.S. Energy Information Administration, *Annual Energy Outlook 2005*, DOE/EIA-0383(2005). See also <http://eia.doe.gov/oiat/aeo/pdf/aeotab_1.pdf>.

Table 890. Energy Consumption by End-Use Sector: 1970 to 2003

[67.84 represents 67,840,000,000,000 Btu. Btu = British thermal units. For Btu conversion factors, see source and text, this section. See Appendix III]

Year	Residential and commercial ¹				Transportation ²	Percent of total		
	Total (quad. Btu)	Commercial ¹ (quad. Btu)	Industrial ² (quad. Btu)	Transportation ² (quad. Btu)		Residential and commercial ¹	Industrial ²	Transportation ²
1970	67.84	22.11	29.64	16.10	32.6	43.7	23.7	
1975	72.00	24.31	29.45	18.24	33.8	40.9	25.3	
1980	78.29	26.44	32.15	19.70	33.8	41.1	25.2	
1985	76.47	27.49	28.89	20.09	36.0	37.8	26.3	
1990	84.67	30.36	31.89	22.42	35.9	37.7	26.5	
1994	89.25	32.32	33.57	23.37	36.2	37.6	26.2	
1995	91.22	33.37	34.00	23.85	36.6	37.3	26.1	
1996	94.22	34.81	34.97	24.44	36.9	37.1	25.9	
1997	94.73	34.73	35.24	24.75	36.7	37.2	26.1	
1998	95.15	35.02	34.88	25.26	36.8	36.7	26.5	
1999	96.77	36.03	34.79	25.95	37.2	36.0	26.8	
2000	98.90	37.67	34.68	26.55	38.1	35.1	26.8	
2001	96.38	37.57	32.53	26.28	39.0	33.7	27.3	
2002	98.03	38.50	32.86	26.65	39.3	33.5	27.2	
2003 ³	98.16	38.78	32.52	26.86	39.5	33.1	27.4	

¹ Commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and industrial electricity-only plants. ² Industrial sector fuel use, including that at industrial combined-heat-and-power (CHP) and industrial electricity-only plants. ³ Preliminary.

Source: U.S. Energy Information Administration, *Annual Energy Review 2003*. See also <http://www.eia.doe.gov/emeu/aer/pdf/pages/sec2_4.pdf> (released September 2004).

Table 891. Energy Consumption—End-Use Sector and Selected Source by State: 2001

[In trillions of Btu (96,275 represents 96,275,000,000,000), except as indicated]

State	Total ¹	Per capita ² (mil. Btu)	End-use sector ³				Source				Nuclear electric power
			Residential	Commercial	Industrial ¹	Transportation	Petroleum	Natural gas (dry) ⁴	Coal	Hydro electric power ⁵	
United States	96,275	338	20,241	17,332	32,431	26,272	38,333	22,845	21,905	2,118	8,033
Alabama	1,943	435	380	254	863	446	540	342	846	85	317
Alaska	737	1,164	53	65	413	206	292	413	16	14	-
Arizona	1,353	255	344	312	221	476	524	245	424	80	300
Arkansas	1,106	411	219	148	462	278	379	232	274	26	154
California	7,853	227	1,446	1,509	1,928	2,971	3,604	2,514	68	256	347
Colorado	1,270	287	303	287	294	386	462	385	400	13	-
Connecticut	853	249	267	215	134	238	439	149	40	3	161
Delaware	293	368	62	52	113	66	147	52	38	-	-
District of Columbia	168	294	34	104	4	26	34	31	1	-	-
Florida	4,135	253	1,193	958	598	1,386	1,990	570	726	2	330
Georgia	2,881	343	642	503	876	860	1,034	363	772	21	352
Hawaii	282	230	35	39	77	132	240	3	18	1	-
Idaho	501	379	105	95	180	122	155	82	11	74	-
Illinois	3,870	309	928	829	1,173	939	1,304	971	994	2	965
Indiana	2,802	457	504	397	1,296	604	837	514	1,567	6	-
Iowa	1,151	392	229	179	472	270	401	225	445	9	40
Kansas	1,044	387	215	192	385	252	391	274	355	(Z)	108
Kentucky	1,880	462	339	246	846	449	704	217	1,011	39	-
Louisiana	3,500	784	348	264	2,135	753	1,491	1,340	240	7	181
Maine	491	382	111	74	199	107	233	101	8	27	-
Maryland	1,420	264	391	372	252	405	568	191	317	12	143
Massachusetts	1,549	242	461	379	261	447	762	364	199	(-)	54
Michigan	3,120	312	790	598	928	804	1,042	929	797	4	279
Minnesota	1,745	350	381	336	526	502	674	345	353	9	123
Mississippi	1,173	410	234	163	427	349	486	341	198	-	104
Missouri	1,815	322	496	389	374	556	719	289	716	9	88
Montana	366	404	70	60	128	108	168	67	184	67	-
Nebraska	627	365	152	130	182	163	218	124	228	11	91
Nevada	629	301	147	108	169	205	250	181	189	26	-
New Hampshire	322	256	87	65	68	102	178	25	40	10	91
New Jersey	2,500	294	573	554	491	882	1,246	586	112	-1	318
New Mexico	679	371	107	122	220	230	251	262	297	2	-
New York	4,135	217	1,194	1,303	667	970	1,713	1,206	315	225	422
North Carolina	2,591	316	641	513	743	694	950	216	757	26	395
North Dakota	407	640	61	56	203	88	138	63	420	14	-
Ohio	3,982	350	892	682	1,429	979	1,305	836	1,343	5	162
Oklahoma	1,540	444	298	233	544	466	588	548	377	23	-
Oregon	1,064	307	252	208	298	307	368	236	43	291	-
Pennsylvania	3,923	319	931	709	1,286	997	1,454	669	1,379	11	770
Rhode Island	227	215	73	63	26	66	100	99	(Z)	(Z)	-
South Carolina	1,549	382	322	235	609	383	470	147	414	2	521
South Dakota	248	327	60	50	54	83	112	37	44	35	-
Tennessee	2,195	382	500	369	746	581	708	265	688	63	299
Texas	12,029	564	1,570	1,356	6,426	2,677	5,521	4,435	1,493	12	399
Utah	725	318	140	140	233	213	261	168	390	5	-
Vermont	164	267	48	33	31	52	89	8	(Z)	9	44
Virginia	2,315	322	549	534	547	685	911	247	482	-13	269
Washington	2,034	339	471	377	586	600	843	323	100	557	86
West Virginia	762	423	157	111	311	183	215	152	872	10	-
Wisconsin	1,863	345	401	313	729	422	668	363	495	21	120
Wyoming	439	890	39	51	238	111	157	104	500	9	-

- Represents zero. Z Less than .5 trillion Btus. ¹ U.S. total energy and U.S. industrial sector include 29.3 trillion Btus of net imports of coal coke that is not allocated to the states. State and U.S. totals include 81.8 trillion Btus of net imports of electricity generated from nonrenewable energy sources. ² Based on estimated resident population as of July 1. ³ End-use sector data include electricity sales and associated electrical system energy losses. ⁴ Includes supplemental gaseous fuels. ⁵ Includes net imports of hydroelectricity. A negative number in this column results from pumped storage for which, overall, more electricity is expended than created to provide electricity during peak demand periods.

Source: U.S. Energy Information Administration, *State Energy Data Report, 2001*. See also http://www.eia.doe.gov/emeu/states/sep_use/total/pdf/use_all.pdf (released December 2004).

Table 892. Renewable Energy Consumption Estimates by Source: 1995 to 2003

[In quadrillion Btu (6.66 represents 6,660,000,000,000). Renewable energy is obtained from sources that are essentially inexhaustible unlike fossil fuels of which there is a finite supply]

Source and sector	1995	1998	1999	2000	2001	2002	2003 ¹
Consumption, total	6.66	6.55	6.59	6.15	5.27	5.95	6.13
Conventional hydroelectric power ²	3.21	3.30	3.27	2.81	2.20	2.68	2.78
Geothermal energy ³	0.29	0.33	0.33	0.32	0.31	0.33	0.31
Biomass ⁴	3.06	2.82	2.87	2.89	2.63	2.77	2.87
Solar energy ⁵	0.07	0.07	0.07	0.07	0.07	0.06	0.06
Wind energy ⁶	0.03	0.03	0.05	0.06	0.07	0.11	0.11
Residential ⁷	0.67	0.46	0.49	0.50	0.44	0.38	0.44
Biomass ⁴	0.60	0.39	0.41	0.43	0.37	0.31	0.36
Geothermal ³	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Solar ^{5, 8}	0.07	0.07	0.06	0.06	0.06	0.06	0.06
Commercial ⁹	0.09	0.11	0.11	0.11	0.09	0.09	0.11
Biomass ⁴	0.09	0.10	0.11	0.10	0.08	0.08	0.09
Geothermal ³	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Hydroelectric ²	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
Industrial ¹⁰	1.91	1.84	1.84	1.83	1.63	1.75	1.75
Biomass ⁴	1.85	1.78	1.79	1.78	1.59	1.71	1.69
Geothermal ³	(Z)	(Z)	(Z)	(Z)	0.01	0.01	0.01
Hydroelectric ²	0.06	0.06	0.05	0.04	0.03	0.04	0.06
Transportation: Alcohol fuels ¹¹	0.11	0.11	0.11	0.13	0.13	0.16	0.22
Electric power ¹²	3.89	4.03	4.03	3.58	2.98	3.57	3.62
Electric utilities ¹³	3.17	3.28	3.12	2.61	2.03	2.53	2.55
Biomass ⁴	0.02	0.02	0.02	0.02	0.02	0.05	0.04
Geothermal ³	0.10	0.11	0.04	(Z)	(Z)	(Z)	0.01
Hydroelectric ²	3.06	3.15	3.07	2.58	2.01	2.45	2.50
Solar ⁵	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)
Wind ⁶	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)	(Z)

Z Less than 5 trillion Btu. ¹ Preliminary. ² Power produced from natural streamflow as regulated by available storage. ³ As used at electric power plants, hot water or steam extracted from geothermal reservoirs in the Earth's crust that is supplied to steam turbines at electric power plants that drive generators to produce electricity. ⁴ Organic nonfossil material of biological origin constituting a renewable energy source. ⁵ Includes small amounts of distributed solar thermal and photovoltaic energy. ⁶ Energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators. Wind pushes against sails, vanes, or blades radiating from a central rotating shaft. ⁷ Consists of living quarters for private households, but excludes institutional living quarters. ⁸ The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity. ⁹ Consists of service-providing facilities and equipment of businesses, governments, and other private and public organizations. Includes institutional living quarters and sewage treatment facilities. ¹⁰ Consists of all facilities and equipment used for producing, processing, or assembling goods. ¹¹ Ethanol primarily derived from corn. ¹² Consists of electricity only and combined heat and power plants who sell electricity and heat to the public. ¹³ A corporation or other legal entity aligned with distribution facilities for delivery of electric energy, primarily for public use.

Source: U.S. Energy Information Administration, *Renewable Energy Annual 2003*. See also <http://www.eia.doe.gov/cneaf/solar.renewables/page/rea_data/trends.pdf> (issued December 2004).

Table 893. Energy Expenditures and Average Fuel Prices by Source and Sector: 1970 to 2001

[In millions of dollars (82,911 represents \$82,911,000,000). For definition of Btu, see text, this section. End-use sector and electric utilities exclude expenditures and prices on energy sources such as hydropower, solar, wind, and geothermal. Also excludes expenditures for reported amounts of energy consumed by the energy industry for production, transportation, and processing operations]

Source and sector	1970	1980	1985	1990	1995	1997	1998	1999	2000	2001
EXPENDITURES (mil. dol.)										
Total	82,911	374,367	437,586	471,951	514,126	566,515	524,439	555,018	689,384	693,599
Natural gas	10,891	51,061	72,938	65,281	75,020	93,392	83,634	84,971	119,091	139,526
Petroleum products	47,955	237,676	223,906	235,347	236,863	267,233	231,864	262,795	360,735	336,362
Motor gasoline	31,596	124,408	118,048	126,558	136,647	149,668	132,730	149,260	193,947	185,892
Coal	4,630	22,607	29,678	28,602	27,431	28,278	27,888	27,310	28,080	28,195
Electricity sales	23,345	98,095	149,233	176,737	205,932	213,645	216,928	216,737	231,653	244,814
Residential sector ¹	20,213	69,438	99,669	111,099	128,482	138,664	134,914	137,421	156,095	168,618
Commercial sector ²	10,628	46,932	70,396	79,237	91,746	100,355	98,327	98,186	112,843	125,772
Industrial sector ³	16,691	94,316	106,518	102,402	107,060	119,097	107,386	111,529	141,692	137,820
Transportation sector	35,379	163,680	161,003	179,212	186,838	208,398	183,811	207,883	278,754	261,390
Motor gasoline	30,525	121,809	115,205	123,845	134,641	147,164	130,709	147,592	191,620	182,122
Electric utilities ¹	4,329	37,788	43,421	40,155	38,727	42,466	42,649	43,932	57,596	62,115
AVERAGE FUEL PRICES (dol. per mil. Btu)										
All sectors	1.65	6.89	8.37	8.25	8.28	8.80	8.18	8.50	10.33	10.72
Residential sector ¹	2.10	7.46	10.93	11.88	12.59	13.29	13.46	13.17	14.27	15.72
Commercial sector ²	1.98	7.85	11.65	11.90	12.65	13.06	13.04	12.74	13.94	15.56
Industrial sector ³	0.84	4.71	6.03	5.23	4.97	5.33	4.89	5.09	6.48	6.78
Transportation sector	2.31	8.61	8.26	8.28	8.09	8.70	7.48	8.23	10.78	10.21
Electric utilities ¹	0.32	1.76	1.88	1.47	1.28	1.36	1.30	1.31	1.64	1.78

¹ There are no direct fuel costs for geothermal, photovoltaic, or solar thermal energy. ² There are no direct fuel costs for hydroelectric, geothermal, photovoltaic, or solar thermal energy. ³ There are no direct fuel costs for hydroelectric, geothermal, wind, photovoltaic, or solar thermal energy. ⁴ There is a discontinuity in the total time series and the industrial time series between 1988 and 1989 due to the expanded coverage of nonelectric utility use of wood and waste beginning in 1989.

Source: U.S. Energy Information Administration, *State Energy Price and Expenditure Report 2001*. See also <http://www.eia.doe.gov/emeu/states/main_us.html> (published January 2005).

Table 894. Energy Expenditures—End-Use Sector and Selected Source by State: 2001

[In millions of dollars (693,599 represents \$693,599,000,000). End-use sector and electric utilities exclude expenditures on energy sources such as hydroelectric, photovoltaic, solar thermal, wind, and geothermal. Also excludes expenditures for reported amounts of energy consumed by the energy industry for production, transportation, and processing operations]

State	Total ¹	End-use sector				Source			
		Residen- tial	Commer- cial	Industrial	Transpor- tation	Petroleum products	Natural gas	Coal	Electricity sales
U.S.	693,599	168,618	125,772	137,820	261,390	336,362	139,526	28,195	244,814
AL	11,580	2,798	1,628	2,827	4,327	5,142	2,077	1,219	4,345
AK	2,780	428	453	310	1,589	2,071	250	31	567
AZ	10,672	2,664	2,046	1,136	4,826	5,351	1,381	540	4,526
AR	7,340	1,702	915	1,968	2,755	3,510	1,419	250	2,464
CA	72,924	15,504	15,832	10,676	30,913	33,751	20,824	99	27,483
CO	9,279	2,268	1,653	1,155	4,203	4,864	2,092	374	2,638
CT	8,062	2,672	1,743	886	2,762	4,273	1,125	67	2,937
DC	1,985	522	352	425	696	1,020	338	80	744
DE	1,479	310	826	25	318	381	363	1	740
FL	31,605	9,257	6,341	2,891	13,116	16,036	3,195	1,250	15,376
GA	19,361	4,935	3,198	3,441	7,788	9,072	2,616	1,294	7,484
HI	2,812	519	515	474	1,304	1,849	58	22	1,349
ID	3,142	660	483	712	1,287	1,583	517	19	1,037
IL	29,387	7,737	5,578	5,687	10,384	12,676	7,469	1,220	9,311
IN	17,066	3,710	2,211	5,117	6,028	7,311	4,122	1,966	5,130
IA	8,161	1,847	1,108	2,387	2,820	4,085	1,593	403	2,408
KS	7,082	1,667	1,208	1,792	2,416	3,457	1,500	373	2,223
KY	11,018	2,005	1,292	3,232	4,489	6,082	1,475	1,158	3,361
LA	18,026	2,696	1,891	7,487	5,952	8,991	4,960	314	5,070
ME	3,625	1,112	651	660	1,201	2,131	409	15	1,270
MD	11,446	3,179	2,433	1,170	4,663	5,777	1,891	496	3,983
MA	15,957	4,966	3,790	2,130	5,071	7,394	3,176	183	6,062
MI	21,913	5,551	3,881	3,996	8,484	10,711	4,440	1,057	7,068
MN	12,447	2,932	2,050	2,135	5,330	6,495	2,305	376	3,618
MS	7,459	1,788	1,088	1,611	2,972	3,886	1,493	324	2,719
MO	13,822	3,786	2,404	1,914	5,717	7,005	2,531	700	4,414
MT	2,484	469	361	489	1,164	1,408	343	177	720
NE	4,412	1,040	740	904	1,729	2,216	869	134	1,333
NV	5,127	1,218	808	962	2,139	2,459	1,447	239	2,172
NH	3,128	927	600	446	1,155	1,768	239	67	1,129
NJ	20,178	4,951	4,433	2,732	8,063	10,236	3,659	255	6,785
NM	4,313	921	825	629	1,938	2,418	769	437	1,316
NY	39,903	13,371	12,961	3,297	10,274	15,374	9,889	463	16,449
NC	18,865	5,170	3,170	3,414	7,111	9,167	1,786	1,210	7,804
ND	2,243	417	307	707	812	1,296	241	412	535
OH	29,071	7,375	5,198	6,212	10,286	12,376	6,404	1,790	10,200
OK	10,181	2,193	1,441	2,349	4,197	4,920	3,011	348	3,016
OR	7,411	1,605	1,129	1,306	3,372	3,855	1,335	48	2,494
PA	29,888	8,713	5,393	5,632	10,150	13,222	5,736	1,796	10,757
RI	2,313	771	578	209	755	1,067	601	(Z)	847
SC	9,867	2,397	1,447	2,228	3,795	4,412	1,012	665	4,317
SD	1,881	449	301	282	849	1,127	220	46	548
TN	13,808	3,217	2,304	2,799	5,489	6,319	1,971	864	5,325
TX	72,653	12,999	9,310	26,995	23,349	38,721	17,441	1,993	22,979
UT	4,533	959	749	659	2,166	2,442	889	454	1,198
VT	1,660	536	310	200	615	991	61	(Z)	607
VA	16,290	4,325	2,963	2,025	6,977	8,523	1,917	784	5,928
WA	12,906	2,920	2,048	1,927	6,012	7,014	2,316	115	4,141
WV	4,297	999	603	986	1,710	2,148	656	1,116	1,392
WI	13,358	3,190	1,951	3,361	4,855	6,645	2,727	552	3,931
WY	2,322	275	275	746	1,026	1,339	384	402	564

Z Less than \$500,000. ¹ Includes sources not shown separately. Total expenditures are the sum of purchases for each source (including electricity sales) less electric utility purchases of fuel.

Source: U.S. Energy Information Administration, *State Energy Price and Expenditure Report 2001*. See also <http://tonfo.eia.doe.gov/FTPROOT/state/pr_all.pdf> (released January 2005).

Table 895. Residential Energy Consumption, Expenditures, and Average Price: 1980 to 2001

[9.32 represents 9,320,000,000,000 Btu. For period April to March for 1980; January to December for 1987 to 2001. Excludes Alaska and Hawaii in 1980. Covers occupied units only. Excludes household usage of gasoline for transportation and the use of wood or coal. Based on Residential Energy Consumption Survey; see source. Btu = British thermal unit; see text, this section]

Type of fuel	Unit	1980	1987	1990	1993	1997	2001
CONSUMPTION							
Total	Quad. Btu	9.32	9.13	9.22	10.01	10.25	9.86
Average per household	Mil. Btu	114	101	98	104	101	92
Natural gas	Quad. Btu	4.97	4.83	4.86	5.27	5.28	4.84
Electricity, site	Quad. Btu	2.48	2.76	3.03	3.28	3.54	3.89
Fuel oil, kerosene	Quad. Btu	1.52	1.22	1.04	1.07	1.07	0.76
Liquid petroleum gas	Quad. Btu	0.35	0.32	0.28	0.38	0.36	0.38
EXPENDITURES							
Total	Bil. dol.	75.6	97.8	110.2	123.9	135.8	159.7
Average per household	Dollars	926	1,080	1,172	1,282	1,338	1,493
Natural gas	Bil. dol.	19.8	26.2	27.3	32.0	35.8	47.0
Electricity	Bil. dol.	40.8	61.6	71.5	81.1	88.3	100.3
Fuel oil, kerosene	Bil. dol.	12.2	7.2	8.3	7.0	7.6	6.8
Liquid petroleum gas	Bil. dol.	2.8	2.8	3.1	3.8	4.0	5.6
AVERAGE PRICE							
Total	Dol./mil. Btu.	8.12	10.71	11.95	12.38	13.25	16.19
Natural gas	Dol./mil. Btu	3.98	5.41	5.61	6.07	6.78	9.70
Electricity	Dol./mil. Btu	16.46	22.34	23.60	24.69	24.97	25.80
Fuel oil, kerosene	Dol./mil. Btu	8.03	5.89	7.92	6.53	7.13	9.05
Liquid petroleum gas	Dol./mil. Btu	8.00	8.91	11.18	10.04	11.23	14.87

Source: U.S. Energy Information Administration, *Residential Energy Consumption Survey: Household Energy Consumption and Expenditures*, 1980, 1987, 1990, 1993, 1997, and 2001. See also <<http://www.eia.doe.gov/emeu/recs/contents.html>>.

Table 896. Residential Energy Consumption and Expenditures, by Type of Fuel and Selected Household Characteristic: 2001

[Quad. = quadrillion. (9.86 represents 9,860,000,000,000 Btu). See headnote, Table 895]

Characteristic	Consumption (Btus)					Expenditures				
	Total ¹ (quad.)	Avg. per household ² (mil.)	Natural gas (quad.)	Electricity (quad.)	Fuel oil ³ (quad.)	Total ¹ (bil. dol.)	Avg. per household ² (dol.)	Natural gas (bil. dol.)	Electricity (bil. dol.)	Fuel oil ³ (bil. dol.)
Total households	9.86	92.2	4.84	3.89	0.71	159.74	1,493	46.98	100.34	6.83
Single family	7.91	107.3	3.98	3.01	0.59	125.02	1,697	38.04	76.69	5.32
Two-to-four unit building	0.74	78.1	0.45	0.23	0.06	11.97	1,261	4.70	6.68	0.54
Five-or-more unit building	0.70	41.0	0.28	0.36	0.05	13.66	803	2.98	10.29	0.37
Mobile home	0.52	75.9	0.14	0.29	0.01	9.09	1,336	1.26	6.68	0.08
Year house built:										
1949 or earlier	2.92	109.8	1.68	0.76	0.34	42.18	1,586	16.47	20.65	3.04
1950 to 1959	1.39	97.9	0.75	0.46	0.14	21.25	1,500	7.15	12.34	1.29
1960 to 1969	1.19	86.5	0.61	0.45	0.09	19.48	1,414	6.00	12.09	0.77
1970 to 1979	1.48	79.0	0.57	0.77	0.07	26.03	1,388	5.28	18.99	0.61
1980 to 1989	1.45	79.7	0.57	0.78	0.04	26.22	1,438	5.53	19.37	0.40
1990 to 2001 ⁴	1.43	92.5	0.66	0.68	0.02	24.59	1,591	6.54	16.90	0.21

¹ Includes liquid petroleum gas, not shown separately. ² The averages are over the set of all households; otherwise the averages are over the set of households using a given fuel or end use. ³ Includes kerosene. ⁴ New construction for 2001 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

Source: U.S. Energy Information Administration, *Residential Energy Consumption Survey: Household Energy Consumption and Expenditures*, 2001. See also <<http://www.eia.doe.gov/emeu/recs/contents.html>>.

Table 897. Fossil Fuel Prices by Type of Fuel: 1990 to 2003

[In cents per million British thermal units (Btu), except as indicated. All fuel prices taken as close to the point of production as possible. See text, this section, for explanation of Btu conversions from mineral fuels]

Fuel	Current dollars					Constant (2000) dollars				
	1990	1995	2000	2002	2003 ¹	1990	1995	2000	2002	2003 ¹
Composite²	1.84	1.47	2.60	2.21	3.12	2.26	1.60	2.60	2.12	2.95
Crude oil ³	3.45	2.52	4.61	3.88	4.75	4.23	2.74	4.61	3.73	4.50
Natural gas	1.55	1.40	3.32	2.67	4.50	1.90	1.52	3.32	2.56	4.26
Bituminous coal	1.00	0.88	0.80	0.87	0.86	1.22	0.96	0.80	0.83	0.82

¹ Preliminary. ² Derived by multiplying the price per Btu of each fossil fuel by the total Btu content of the production of each fossil fuel and dividing this accumulated value of total fossil fuel production by the accumulated Btu content of total fossil fuel production. ³ Domestic first purchase prices. ⁴ Wellhead prices. ⁵ Includes bituminous coal, subbituminous coal, and lignite.

Source: U.S. Energy Information Administration, *Annual Energy Review 2003*. See also <<http://www.eia.doe.gov/emeu/aer/finan.html>> (released September 2004).

Table 898. Energy Imports and Exports by Type of Fuel: 1980 to 2003

[In quadrillion of Btu. (12.10 represents 12,100,000,000,000 Btu). For definition of Btu, see text, this section]

Type of fuel	1980	1985	1990	1995	1997	1998	1999	2000	2001	2002	2003 ¹
Net imports, total²	12.10	7.58	14.06	17.75	20.70	22.28	23.54	24.97	26.39	25.74	26.97
Coal	-2.39	-2.39	-2.70	-2.08	-2.01	-1.87	-1.30	-1.21	-0.77	-0.61	-0.49
Natural gas (dry)	0.96	0.90	1.46	2.74	2.90	3.06	3.50	3.62	3.69	3.58	3.32
Petroleum ³	13.50	8.95	15.29	16.89	19.64	20.94	21.18	22.38	23.36	22.63	24.07
Other ⁴	0.04	0.13	0.01	0.19	0.16	0.16	0.16	0.18	0.10	0.14	0.07
Imports, total	15.80	11.78	18.82	22.26	25.22	26.58	27.25	28.97	30.16	29.41	31.02
Coal	0.03	0.05	0.07	0.24	0.19	0.22	0.23	0.31	0.49	0.42	0.63
Natural gas (dry)	1.01	0.95	1.55	2.90	3.06	3.22	3.66	3.87	4.07	4.10	4.02
Petroleum ³	14.66	10.61	17.12	18.88	21.74	22.91	23.13	24.53	25.40	24.68	26.21
Other ⁴	0.10	0.17	0.08	0.24	0.22	0.23	0.23	0.26	0.19	0.20	0.17
Exports, total	3.69	4.20	4.75	4.51	4.51	4.30	3.71	4.01	3.77	3.66	4.05
Coal	2.42	2.44	2.77	2.32	2.19	2.09	1.53	1.53	1.27	1.03	1.12
Natural gas (dry)	0.05	0.06	0.09	0.16	0.16	0.16	0.16	0.25	0.38	0.52	0.70
Petroleum	1.16	1.66	1.82	1.99	2.10	1.97	1.95	2.15	2.04	2.04	2.13
Other ⁴	0.07	0.04	0.07	0.05	0.06	0.07	0.07	0.08	0.09	0.07	0.10

¹ Preliminary. ² Net imports equals imports minus exports. Minus sign (-) denotes an excess of exports over imports. ³ Includes imports into the Strategic Petroleum Reserve, which began in 1977. ⁴ Coal coke and small amounts of electricity transmitted across U.S. borders with Canada and Mexico.

Source: U.S. Energy Information Administration, *Annual Energy Review 2003*. See also <http://www.eia.doe.gov/emeu/aer/pdf/pages/sec1_11.pdf> (released September 2004).

Table 899. U.S. Foreign Trade in Selected Mineral Fuels: 1980 to 2003

[985 represents 985,000,000,000 cu. ft. Minus sign (-) indicates an excess of imports over exports]

Mineral fuel	Unit	1980	1985	1990	1995	1999	2000	2001	2002	2003 ¹
Natural gas:										
Imports	Bil. cu. ft.	985	950	1,532	2,841	3,586	3,782	3,977	4,015	3,928
Exports	Bil. cu. ft.	49	55	86	154	163	244	373	516	692
Net trade	Bil. cu. ft.	-936	-894	-1,447	-2,687	-3,422	-3,538	-3,604	-3,499	-3,236
Crude oil:										
Imports ²	Mil. bbl.	1,926	1,168	2,151	2,639	3,187	3,320	3,405	3,336	3,521
Exports	Mil. bbl.	105	75	40	35	43	18	7	3	5
Net trade	Mil. bbl.	-1,821	-1,094	-2,112	-2,604	-3,144	-3,301	-3,398	-3,333	-3,516
Petroleum products:										
Imports	Mil. bbl.	603	681	775	586	774	874	928	872	952
Exports	Mil. bbl.	94	211	273	312	300	362	347	356	367
Net trade	Mil. bbl.	-508	-471	-502	-274	-474	-512	-581	-517	-585
Coal:										
Imports	Mil. sh. tons	1.2	2.0	2.7	9.5	9.1	12.5	19.8	16.9	25.0
Exports	Mil. sh. tons	91.7	92.7	105.8	88.5	58.5	58.5	48.7	39.6	43.0
Net trade	Mil. sh. tons	90.5	90.7	103.1	79.1	49.4	46.0	28.9	22.7	18.0

¹ Preliminary. ² Includes strategic petroleum reserve imports.

Source: U.S. Energy Information Administration, *Annual Energy Review 2003*. See also <<http://www.eia.doe.gov/emeu/aer/contents.html>> (issued September 2004).

Table 900. Crude Oil Imports Into the U.S. by Country of Origin: 1980 to 2004

[In millions of barrels (1,921 represents 1,921,000,000). Barrels contain 42 gallons. Total OPEC excludes, and Non-OPEC includes, petroleum imported into the United States indirectly from members of OPEC, primarily from Caribbean and West European areas, as petroleum products that were refined from crude oil produced by OPEC]

Country of origin	1980	1985	1990	1995	1998	1999	2000	2001	2002	2003	2004
Total imports	1,921	1,168	2,151	2,639	3,178	3,187	3,311	3,405	3,336	3,521	3,674
OPEC, ^{1, 2, 3} total	1,410	479	1,283	1,219	1,522	1,543	1,659	1,770	1,490	1,671	1,836
Algeria	166	31	23	10	4	9	(2)	4	11	41	79
Iraq	10	17	188	-	123	265	226	290	168	171	238
Kuwait ⁴	10	1	29	78	110	90	96	87	79	75	88
Libya	200	-	-	-	-	-	-	-	-	-	7
Saudi Arabia ⁵	456	48	436	460	512	506	556	588	554	629	547
Indonesia	115	107	36	23	18	26	13	15	18	10	12
Nigeria	307	102	286	227	251	227	319	307	215	306	389
Venezuela	57	112	243	420	503	420	446	471	438	436	473
Non-OPEC, total ⁵	511	689	869	1,419	1,656	1,643	1,652	1,635	1,846	1,850	1,838
Angola	(NA)	(NA)	86	131	170	130	108	117	117	132	112
Canada	73	171	235	380	462	430	492	495	527	565	590
Colombia	(NA)	(NA)	51	76	127	165	116	95	86	59	51
Ecuador ²	6	20	(NA)	35	36	42	46	41	37	50	83
Gabon	9	19	(NA)	84	76	61	52	51	52	48	52
Mexico	185	261	251	375	482	458	479	509	548	580	584
Norway	53	11	35	94	81	96	110	103	127	60	54
Russia	(NA)	(NA)	(Z)	5	3	8	3	-	31	54	55
United Kingdom	63	101	57	124	59	104	106	89	148	127	86

- Represents zero. NA Not available. Z Represents less than 500,000 barrels. ¹ OPEC (Organization of Petroleum Exporting Countries) includes the Persian Gulf nations shown below, except Bahrain, which is not a member of OPEC, and also includes nations not shown. ² Ecuador withdrew from OPEC on December 31, 1992; therefore, it is included under OPEC for the period 1973 to 1992. ³ Gabon withdrew from OPEC on December 31, 1994; therefore, it is included under OPEC for the period 1973 to 1994. ⁴ Imports from the Neutral Zone between Kuwait and Saudi Arabia are included in Saudi Arabia. ⁵ Non-OPEC total includes nations not shown.

Source: U.S. Energy Information Administration, *Petroleum Supply Monthly, February 2005*. See also <http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publications/petroleum_supply_monthly/historical/2005/2005_02/pdf/table40.pdf>.

Table 901. Crude Oil and Refined Products—Summary: 1980 to 2004

[13,481 represents 13,481,000 bbl. Barrels (bbl.) of 42 gallons. Data are averages]

Year	Crude oil (1,000 bbl. per day)					Refined oil products (1,000 bbl. per day)				Total oil imports ³ (1,000 bbl. per day)	Crude oil stocks ⁴ (mil. bbl.)	
	Input to refiner- ies	Domestic produc- tion	Imports		Exports	Domestic demand	Imports	Exports	Total		Strategic reserve ⁵	
			Total ¹	Strategic reserve ²								
1980 . . .	13,481	8,597	5,263	44	287	17,056	1,646	258	6,909	⁶ 466	108	
1985 . . .	12,002	8,971	3,201	118	204	15,726	1,866	577	5,067	814	493	
1990 . . .	13,409	7,355	5,894	27	109	16,988	2,123	748	8,018	908	586	
1994 . . .	13,866	6,662	7,063	12	99	17,718	1,933	843	8,996	929	592	
1995 . . .	13,973	6,560	7,230	-	95	17,725	1,605	855	8,835	895	592	
1996 . . .	14,195	6,465	7,508	-	110	18,309	1,971	871	9,478	850	566	
1997 . . .	14,662	6,452	8,225	-	108	18,620	1,936	896	10,162	868	563	
1998 . . .	14,889	6,252	8,706	-	110	18,917	2,002	835	10,708	895	571	
1999 . . .	14,804	5,881	8,731	8	118	19,519	2,122	822	10,852	852	567	
2000 . . .	15,067	5,822	9,071	8	50	19,701	2,389	990	11,459	826	541	
2001 . . .	15,128	5,801	9,328	11	20	19,649	2,543	951	11,871	862	550	
2002 . . .	14,947	5,746	9,140	16	9	19,761	2,390	975	11,530	877	599	
2003 . . .	15,304	5,681	9,665	-	12	20,034	2,599	1,014	12,264	907	638	
2004 . . .	15,479	5,430	10,038	75	27	20,517	2,861	1,021	12,899	962	676	

- Represents zero. ¹ Includes Strategic Petroleum Reserve. ² SPR is the Strategic Petroleum Reserve. Through 2003, includes imports by SPR only; beginning in 2004, includes imports by SPR, and imports into SPR by others. ³ Crude oil (including Strategic Petroleum Reserve imports) plus refined products. ⁴ Crude oil at end of period. Includes commercial and Strategic Petroleum Reserve stocks. ⁵ Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements. ⁶ Stocks of Alaskan crude oil in transit are included from January 1985 forward.

Source: U.S. Energy Information Administration, *Monthly Energy Review*, March 2005 issue.

Table 902. Petroleum and Coal Products Corporations—Sales, Net Profit, and Profit Per Dollar of Sales: 1990 to 2004

[318.5 represents \$318,500,000,000. Represents SIC group 29 (NAICS group 324). Through 2000 based on Standard Industrial Classification code; beginning 2001 based on North American Industry Classification System, 1997 (NAICS). Profit rates are averages of quarterly figures at annual rates. Beginning 1990, excludes estimates for corporations with less than \$250,000 in assets]

Item	Unit	1990	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Sales	Bil. dol.	318.5	283.1	323.5	320.0	250.4	277.0	455.2	472.5	474.9	597.8	762.7
Net profit:												
Before income taxes	Bil. dol.	23.1	16.5	32.6	36.8	9.7	20.3	55.5	47.2	22.4	52.8	88.0
After income taxes	Bil. dol.	17.8	13.9	26.6	29.4	8.3	17.2	42.6	35.8	19.5	43.6	71.4
Depreciation ¹	Bil. dol.	18.7	16.7	15.9	15.6	14.7	13.5	15.5	17.2	17.8	19.4	18.4
Profits per dollar of sales:												
Before income taxes	Cents	7.3	5.8	10.1	11.5	3.5	7.1	12.2	9.7	4.6	10.4	15.1
After income taxes	Cents	5.6	4.9	8.2	9.2	3.1	6.0	9.4	7.4	4.2	8.6	12.3
Profits on stockholders' equity:												
Before income taxes	Percent	16.4	12.6	23.2	23.5	6.0	13.0	29.4	21.8	9.7	20.9	32.3
After income taxes	Percent	12.7	10.6	18.9	18.9	5.2	11.0	22.6	16.5	8.4	17.2	26.2

¹ Includes depletion and accelerated amortization of emergency facilities.

Source: U.S. Census Bureau, *Quarterly Financial Report for Manufacturing, Mining and Trade Corporations*.

Table 903. Major Petroleum Companies—Financial Summary: 1980 to 2004

[32.9 represents \$32,900,000,000. Data represent a composite of approximately 42 major worldwide petroleum companies aggregated on a consolidated total company basis]

Item	1980	1990	1995	1998	1999	2000	2001	2002	2003	2004
FINANCIAL DATA (bil. dol.)										
Net income	32.9	26.8	24.3	14.5	35.3	76.4	62.0	44.3	85.5	120.5
Depreciation, depletion, etc.	32.5	38.7	43.1	61.0	45.0	53.3	63.4	61.2	68.0	76.9
Cash flow ¹	65.4	65.5	67.4	75.5	75.3	129.7	140.0	118.0	157.7	205.1
Dividends paid	9.3	15.9	17.6	20.9	21.7	23.0	29.7	27.3	27.5	33.5
Net internal funds available for investment or debt repayment ²	56.1	49.6	49.8	54.6	54.1	106.7	110.4	90.7	130.3	171.5
Capital and exploratory expenditures	62.1	59.6	59.8	83.9	67.7	72.8	99.9	88.7	90.7	112.4
Long-term capitalization	211.4	300.0	304.3	382.0	456.2	516.9	543.8	548.1	606.1	685.0
Long-term debt	49.8	90.4	85.4	103.9	105.4	112.8	143.2	153.5	142.1	145.6
Preferred stock	2.0	5.2	5.7	3.9	4.8	5.4	6.7	2.5	2.2	1.3
Common stock and retained earnings ³	159.6	204.4	213.2	274.2	346.0	398.7	393.9	392.1	461.8	538.1
Excess of expenditures over cash income ⁴	6.0	10.0	10.0	29.3	13.6	-33.9	-10.5	-2.0	-39.5	-59.2
RATIOS ⁵ (percent)										
Long-term debt to long-term capitalization	23.6	30.1	28.1	27.2	23.1	21.8	26.7	28.3	26.5	24.1
Net income to total average capital	17.0	9.1	8.1	3.8	8.9	15.7	12.3	8.7	15.2	18.9
Net income to average common equity	22.5	13.5	11.6	5.2	12.4	20.5	16.3	11.5	20.1	24.2

¹ Generally represents internally-generated funds from operations. Sum of net income and noncash charges such as depreciation, depletion, and amortization. ² Cash flow minus dividends paid. ³ Includes common stock, capital surplus, and earned surplus accounts after adjustments. ⁴ Capital and exploratory expenditures plus dividends paid minus cash flow. ⁵ Represents approximate year-to-year comparisons because of changes in the makeup of the group due to mergers and other corporate changes.

Source: Carl H. Pforzheimer & Co., New York, NY, *Comparative Oil Company Statements*, annual.

Table 904. Electric Power Industry—Sales, Prices, Net Generation, Net Summer Capacity, and Consumption of Fuels: 1990 to 2004

[2,837.1 represents 2,837,100,000,000 kWh. Net generation for calendar years; capacity as of December 31]

Item	Unit	1990	2000	2001	2002	2003	2004 ¹
ELECTRIC POWER INDUSTRY, ALL SECTORS							
Consumption, total	Bil. kWh	2,837.1	3,592.4	3,532.4	3,628.7	3,656.5	3,716.5
Net generation, total	Bil. kWh	3,038.0	3,802.1	3,736.6	3,858.5	3,883.2	3,953.4
Electric power sector	Bil. kWh	2,901.3	3,637.5	3,580.1	3,698.5	3,721.2	3,793.6
Commercial sector	Bil. kWh	5.8	7.9	7.4	7.4	7.5	7.4
Industrial sector	Bil. kWh	130.8	156.7	149.2	152.6	154.5	152.4
Electricity imports	Bil. kWh	18.4	48.6	38.5	36.4	30.4	34.2
Electricity exports	Bil. kWh	16.1	14.8	16.5	13.6	24.0	22.9
Electricity losses and unaccounted for	Bil. kWh	203.2	243.5	226.2	252.6	233.1	248.2
Retail sales of electricity	Bil. kWh	2,712.6	3,421.4	3,369.8	3,462.5	3,488.2	3,550.5
Direct use of electricity	Bil. kWh	124.5	170.9	162.6	166.2	168.3	166.0
Electricity retail prices per kWh:							
All sectors, current dollars	Cents	6.57	6.81	7.32	7.21	7.42	7.57
All sectors, real (1996) dollars	Cents	8.05	6.81	7.15	6.93	7.00	6.99
Residential, current dollars	Cents	7.83	8.24	8.62	8.46	8.70	8.94
Residential, real (1996) dollars	Cents	9.60	8.24	8.42	8.13	8.21	8.26
Commercial, current dollars	Cents	7.34	7.43	7.93	7.86	7.98	8.17
Commercial, real (1996) dollars	Cents	9.00	7.43	7.74	7.55	7.53	7.55
Industrial, current dollars	Cents	4.74	4.64	5.04	4.88	5.13	5.11
Industrial, real (1996) dollars	Cents	5.81	4.64	4.92	4.69	4.84	4.72
Transportation, current dollars	Cents	(NA)	(NA)	(NA)	(NA)	7.58	6.48
Transportation, real (1996) dollars	Cents	(NA)	(NA)	(NA)	(NA)	7.15	5.99
Other users, current dollars	Cents	6.40	6.56	7.03	6.73	(NA)	(NA)
Other users, real (1996) dollars	Cents	7.84	6.56	6.87	6.47	(NA)	(NA)
Net generation, total ²	Bil. kWh	3,038.0	3,802.1	3,736.6	3,858.5	3,883.2	3,953.4
Coal	Bil. kWh	1,594.0	1,966.3	1,904.0	1,933.1	1,973.7	1,976.3
Petroleum	Bil. kWh	126.6	111.2	124.9	94.6	119.4	117.6
Natural gas	Bil. kWh	372.8	601.0	639.1	691.0	649.9	699.6
Nuclear	Bil. kWh	576.9	753.9	768.8	780.1	763.7	788.6
Hydroelectric pumped storage plants	Bil. kWh	-3.5	-5.5	-8.8	-8.7	-8.5	-8.1
Conventional hydroelectric power plants	Bil. kWh	292.9	275.6	217.0	264.3	275.8	269.6
Geothermal	Bil. kWh	15.4	14.1	13.7	14.5	14.4	14.4
Net summer capacity, total ²	Mil. kW	734.1	811.7	848.3	905.3	948.4	968.1
Coal-fired plants	Mil. kW	307.4	315.1	314.2	315.4	313.0	313.3
Petroleum-fired plants	Mil. kW	49.0	35.9	39.7	38.2	36.4	36.6
Natural-gas-fired plants	Mil. kW	56.2	95.7	125.8	171.7	208.4	222.9
Dual-fired plants	Mil. kW	113.6	149.8	153.5	162.3	171.3	175.4
Nuclear electric power plants	Mil. kW	99.6	97.9	98.2	98.7	99.2	99.6
Hydroelectric-pumped storage plants	Mil. kW	19.5	19.5	19.1	20.4	20.5	20.5
Conventional hydroelectric power plants	Mil. kW	73.9	79.4	79.5	79.4	78.7	78.7
Geothermal energy plants	Mil. kW	2.7	2.8	2.2	2.3	2.1	2.1
Fuel consumption:							
Coal	Mil. sh. tons	792.5	994.9	972.7	987.6	1,014.1	1,029.6
Distillate fuel and kerosene	Mil. bbl	18.1	31.7	31.1	23.3	29.7	19.7
Residual fuel	Mil. bbl	190.8	143.4	165.3	109.2	142.5	147.9
Petroleum coke	Mil. sh. tons	1.9	3.7	3.9	6.8	6.3	7.5
Natural gas	Bil. cu. ft.	3,691.6	5,691.5	5,832.3	6,126.1	5,616.1	6,020.3
ELECTRIC POWER SECTOR							
Net generation, total ²	Bil. kWh	2,901.3	3,637.5	3,580.1	3,698.5	3,721.2	3,793.6
Coal	Bil. kWh	1,572.1	1,943.1	1,882.8	1,910.6	1,952.7	1,954.0
Petroleum	Bil. kWh	118.9	105.2	119.1	89.7	113.7	112.5
Natural gas	Bil. kWh	309.5	518.0	554.9	607.7	567.3	618.6
Nuclear	Bil. kWh	576.9	753.9	768.8	780.1	763.7	788.6
Net summer capacity, total ²	Mil. kW	709.9	782.1	818.8	875.8	918.6	938.3
Coal-fired plants	Mil. kW	302.3	310.2	309.8	311.0	308.5	308.9
Petroleum-fired plants	Mil. kW	48.0	34.9	38.4	37.3	35.5	35.6
Natural-gas-fired plants	Mil. kW	47.9	82.6	111.1	157.4	193.9	208.3
Dual-fired plants	Mil. kW	110.8	147.9	152.0	160.4	169.4	173.6
Nuclear electric power plants	Mil. kW	99.6	97.9	98.2	98.7	99.2	99.6
COMBINED HEAT-AND-POWER PLANTS							
Commercial:							
Net generation, total ²	Bil. kWh	5.8	7.9	7.4	7.4	7.5	7.4
Coal	Bil. kWh	0.8	1.1	1.0	1.0	1.2	1.1
Petroleum	Bil. kWh	0.6	0.4	0.4	0.4	0.4	0.4
Natural gas	Bil. kWh	3.3	4.3	4.4	4.3	3.9	4.0
Net summer capacity, total ²	Mil. kW	1.4	2.2	2.9	2.2	2.1	2.1
Coal-fired plants	Mil. kW	0.3	0.3	0.3	0.3	0.3	0.3
Petroleum-fired plants	Mil. kW	0.2	0.3	0.3	0.3	0.3	0.3
Natural-gas-fired plants	Mil. kW	0.2	0.6	1.4	0.5	0.5	0.5
Dual-fired plants	Mil. kW	0.6	0.6	0.6	0.7	0.6	0.6
Industrial:							
Net generation, total ²	Bil. kWh	130.8	156.7	149.2	152.6	154.5	152.4
Coal	Bil. kWh	21.1	22.1	20.1	21.5	19.8	21.2
Petroleum	Bil. kWh	7.2	5.6	5.3	4.4	5.3	4.7
Natural gas	Bil. kWh	60.0	78.8	79.8	79.0	78.7	77.0
Net summer capacity, total ²	Mil. kW	22.9	27.3	26.6	27.3	27.7	27.6
Coal-fired plants	Mil. kW	4.8	4.6	4.2	4.0	4.1	4.1
Petroleum-fired plants	Mil. kW	0.9	0.8	1.0	0.6	0.7	0.7
Natural-gas-fired plants	Mil. kW	8.1	12.5	13.3	13.7	14.1	14.0
Dual-fired plants	Mil. kW	2.2	1.3	0.9	1.1	1.3	1.3

- Represents zero. (NA) Not available. ¹ Preliminary. ² Includes types not shown separately.

Source: U.S. Energy Information Administration, *Annual Energy Review 2004*. See also <<http://www.eia.doe.gov/emeu/aer/elect.html>>

Table 905. Electric Power Industry—Net Generation and Net Summer Capacity by State: 2000 to 2003

[Capacity as of December 31. (3,802.1 represents 3,802,100,000,000) Covers utilities for public use]

State	Net generation (bil. kWh)					Net summer capacity (mil. kW)			
	2003					2000	2001	2002	2003
	2000	2001	2002	Total	Percent from coal				
United States.	3,802.1	3,736.6	3,858.5	3,883.2	50.8	809.4	846.6	905.3	948.4
Alabama	124.4	125.3	132.9	137.5	55.8	23.5	23.8	26.6	30.2
Alaska	6.2	6.7	6.8	6.3	8.7	2.1	2.1	2.0	1.9
Arizona	88.9	89.9	94.1	94.4	100.0	15.3	16.7	19.4	23.5
Arkansas	43.9	47.2	47.6	50.4	46.6	9.7	10.1	11.3	13.5
California	208.1	198.6	184.2	192.8	1.2	51.9	54.2	56.7	57.9
Colorado	44.2	46.9	45.6	46.6	77.5	8.4	8.9	9.4	10.4
Connecticut	33.0	30.5	31.3	29.5	14.2	6.4	7.9	7.4	7.6
Delaware	6.0	6.8	6.0	7.4	54.5	2.1	2.7	3.4	3.4
District of Columbia	0.1	0.1	0.3	0.1	-	0.8	0.8	0.8	0.8
Florida	191.8	190.9	203.4	212.6	31.8	41.5	42.8	47.1	49.4
Georgia	123.9	118.3	126.5	124.1	63.4	27.8	29.5	34.6	34.8
Hawaii	10.6	10.6	11.7	11.0	15.0	2.4	2.3	2.3	2.3
Idaho	11.9	9.3	9.8	10.4	0.9	3.0	3.2	3.3	3.0
Illinois	178.5	179.2	188.1	189.1	46.5	36.3	40.0	44.7	45.5
Indiana	127.8	122.6	125.6	124.9	94.3	23.3	23.6	25.3	25.6
Iowa	41.5	40.7	42.5	42.1	85.1	9.1	9.2	9.3	10.1
Kansas	44.8	44.7	47.2	46.6	75.4	10.1	10.4	10.4	10.9
Kentucky	93.0	95.4	92.1	91.7	91.7	16.8	17.6	19.1	19.1
Louisiana	92.9	87.9	95.0	94.9	24.1	21.0	21.7	25.6	25.7
Maine	14.0	19.6	22.5	19.0	2.0	4.2	4.2	4.3	4.3
Maryland	51.1	49.1	48.3	52.2	57.3	10.4	11.8	11.9	12.5
Massachusetts	38.7	38.5	42.0	48.4	22.5	12.4	11.8	12.2	13.9
Michigan	104.2	111.8	117.9	111.3	60.9	25.8	26.9	29.3	30.4
Minnesota	51.4	48.5	52.8	55.1	64.8	10.3	11.1	11.3	11.5
Mississippi	37.6	53.4	42.9	40.1	42.5	9.0	11.1	13.7	17.3
Missouri	76.6	79.5	81.2	87.2	85.1	17.3	18.9	19.8	20.0
Montana	26.5	24.2	25.5	26.3	64.9	5.2	5.1	5.2	5.2
Nebraska	29.1	30.5	31.6	30.5	68.8	6.0	6.0	6.1	6.7
Nevada	35.5	33.9	32.1	33.2	51.5	6.7	6.9	6.9	7.5
New Hampshire	15.0	15.1	16.0	21.6	18.2	2.9	2.8	3.4	4.2
New Jersey	58.1	59.4	61.6	57.4	17.1	16.5	16.1	18.4	18.6
New Mexico	34.0	33.6	30.7	32.7	88.0	5.6	5.7	5.9	6.3
New York	138.1	143.9	139.6	137.6	17.1	35.6	35.7	36.0	36.7
North Carolina	122.3	117.5	124.5	127.6	58.6	24.5	26.1	26.7	27.3
North Dakota	31.3	30.3	31.3	31.3	94.0	4.7	4.7	4.7	4.7
Ohio	149.1	142.3	147.1	146.6	91.9	28.4	29.5	31.5	34.1
Oklahoma	55.6	55.2	59.2	60.6	60.5	14.1	14.9	16.2	18.2
Oregon	51.8	45.1	47.1	49.0	8.8	11.3	11.8	12.5	12.9
Pennsylvania	201.7	196.6	204.3	206.3	56.2	36.7	37.6	39.8	42.4
Rhode Island	6.0	7.5	7.1	5.6	-	1.2	1.2	1.7	1.7
South Carolina	93.3	89.2	96.6	93.8	39.9	18.7	19.4	20.4	20.7
South Dakota	9.7	7.4	7.7	7.9	43.2	2.8	2.8	2.9	2.7
Tennessee	95.8	96.2	96.1	92.2	59.6	19.5	20.2	20.7	20.9
Texas	377.7	372.6	385.6	379.2	38.8	81.7	87.8	94.5	99.6
Utah	36.6	35.9	36.6	38.0	94.6	5.2	5.3	5.8	5.8
Vermont	6.3	5.5	5.5	6.0	-	1.0	1.0	1.0	1.0
Virginia	77.2	74.1	75.0	75.3	49.3	19.4	20.1	20.2	21.3
Washington	108.2	83.0	102.8	100.1	11.1	26.1	26.6	27.1	27.7
West Virginia	92.9	81.8	94.8	94.7	97.6	15.0	15.7	16.2	16.1
Wisconsin	59.6	58.8	58.4	60.1	69.4	13.6	14.1	14.2	14.3
Wyoming	45.5	44.8	43.8	43.6	97.1	6.2	6.3	6.3	6.6

- Represents zero.

Source: U.S. Energy Information Administration, *Electric Power Annual 2003*. See also <http://www.eia.doe.gov/eneat/electricity/epa/epa_sprdshts.html> (accessed June 1, 2005).

Table 906. Electric Utility Industry—Capability, Peak Load, and Capacity Margin:1980 to 2003

[558,237 represents 558,237,000 kW. Excludes Alaska and Hawaii. Capability represents the maximum kilowatt output with all power sources available and with hydraulic equipment under actual water conditions, allowing for maintenance, emergency outages, and system operating requirements. Capacity margin is the difference between capability and peak load]

Year	Capability at the time of—				Noncoincident peak load		Capacity margin			
	Summer peak load (1,000 kW)		Winter peak load (1,000 kW)		Summer (1,000 kW)	Winter (1,000 kW)	Summer		Winter	
	Amount	Change from prior year	Amount	Change from prior year			Amount (1,000 kW)	Percent of capability	Amount (1,000 kW)	Percent of capability
1980	558,237	13,731	572,195	17,670	427,058	384,567	131,179	23.5	187,628	32.8
1983	596,449	10,307	612,453	14,387	447,526	410,779	148,923	25.0	201,674	32.9
1984	604,240	7,791	622,125	9,672	451,150	436,374	153,090	25.3	185,751	29.9
1985	621,597	17,357	636,475	14,350	460,503	423,660	161,094	25.9	212,815	33.4
1986	633,291	11,694	646,721	10,246	476,320	422,857	156,971	24.8	223,864	34.6
1987	648,118	14,827	662,977	16,256	496,185	448,277	151,933	23.4	214,700	32.4
1988	661,580	13,462	676,940	13,963	529,460	466,533	132,120	20.0	210,407	31.1
1989	673,316	11,736	685,249	8,309	524,110	496,378	149,206	22.2	188,871	27.6
1990	685,091	11,775	696,757	11,508	546,331	484,231	138,760	20.3	212,526	30.5
1991	690,915	5,824	703,212	6,455	551,418	485,761	139,497	20.2	217,451	30.92
1992	695,436	4,521	707,752	4,540	548,707	492,983	146,729	21.1	214,769	30.35
1993	694,250	-1,186	711,957	4,205	575,356	521,733	118,894	17.1	190,224	26.72
1994	702,985	8,735	715,090	3,133	585,320	518,253	117,665	16.7	196,837	27.53
1995	714,222	11,237	727,679	12,589	620,249	544,684	93,973	13.2	182,995	25.15
1996	724,728	10,506	737,637	9,958	616,790	554,081	107,938	14.9	183,556	24.88
1997	725,829	1,101	736,666	-971	637,677	529,874	88,152	12.1	206,792	28.07
1998	724,193	-1,636	735,090	-1,576	660,293	567,558	63,900	8.8	167,532	22.79
1999	733,481	9,288	748,271	13,181	682,122	570,915	51,359	7.0	177,356	23.70
2000	750,771	17,290	767,505	19,234	678,413	588,426	72,358	9.6	179,079	23.33
2001	783,737	32,966	806,598	39,093	687,812	576,312	95,925	12.2	230,286	28.55
2002	825,145	41,408	850,984	44,386	714,565	604,986	110,580	13.4	245,998	28.91
2003 ¹	853,649	28,504	882,120	31,136	709,375	593,874	144,274	16.9	288,246	32.68

¹ Preliminary.

Source: Edison Electric Institute, Washington, DC, *Statistical Yearbook of the Electric Utility Industry*, annual.

Table 907. Electric Energy Retail Sales by Class of Service and State: 2003

[In billions of kilowatt-hours (3,488.2 represents 3,488,200,000,000)]

State	Total ¹	Residential	Commercial	Industrial	State	Total ¹	Residential	Commercial	Industrial
United States	3,488.2	1,273.5	1,199.7	1,008.0	Missouri	74.2	31.4	28.0	14.8
Alabama	83.8	29.4	20.4	34.0	Montana	12.7	4.1	4.1	4.5
Alaska	5.6	2.0	2.5	1.1	Nebraska	25.9	8.9	8.6	8.4
Arizona	64.1	27.7	25.4	10.9	Nevada	30.1	10.3	8.2	11.6
Arkansas	43.1	15.6	10.6	16.9	New Hampshire	11.0	4.3	4.3	2.5
California	238.7	80.7	108.0	49.2	New Jersey	76.6	27.3	36.1	13.1
Colorado	46.5	15.7	19.7	11.1	New Mexico	19.3	5.4	8.1	5.8
Connecticut	31.8	13.2	12.9	5.5	New York	144.2	47.1	72.5	21.7
Delaware	12.6	4.2	3.9	4.5	North Carolina	121.3	49.3	41.7	30.3
District of Columbia	10.9	1.9	8.4	0.3	North Dakota	10.5	3.7	3.8	3.0
Florida	217.4	112.6	85.3	19.4	Ohio	151.4	49.5	44.1	57.8
Georgia	123.7	48.2	40.6	34.8	Oklahoma	50.4	20.2	17.0	13.3
Hawaii	10.4	3.0	3.5	3.8	Oregon	45.2	17.7	15.5	12.0
Idaho	21.2	7.1	5.5	8.7	Pennsylvania	141.0	49.8	46.2	44.2
Illinois	136.0	43.2	51.1	41.2	Rhode Island	7.8	3.0	3.5	1.3
Indiana	100.5	30.7	22.4	47.3	South Carolina	77.1	26.4	19.3	31.3
Iowa	41.2	12.8	11.6	16.8	South Dakota	9.1	3.7	3.7	1.6
Kansas	36.7	12.6	13.8	10.4	Tennessee	97.5	37.7	27.5	32.3
Kentucky	85.2	24.7	17.9	42.6	Texas	322.7	121.4	96.7	104.5
Louisiana	77.8	28.6	21.9	27.3	Utah	23.9	7.2	9.0	7.6
Maine	12.0	4.2	4.0	3.8	Vermont	5.4	2.0	1.9	1.5
Maryland	71.3	26.7	17.0	27.2	Virginia	101.5	40.9	41.2	19.3
Massachusetts	54.7	19.3	25.6	Washington	78.1	31.9	28.0	18.2	
Michigan	108.9	33.7	35.4	39.8	West Virginia	28.3	10.5	7.1	10.7
Minnesota	63.1	20.6	20.5	21.9	Wisconsin	67.2	21.4	20.1	25.8
Mississippi	45.5	17.7	12.6	15.3	Wyoming	13.3	2.3	3.3	7.7

¹ Includes transportation, not shown separately.

Source: U.S. Energy Information Administration, *Electric Sales and Revenue 2003*. See also <http://www.eia.doe.gov/cneat/electricity/esr/esr_sum.html> (issued January 2005).

Table 908. Electric Energy Price by Class of Service and State: 2003

[Revenue (in cents) per kilowatt-hour (kWh). Data include both bundled and unbundled consumers]

State	Total ¹	Residential	Commercial	Industrial	State	Total ¹	Residential	Commercial	Industrial
United States . . .	7.42	8.70	7.98	5.13	Missouri	6.02	6.96	5.78	4.49
Alabama	5.88	7.39	6.85	3.98	Montana	6.16	7.56	7.10	4.01
Alaska	10.50	11.98	10.49	7.86	Nebraska	5.64	6.87	5.81	4.18
Arizona	7.34	8.35	7.09	5.37	Nevada	8.29	9.02	8.79	7.30
Arkansas	5.57	7.24	5.54	4.04	New Hampshire	10.80	11.98	10.44	9.39
California	11.62	12.00	12.19	9.85	New Jersey	9.46	10.69	9.25	7.47
Colorado	6.77	8.14	6.60	5.10	New Mexico	7.00	8.69	7.36	4.95
Connecticut	10.17	11.31	9.99	7.92	New York	12.44	14.31	12.93	7.14
Delaware	6.96	8.59	7.31	5.15	North Carolina	6.86	8.32	6.65	4.79
District of Columbia	7.43	7.66	7.43	5.61	North Dakota	5.47	6.49	5.64	3.96
Florida	7.72	8.55	7.13	5.41	Ohio	6.75	8.27	7.60	4.79
Georgia	6.32	7.70	6.66	4.02	Oklahoma	6.35	7.47	6.38	4.59
Hawaii	14.47	16.73	15.02	12.20	Oregon	6.18	7.06	6.38	4.63
Idaho	5.22	6.24	5.56	4.16	Pennsylvania	7.98	9.55	8.07	6.14
Illinois	6.88	8.38	7.22	4.91	Rhode Island	10.47	11.62	10.00	9.06
Indiana	5.37	7.04	6.12	3.92	South Carolina	6.08	8.01	6.81	4.00
Iowa	6.11	8.57	6.24	4.16	South Dakota	6.35	7.47	6.04	4.51
Kansas	6.35	7.71	6.42	4.61	Tennessee	5.84	6.55	6.68	4.29
Kentucky	4.42	5.81	5.37	3.21	Texas	7.50	9.16	7.84	5.27
Louisiana	6.93	7.84	7.42	5.57	Utah	5.41	6.90	5.59	3.79
Maine	9.79	12.37	10.34	6.35	Vermont	10.98	12.82	11.29	8.05
Maryland	6.45	7.73	6.95	4.89	Virginia	6.27	7.76	5.74	4.23
Massachusetts	10.63	11.68	10.49	9.11	Washington	5.86	6.31	6.07	4.76
Michigan	6.85	8.35	7.55	4.96	West Virginia	5.13	6.24	5.45	3.81
Minnesota	6.01	7.65	6.12	4.36	Wisconsin	6.64	8.67	6.97	4.71
Mississippi	6.46	7.60	7.25	4.48	Wyoming	4.76	7.04	5.74	3.65

¹ Includes transportation, not shown separately.

Source: U.S. Energy Information Administration, *Electric Sales and Revenue 2003*. Also see <http://www.eia.doe.gov/cneaf/electricity/esr/esr_tabs.html>

Table 909. Electric Utilities—Generation, Sales, Revenue, and Customers: 1990 to 2004

[2,808 represents 2,808,000,000,000 kWh. Sales and revenue are to and from ultimate customers. Commercial and Industrial are not wholly comparable on a year-to-year basis due to changes from one classification to another. For the 2003 period forward, the Energy Information Administration replaced the "Other" sector with the Transportation sector. The Transportation sector consists entirely of electrified rail and urban transit systems. Data previously reported in "Other" have been relocated to the Commercial sector, except for Agriculture (i.e., irrigation load), which have been relocated to the Industrial sector]

Class	Unit	1990	1995	1998	1999	2000	2001	2002	2003	2004
Generation ¹	Bil. kWh . . .	2,808	2,995	3,212	3,174	3,015	2,630	2,549	2,462	2,494
Sales ²	Bil. kWh . . .	2,713	3,013	3,264	3,312	3,421	3,370	3,463	3,488	3,551
Residential or domestic	Bil. kWh . . .	924	1,043	1,130	1,145	1,192	1,203	1,267	1,273	1,293
Percent of total	Percent . . .	34.1	34.6	34.6	34.6	34.9	35.7	36.6	36.5	36.4
Commercial ³	Bil. kWh . . .	751	863	979	1,002	1,055	1,089	1,116	1,200	1,229
Industrial ⁴	Bil. kWh . . .	946	1,013	1,051	1,058	1,064	964	972	1,008	1,021
Revenue ²	Bil. dol . . .	178.2	207.7	219.8	219.9	233.2	246.6	249.6	258.8	268.6
Residential or domestic	Bil. dol . . .	72.4	87.6	93.4	93.5	98.2	103.7	107.2	110.8	115.6
Percent of total	Percent . . .	40.6	42.2	42.5	42.5	42.1	42.0	43.0	42.8	43.0
Commercial ³	Bil. dol . . .	55.1	66.4	72.6	72.8	78.4	86.4	87.7	95.8	100.3
Industrial ⁴	Bil. dol . . .	44.9	47.2	47.0	46.8	49.4	48.6	47.5	51.7	52.2
Ultimate customers, Dec. 31 ²	Million . . .	110.1	118.3	124.4	125.9	127.6	130.8	132.9	135.1	136.7
Residential or domestic	Million . . .	97.0	103.9	109.0	110.4	111.7	114.3	116.0	117.6	119.1
Commercial ³	Million . . .	12.1	12.9	13.9	14.1	14.3	14.9	15.2	16.8	16.9
Industrial ⁴	Million . . .	0.5	0.6	0.5	0.6	0.5	0.6	0.6	0.7	0.7
Avg. kWh used per customer	1,000	24.6	25.5	26.2	26.3	26.8	25.8	26.1	25.8	26.0
Residential	1,000	9.5	10.0	10.4	10.4	10.7	10.5	10.9	10.8	10.9
Commercial ³	1,000	62.0	66.6	70.5	71.2	73.5	72.9	73.3	71.4	72.6
Avg. annual bill per customer	Dollar	1,619	1,756	1,767	1,746	1,828	1,885	1,879	1,915	1,965
Residential	Dollar	746	843	856	847	879	907	925	942	971
Commercial ³	Dollar	4,553	5,124	5,226	5,171	5,464	5,780	5,757	5,697	5,929
Avg. revenue per kWh sold	Cents	6.57	6.89	6.74	6.64	6.81	7.32	7.21	7.42	7.57
Residential	Cents	7.83	8.40	8.26	8.17	8.24	8.62	8.46	8.70	8.94
Commercial ³	Cents	7.34	7.69	7.41	7.26	7.43	7.93	7.86	7.98	8.17
Industrial ⁴	Cents	4.74	4.66	4.48	4.43	4.64	5.04	4.88	5.13	5.11

NA Not available. ¹ "Generation" includes batteries, chemicals, hydrogen, pitch, sulfur, and purchased steam. ² Includes other types not shown separately. ³ Small light and power. ⁴ Large light and power.

Source: Edison Electric Institute, Washington, DC, *Statistical Yearbook of the Electric Utility Industry, annual*.

Table 910. Revenue and Expense Statistics for Major U.S. Investor-Owned Electric Utilities: 1995 to 2003

[In millions of nominal dollars (199,967 represents \$199,967,000,000). Covers approximately 180 investor-owned electric utilities that during each of the last 3 years met any one or more of the following conditions—1 mil. megawatt-hours of total sales; 100 megawatt-hours of sales for 3 years, 500 megawatt-hours of gross interchange out, and 500 megawatt-hours of wheeling for other]

Item	1995	1998	1999	2000	2001	2002	2003
Utility operating revenues	199,967	218,175	214,160	235,336	267,525	219,389	226,227
Electric utility	183,655	201,970	197,578	214,707	244,219	200,135	202,369
Other utility	16,312	16,205	16,583	20,630	23,306	19,254	23,858
Utility operating expenses	165,321	186,498	182,258	210,324	235,198	188,745	197,459
Electric utility	150,599	171,689	167,266	191,329	213,733	171,291	175,473
Operation	91,881	110,759	108,461	132,662	159,929	116,374	122,723
Production	68,983	85,956	83,555	107,352	136,089	90,649	96,181
Cost of fuel	29,122	31,252	29,826	32,555	29,490	24,132	26,476
Purchased power	29,981	42,612	43,258	61,969	98,231	58,828	62,173
Other	9,880	12,092	10,470	12,828	8,368	7,688	7,532
Transmission	1,425	2,197	2,423	2,699	2,365	3,494	3,585
Distribution	2,561	2,804	2,956	3,115	3,217	3,113	3,185
Customer accounts	3,613	4,021	4,195	4,246	4,434	4,165	4,180
Customer service	1,922	1,955	1,889	1,839	1,856	1,821	1,893
Sales	348	514	492	403	282	261	234
Administrative and general	13,028	13,311	12,951	13,009	11,686	12,872	13,466
Maintenance	11,767	12,486	12,276	12,185	11,167	10,843	11,141
Depreciation	19,885	24,122	23,968	22,761	20,845	17,319	16,962
Taxes and other	27,065	24,322	22,561	23,721	21,792	26,755	24,648
Other utility	14,722	14,809	14,992	18,995	21,465	17,454	21,986
Net utility operating income	34,646	31,677	31,902	25,012	32,327	30,644	28,768

Source: U.S. Energy Information Administration, *Electric Power Annual 2003*. See also <<http://www.eia.doe.gov/cneaf/electricity/epa/epat8p1.html>> (released December 2004).

Table 911. Uranium Concentrate—Supply, Inventories, and Average Prices: 1980 to 2003

[43.70 represents 43,700,000 pounds (lbs.) Years ending Dec. 31. For additional data on uranium, see Section 18]

Item	Unit	1980	1990	1995	1998	1999	2000	2001	2002	2003
Production ¹	Mil. lb.	43.70	8.89	6.04	4.71	4.61	3.96	2.64	2.34	2.00
Exports ²	Mil. lb.	5.8	2.0	9.8	15.1	8.5	13.6	11.7	15.4	13.2
Imports	Mil. lb.	3.6	23.7	41.3	43.7	47.6	44.9	46.7	52.7	53.0
Electric plant purchases from domestic suppliers	Mil. lb.	(NA)	20.5	22.3	21.6	21.4	24.3	27.5	22.7	21.7
Loaded into U.S. nuclear reactors ³	Mil. lb.	(NA)	(NA)	51.1	38.2	58.8	51.5	52.7	57.2	62.3
Inventories, total	Mil. lb.	(NA)	129.1	72.5	136.5	127.1	111.3	103.8	102.1	85.2
At domestic suppliers	Mil. lb.	(NA)	26.4	13.7	70.7	68.8	56.5	48.1	48.7	39.5
At electric utilities	Mil. lb.	(NA)	102.7	58.7	65.8	58.3	54.8	55.6	53.5	45.7
Average price per pound:										
Purchased imports	Dollars	(NA)	12.55	10.20	11.19	10.55	9.84	9.51	10.05	10.59
Domestic purchases	Dollars	(NA)	15.70	11.11	12.31	11.88	11.45	10.45	10.35	10.84

NA Not available. ¹ Data are for uranium concentrate, a yellow or brown powder obtained by the milling of uranium ore, processing of in situ leach mining solutions, or as a byproduct of phosphoric acid production. ² Trade data prior to 1982 were for transactions conducted by uranium suppliers only. For 1982 forward, transactions by uranium buyers (consumers) have been included. Buyer imports and exports prior to 1982 are believed to be small. ³ Does not include any fuel rods removed from reactors and later reloaded into the reactor.

Source: U.S. Energy Information Administration, *Annual Energy Review 2003*. See also <<http://www.eia.doe.gov/emeu/aer/nuclear.html>> (released September 2004).

Table 912. Nuclear Power Plants—Number, Capacity, and Generation: 1980 to 2004

[51.8 represents 51,800,000 kW]

Item	1980	1985	1990	1995	1997	1998	1999	2000	2001	2002	2003	2004
Operable generating units ^{1, 2, ...}	71	96	112	109	107	104	104	104	104	104	104	104
Net summer capacity ^{2, 3} (mil. kW)	51.8	79.4	99.6	99.5	99.7	97.1	97.4	97.9	98.2	98.7	99.2	99.2
Net generation (bil. kWh)	251.1	383.7	576.9	673.4	628.6	673.7	728.3	753.9	768.8	780.1	763.7	788.6
Percent of total electricity net generation	11.0	15.5	19.0	20.1	18.0	18.6	19.7	19.8	20.6	20.2	19.7	19.9
Capacity factor ⁴ (percent)	56.3	58.0	66.0	77.4	71.1	78.2	85.3	88.1	89.4	90.3	87.9	90.5

¹ Total of nuclear generating units holding full-power licenses, or equivalent permission to operate, at the end of the year. Although Browns Ferry 1 was shut down in 1985, the unit has remained fully licensed and thus has continued to be counted as operable during the shutdown. ² As of year-end. ³ Net summer capacity is the peak steady hourly output that generating equipment is expected to supply to system load, exclusive of auxiliary and other power plant, as demonstrated by test at the time of summer peak demand. ⁴ Weighted average of monthly capacity factors. Monthly factors are derived by dividing actual monthly generation by the maximum possible generation for the month (number of hours in the month multiplied by the net summer capacity at the end of the month).

Source: U.S. Energy Information Administration, *Monthly Energy Review*, 2005. See also <<http://www.eia.doe.gov/emeu/mer/nuclear.html>> (accessed June 2, 2005).

Table 913. Nuclear Power Plants—Number of Units, Net Generation, and Net Summer Capacity by State: 2003

[763,733 represents 763,733,000,000 kWh]

State	Number of units	Net generation		Net summer capacity		State	Number of units	Net generation		Net summer capacity	
		Total (mil. kWh)	Percent of total ¹	Total (mil. kW)	Percent of total ¹			Total (mil. kWh)	Percent of total ¹	Total (mil. kW)	Percent of total ¹
U.S.	104	763,733	19.7	99.21	10.5	MS	1	10,902	27.2	1.26	7.3
AL	5	31,677	23.0	4.97	16.5	MO	1	9,700	11.1	1.14	5.7
AZ	3	28,581	30.3	3.83	16.3	NE	2	7,997	26.3	1.23	18.4
AR	2	14,689	29.1	1.84	13.6	NH	1	9,276	43.0	1.16	27.3
CA	4	35,594	18.5	4.32	7.5	NJ	4	29,709	51.8	3.91	21.0
CT	2	16,078	54.4	2.00	26.4	NY	6	40,679	29.6	5.03	13.7
FL	5	30,979	14.6	3.90	7.9	NC	5	40,907	32.1	4.78	17.5
GA	4	33,257	26.8	4.04	11.6	OH	2	8,475	5.8	2.11	6.2
IL	11	189	0.1	11.47	25.2	PA	9	74,361	36.0	9.18	21.7
IA	1	3,988	9.5	0.56	5.6	SC	7	50,418	53.8	6.47	31.3
KS	1	8,890	19.1	1.17	10.7	TN	3	24,153	26.2	3.40	16.3
LA	2	16,126	17.0	2.07	8.0	TX	4	33,437	8.8	4.77	4.8
MD	2	13,691	26.2	1.70	13.7	VT	1	4,444	73.7	0.51	50.7
MA	1	4,978	10.3	0.68	4.9	VA	4	24,816	33.0	3.47	16.3
MI	4	27,954	25.1	3.97	13.0	WA	1	7,615	7.6	1.11	4.0
MN	3	13,414	24.4	1.61	14.0	WI	3	12,215	20.3	1.57	10.9

¹ For total generation and capacity, see Table 905.

Source: U.S. Energy Information Administration, *Electric Power Annual 2003*. See also <http://www.eia.doe.gov/cneaf/electricity/epa/epa_sprdshts.html>.

Table 914. Solar Collector Shipments by Type, End Use, and Market Sector: 1980 to 2003

[Shipments in thousands of square feet (19,398 represents 19,398,000). Solar collector is a device for intercepting sunlight, converting the light to heat, and carrying the heat to where it will be either used or stored. 1985 data are not available. Based on the Annual Solar Thermal Collector Manufacturers Survey]

Year	Number of manufacturers	Total shipments ^{1, 2, 3}	Collector type		End use			Market sector		
			Low temperature ^{1, 2}	Medium temperature, special, other ²	Pool heating	Hot water	Space heating	Residential	Commercial	Industrial
1980	233	19,398	12,233	7,165	12,029	4,790	1,688	16,077	2,417	488
1986 ⁴	98	9,360	3,751	1,111	3,494	1,181	127	4,131	703	13
1990 ⁴	51	11,409	3,645	2,527	5,016	1,091	2	5,835	294	22
1995	36	7,666	6,813	840	6,763	755	132	6,966	604	82
1999	29	8,583	8,152	427	8,141	373	42	7,774	785	18
2000	26	8,354	7,948	400	7,863	367	99	7,473	810	57
2001	26	11,189	10,919	268	10,797	274	70	10,125	1,012	17
2002	27	11,663	11,046	615	11,073	423	146	11,000	595	62
2003	26	11,444	10,877	559	10,778	-	65	9,993	813	71

- Represents zero. ¹ Includes shipments of high temperature collectors to the government, including some military, but excluding space applications. Also includes end uses such as process heating, utility, and other market sectors not shown separately. ² Includes imputation of shipment data to account for nonrespondents. ³ Total shipments include all domestic and export shipments and may include imported collectors that subsequently were shipped to domestic or foreign customers. ⁴ Declines between 1986 and 1990 are primarily due to the expiration of the Federal energy tax credit and industry consolidation.

Source: U.S. Energy Information Administration, 1980–1990, *Solar Collector Manufacturing Activity*, annual reports; thereafter, *Renewable Energy Annual 2003*. See also <http://www.eia.doe.gov/cneaf/solar.renewables/page/rea_data/rea_sum.html> (released December 2004).

Table 915. Total Renewable Net Generation by Source and State: 2001

[In millions of kilowatt hours (294,946 represents 294,946,000,000) MSW = municipal solid waste]

State	Total ¹	Hydro-electric	MSW/landfill gas	Other Bio-mass ²	Wood/Wood Waste	State	Total ¹	Hydro-electric	MSW/landfill gas	Other Bio-mass ²	Wood/Wood Waste
U.S. ...	294,946	216,961	19,931	1,834	35,200	MO	1,167	1,104	(X)	62	(X)
AL	12,553	8,356	3	21	4,172	MT	6,679	6,613	(X)	(X)	65
AK	1,347	1,346	(X)	(X)	(X)	NE	1,143	1,124	(X)	17	(X)
AZ	7,663	7,624	34	5	(X)	NV	3,714	2,514	(X)	(X)	(X)
AR	4,060	2,548	(X)	7	1,505	NH	2,075	991	226	(X)	859
CA	47,359	25,542	1,861	410	3,324	NJ	1,321	18	1,290	13	(X)
CO	1,608	1,495	(X)	64	(X)	NM	256	237	(X)	19	(X)
CT	2,064	286	1,567	211	(X)	NY	25,694	23,084	2,087	(X)	503
DE	(X)	(X)	(X)	(X)	(X)	NC	4,376	2,596	129	9	1,642
DC	(X)	(X)	(X)	(X)	(X)	ND	1,340	1,332	(X)	8	(X)
FL	5,191	148	2,990	225	1,828	OH	942	511	28	(X)	403
GA	5,606	2,596	29	6	2,974	OK	2,575	2,345	(X)	(X)	231
HI	767	101	402	56	(X)	OR	29,522	28,645	87	(X)	701
ID	7,756	7,223	(X)	(X)	533	PA	4,312	1,650	2,020	34	597
IL	872	144	641	87	(X)	RI	107	3	104	(X)	(X)
IN	701	571	126	4	(X)	SC	2,141	1,225	49	1	866
IA	1,445	845	97	15	(X)	SD	3,433	3,432	(X)	(X)	(X)
KS	65	26	(X)	(X)	(X)	TN	7,775	6,947	49	(X)	779
KY	3,865	3,856	(X)	(X)	(X)	TX	3,395	1,200	51	59	898
LA	3,480	732	(X)	107	2,641	UT	671	588	10	(X)	(X)
ME	6,734	2,645	400	158	3,530	VT	1,267	804	(X)	(X)	370
MD	1,804	1,184	609	-	12	VA	3,158	1,014	991	5	1,148
MA	2,786	703	1,929	24	130	WA	56,021	54,734	175	47	1,065
MI	4,069	1,562	743	64	1,700	WV	978	952	25	(X)	1
MN	3,090	832	780	7	575	WI	3,321	2,056	401	86	705
MS	1,432	(X)	(X)	-	1,432	WY	1,244	879	(X)	(X)	(X)

X Not applicable. - Represents zero. ¹ Includes types not shown separately. ² Agriculture byproducts/crops, sludge waste, tires and other biomass solids, liquids and gases.

Source: Energy Information Administration, *Renewable Energy Annual 2003*. See also <http://www.eia.doe.gov/cneaf/solar.renewables/page/rea_data/trends.pdf> (released December 2004).

Table 916. Privately-Owned Gas Utility Industry—Balance Sheet and Income Account: 1990 to 2003

[In millions of dollars (121,686 represents \$121,686,000,000). The gas utility industry consists of pipeline and distribution companies. Excludes operations of companies distributing gas in bottles or tanks]

Item	1990	1995	1997	1998	1999	2000	2001	2002	2003
COMPOSITE BALANCE SHEET									
Assets, total	121,686	141,965	134,715	119,715	155,413	165,709	171,681	185,064	174,756
Total utility plant	112,863	143,636	140,268	135,092	166,134	162,206	175,530	197,717	188,807
Depreciation and amortization	49,483	62,723	62,554	61,226	73,823	69,366	73,753	85,038	76,642
Utility plant (net)	63,380	80,912	77,714	73,866	92,311	92,839	101,777	112,679	112,165
Investment and fund accounts	23,872	26,489	22,812	12,337	17,344	10,846	10,237	13,000	13,430
Current and accrued assets	23,258	18,564	19,084	17,348	22,443	35,691	29,345	25,786	22,905
Deferred debits	9,576	13,923	12,844	13,721	20,922	24,279	28,553	31,928	24,663
Liabilities, total	121,686	141,965	134,775	119,715	155,413	165,709	171,681	185,064	174,756
Capitalization, total	74,958	90,581	78,887	71,718	95,244	96,079	107,310	117,362	112,089
Capital stock	43,810	54,402	42,530	37,977	5859	760	701	333	305
Long-term debts	31,148	35,548	35,971	33,386	46,906	48,267	49,739	58,962	54,179
Current and accrued liabilities	29,550	28,272	33,507	26,953	32,683	42,312	34,962	30,856	28,599
Deferred income taxes	11,360	14,393	13,636	13,239	17,120	17,157	20,445	24,612	23,888
Other liabilities and credits	5,818	8,715	8,745	7,806	10,365	10,161	8,964	12,235	10,179
COMPOSITE INCOME ACCOUNT									
Operating revenues, total	66,027	58,390	62,617	57,117	59,142	72,042	79,276	68,352	75,527
Minus: Operating expenses ⁴	60,137	50,760	59,375	50,896	38,752	64,988	71,209	60,041	66,677
Operation and maintenance	51,627	37,966	46,070	41,026	41,415	54,602	58,873	48,521	55,036
Federal, state, and local taxes	4,957	6,182	7,182	5,429	5,605	6,163	7,394	6,249	6,581
Equals: Operating income	5,890	7,630	3,242	6,220	20,390	7,053	8,068	8,310	8,852
Utility operating income	6,077	7,848	3,337	6,361	16,614	7,166	8,192	8,564	9,198
Income before interest charges	8,081	9,844	4,193	7,779	17,531	7,589	8,266	9,305	10,053
Net income ³	4,410	5,139	48	4,379	10,420	4,245	4,038	4,792	6,198
Dividends	3,191	4,037	6,258	2,263	5,595	3,239	3,560	3,887	3,765

¹ Includes capital stock discount and expense and reacquired securities. ² Data not comparable to earlier years. ³ Includes reserves for deferred income taxes. ⁴ Includes expenses not shown separately.

Source: American Gas Association, Arlington, VA, *Gas Facts*, annual (copyright).

Table 917. Gas Utility Industry—Summary: 1990 to 2003

[54,261 represents 54,261,000. Covers natural, manufactured, mixed, and liquid petroleum gas. Based on a questionnaire mailed to all privately- and municipally-owned gas utilities in United States, except those with annual revenues less than \$25,000]

Item	Unit	1990	1995	1998	1999	2000	2001	2002	2003
End users ¹	1,000	54,261	58,728	61,528	60,778	61,262	61,385	62,034	62,610
Residential	1,000	49,802	53,955	56,517	56,017	56,494	56,680	57,293	57,802
Commercial	1,000	4,246	4,530	4,825	4,599	4,610	4,546	4,590	4,661
Industrial and other	1,000	166	181	183	159	157	156	149	145
Sales ²	Tril. Btu ³	9,842	9,221	8,781	8,975	9,232	8,667	8,864	8,927
Residential	Tril. Btu	4,468	4,803	4,534	4,622	4,741	4,525	4,589	4,722
Percent of total	Percent	45	52	52	51	51	52	52	53
Commercial	Tril. Btu	2,192	2,281	2,063	2,067	2,077	2,053	2,055	2,125
Industrial	Tril. Btu	3,010	1,919	1,370	1,553	1,698	1,461	1,748	1,672
Other	Tril. Btu	171	218	814	734	715	627	472	408
Revenues ²	Mil. dol.	45,153	46,436	47,084	47,202	59,243	69,150	57,112	72,606
Residential	Mil. dol.	25,000	28,742	30,130	30,095	35,828	42,454	35,062	43,664
Percent of total	Percent	55	62	64	64	60	61	61	60
Commercial	Mil. dol.	10,604	11,573	11,020	10,731	13,339	16,848	13,512	17,349
Industrial	Mil. dol.	8,996	5,571	4,189	4,715	7,432	7,513	6,841	11,525
Other	Mil. dol.	553	549	1,745	1,662	2,645	2,335	1,698	2,115
Prices per mil. Btu ³	Dollars	4.59	5.05	5.36	5.26	6.42	7.98	6.44	8.13
Residential	Dollars	5.60	6.00	6.64	6.51	7.56	9.38	7.64	9.25
Commercial	Dollars	4.84	5.07	5.34	5.19	6.42	8.20	6.57	8.17
Industrial	Dollars	2.99	2.98	3.06	3.04	4.38	5.14	3.84	5.67
Gas mains mileage	1,000	1,189	1,278	1,351	1,340	1,369	1,374	1,411	1,424
Field and gathering	1,000	32	31	29	32	27	20	22	22
Transmission	1,000	292	297	300	301	297	287	310	304
Distribution	1,000	865	950	1,022	1,008	1,046	1,066	1,080	1,098
Construction expenditures ⁴	Mil. dol.	7,899	10,760	10,978	8,320	8,624	9,516	11,552	13,034
Transmission	Mil. dol.	2,886	3,380	3,656	1,785	1,590	3,212	5,184	7,317
Distribution	Mil. dol.	3,714	5,394	5,035	4,180	5,437	4,546	4,890	3,870
Production and storage	Mil. dol.	309	367	598	161	138	113	73	258
General	Mil. dol.	770	1,441	1,389	1,974	1,273	1,457	1,156	1,350
Underground storage	Mil. dol.	219	177	299	220	185	187	249	239

¹ Annual average. ² Excludes sales for resale. ³ For definition of Btu, see text, this section. ⁴ Includes general.

Source: American Gas Association, Arlington, VA, *Gas Facts*, annual (copyright).

Table 918. Gas Utility Industry—Customers, Sales, and Revenues by State: 2003

[62,610 represents 62,610,000. See headnote, Table 917. For definition of Btu, see text, this section]

State	Customers ¹ (1,000)		Sales ² (tril. Btu)		Revenues ² (mil. dol.)		State	Customers ¹ (1,000)		Sales ² (tril. Btu)		Revenues ² (mil. dol.)	
	Total	Residential	Total	Residential	Total	Residential		Total	Residential	Total	Residential	Total	Residential
U.S. . . .	62,610	57,802	8,927	4,722	72,606	43,664	MO	1,486	1,344	176	116	1,588	1,087
AL	877	809	105	48	988	550	MT	264	233	32	21	220	145
AK	114	100	113	17	267	74	NE	457	418	63	36	457	282
AZ	1,014	957	83	36	727	400	NV	645	611	80	34	595	266
AR	625	553	72	39	633	393	NH	103	88	17	8	178	91
CA	10,224	9,765	708	494	6,137	4,467	NJ	2,646	2,437	397	241	3,154	1,971
CO	1,593	1,454	198	125	1,224	821	NM	544	499	53	33	398	266
CT	515	467	85	46	935	575	NY	4,269	3,930	550	360	5,953	4,209
DE	142	130	21	11	192	113	NC	1,064	954	145	68	1,357	751
DC	121	113	16	11	209	142	ND	126	110	24	12	168	86
FL	649	607	45	16	520	252	OH	2,225	2,056	299	215	2,723	2,009
GA	353	319	56	19	480	205	OK	953	872	109	67	882	581
HI	33	30	3	1	54	15	OR	701	625	75	38	640	367
ID	307	274	31	20	218	144	PA	2,558	2,349	357	248	3,657	2,615
IL	3,787	3,548	555	430	4,627	3,668	RI	244	221	30	21	331	239
IN	1,737	1,588	264	164	2,209	1,434	SC	574	516	122	30	981	321
IA	929	832	120	74	1,021	677	SD	171	151	25	13	189	112
KS	935	850	102	71	861	630	TN	1,158	1,024	173	73	1,425	683
KY	800	720	111	60	919	533	TX	4,186	3,860	1,417	213	8,547	1,907
LA	1,023	959	185	50	1,290	487	UT	731	679	90	58	575	401
ME	26	18	5	1	57	15	VT	35	31	8	3	63	31
MA	886	831	98	73	1,054	803	VA	1,007	924	134	78	1,360	890
MD	1,438	1,315	230	130	2,415	1,571	WA	986	896	132	73	1,002	600
MI	3,251	3,011	522	374	3,617	2,655	WV	395	360	59	35	463	293
MN	1,433	1,308	280	138	2,170	1,184	WI	1,699	1,541	255	143	2,153	1,317
MS	491	439	85	28	642	259	WY	83	73	13	7	82	48

¹ Averages for the year. ² Excludes sales for resale.

Source: American Gas Association, Arlington, VA, *Gas Facts*, annual (copyright).

Table 919. Public Drinking Water Systems by Size of Community Served and Source of Water: 2004

[As of **September**. Covers systems that provide water for human consumption through pipes and other constructed conveyances to at least 15 service connections or serve an average of at least 25 persons for at least 60 days a year. Based on reported data in the Safe Drinking Water Information System maintained by the Environmental Protection Agency]

Type of system	Total	Size of community served					Water source	
		500 or fewer persons	501 to 3,300 persons	3,301 to 10,000 persons	10,001 to 100,000	100,000 persons or more	Ground water	Surface water
Total systems	159,796	131,291	19,632	4,913	3,584	376	145,498	14,298
COMMUNITY WATER SYSTEMS ¹								
Number of systems	52,838	30,006	14,212	4,707	3,541	372	41,264	11,574
Percent of systems	100	57	27	9	7	1	78	22
Population served (1,000)	272,496	4,957	20,138	27,346	99,809	120,246	90,500	181,996
Percent of population	100	2	7	10	37	44	33	67
NON-TRANSIENT NON-COMMUNITY WATER SYSTEM ²								
Number of systems	19,375	16,545	2,720	96	14	(NA)	18,647	728
Percent of systems	100	85	14	-	-	(NA)	96	4
Population served (1,000)	5,933	2,302	2,713	517	402	(NA)	5,357	577
Percent of population	100	39	46	9	7	(NA)	90	10
TRANSIENT NON-COMMUNITY WATER SYSTEM ³								
Number of systems	87,583	84,740	2,700	110	29	4	85,587	1,996
Percent of systems	100	97	3	-	-	-	98	2
Population served (1,000)	18,485	7,318	2,668	612	618	7,269	15,691	2,793
Percent of population	100	40	14	3	3	39	85	15

- Represents zero. ¹ A public water system that supplies water to the same population year-round. ² A public water system that regularly supplies water to at least 25 of the same people at least 6 months per year, but not year-round. Some examples are schools, factories, and office buildings which have their own water systems. ³ A public water system that provides water in a place such as a gas station or campground where people do not remain for long periods of time.

Source: U.S. Environmental Protection Agency, *Factoids: Drinking Water and Ground Water Statistics for 2004*, annual reports. See also <<http://www.epa.gov/safewater/data/getdata.html>> (accessed June 2005).

Table 920. Sewage Treatment Facilities: 2002

[Based on the North American Industry Classification System (NAICS), 2002; see text, Section 15]

State	Sewage Treatment Facilities (NAICS 22132)		State	Sewage Treatment Facilities (NAICS 22132)	
	Number of establishments	Paid employees		Number of establishments	Paid employees
U.S.	831	7022	MO	21	(²)
AL	13	(¹)	MT	9	(¹)
AK	5	25	NE	5	(³)
AZ	14	(¹)	NV	4	(³)
AR	7	(¹)	NH	2	(³)
CA	32	199	NJ	15	(⁴)
CO	14	(¹)	NM	3	(³)
CT	8	(²)	NY	22	(⁵)
DE	1	(³)	NC	19	108
DC	(NA)	(NA)	ND	(NA)	(NA)
FL	71	805	OH	16	(¹)
GA	6	(⁴)	OK	9	(¹)
HI	12	87	OR	6	(³)
ID	8	71	PA	116	582
IL	42	(⁴)	RI	5	(⁴)
IN	31	(²)	SC	11	82
IA	5	(¹)	SD	4	(²)
KS	5	(¹)	TN	7	(¹)
KY	10	(²)	TX	71	(⁵)
LA	24	(²)	UT	1	(³)
ME	7	(³)	VT	3	(³)
MD	6	(¹)	VA	17	116
MA	20	(²)	WA	17	(¹)
MI	16	(¹)	WV	19	93
MN	22	(¹)	WI	25	(¹)
MS	19	113	WY	6	(¹)

NA Not available. ¹ 20-99 employees. ² 100-249 employees. ³ 0-19 employees. ⁴ 250-499 employees. ⁵ 1,000-2,499 employees.

Source: U.S. Census Bureau, *County Business Patterns 2002*. See also <<http://censtats.census.gov/cgi-bin/cbpnaic/cbpcmp.pl>> (accessed June 2005).