

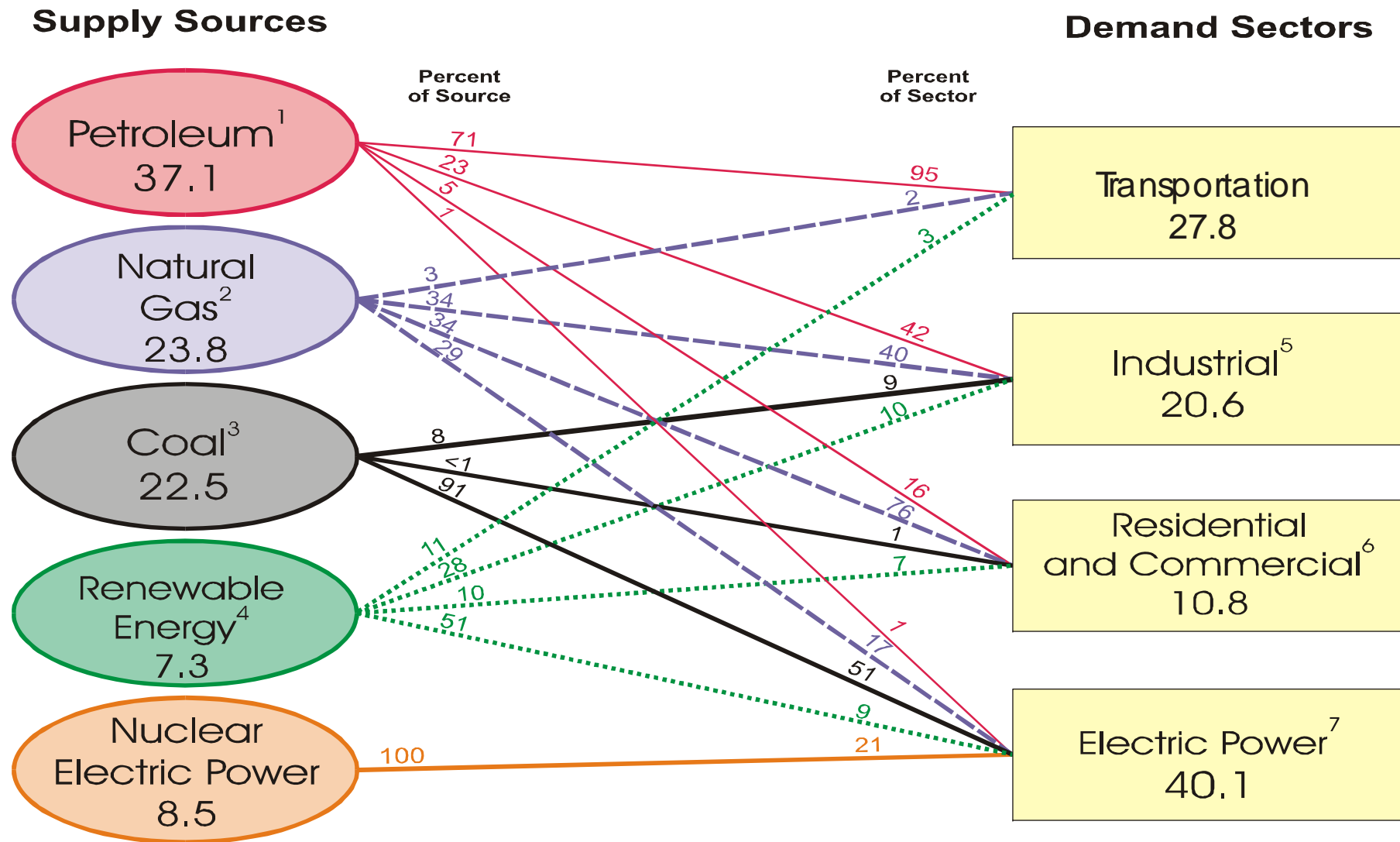
2

Energy Consumption by Sector



Office buildings, industries, residences, and transport systems, Baltimore, Maryland; east view from the inner harbor.
Source: U.S. Department of Energy.

Figure 2.0 Primary Energy Consumption by Source and Sector, 2008
(Quadrillion Btu)



¹ Does not include the fuel ethanol portion of motor gasoline—fuel ethanol is included in "Renewable Energy."

² Excludes supplemental gaseous fuels.

³ Includes less than 0.1 quadrillion Btu of coal coke net imports.

⁴ Conventional hydroelectric power, geothermal, solar/PV, wind, and biomass.

⁵ Includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

⁶ Includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

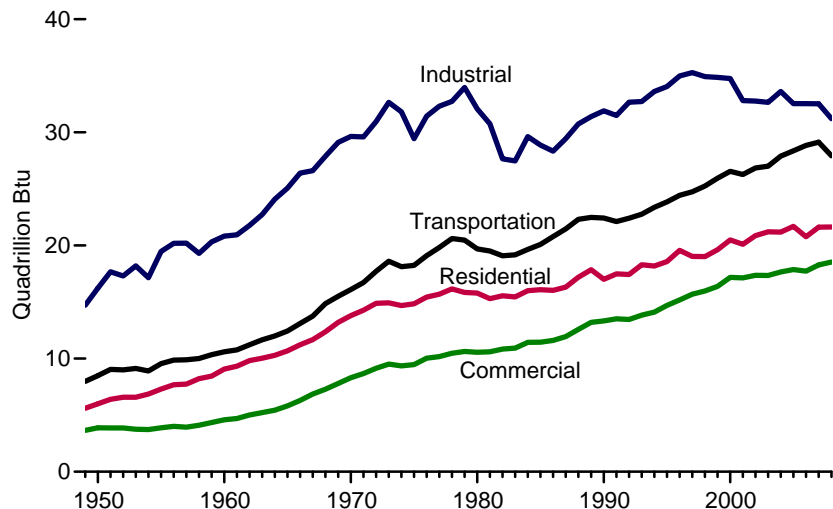
⁷ Electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public.

Note: Sum of components may not equal 100 percent due to independent rounding.

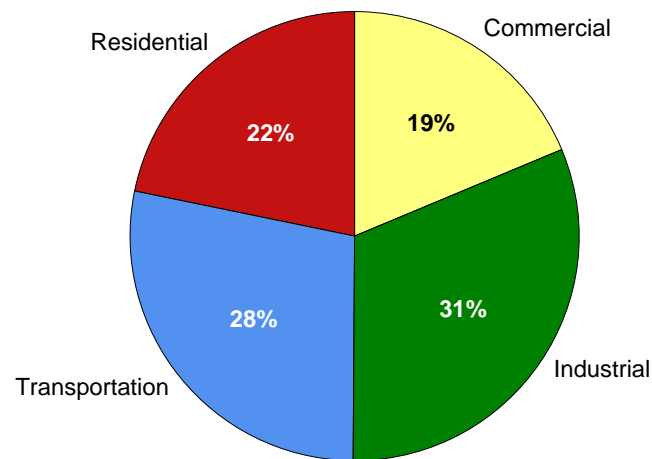
Sources: Energy Information Administration, *Annual Energy Review 2008*, Tables 1.3, 2.1b-2.1f, 10.3, and 10.4.

Figure 2.1a Energy Consumption by Sector Overview

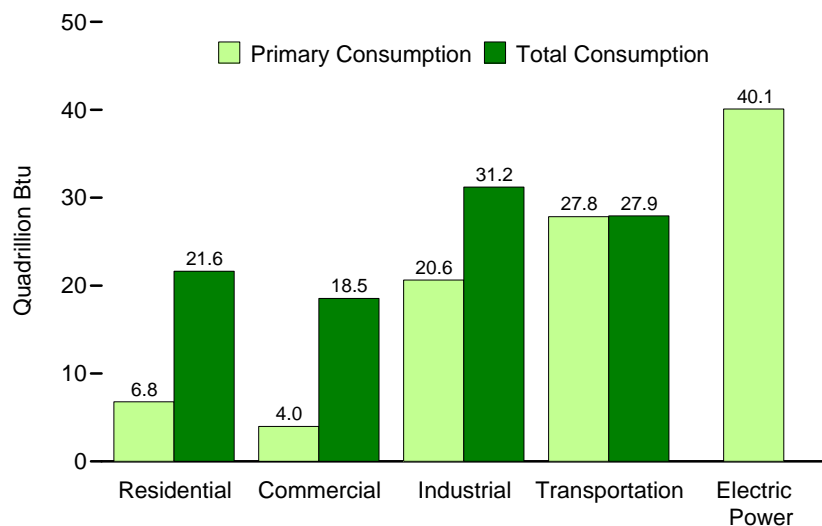
Total Consumption by End-Use Sector, 1949-2008



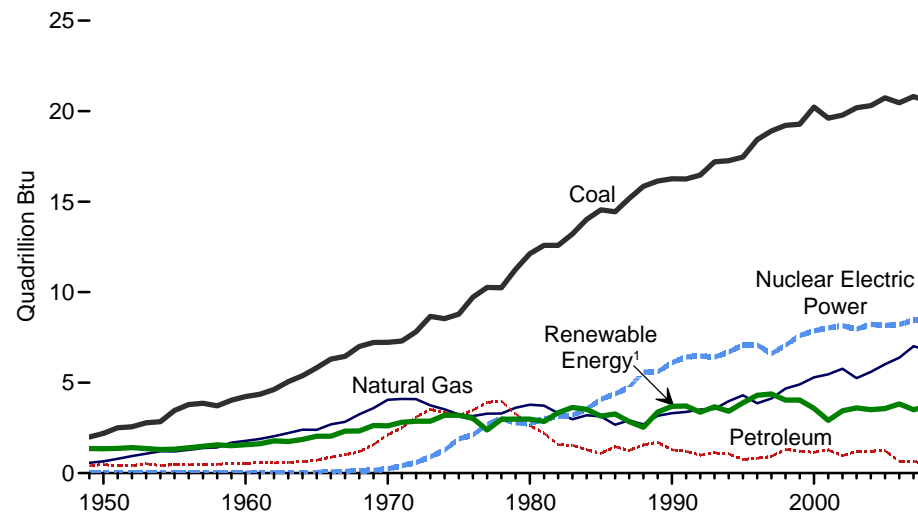
End-Use Sector Shares of Total Consumption, 2008



Primary and Total Consumption by Sector, 2008



Electric Power Sector, 1949-2008

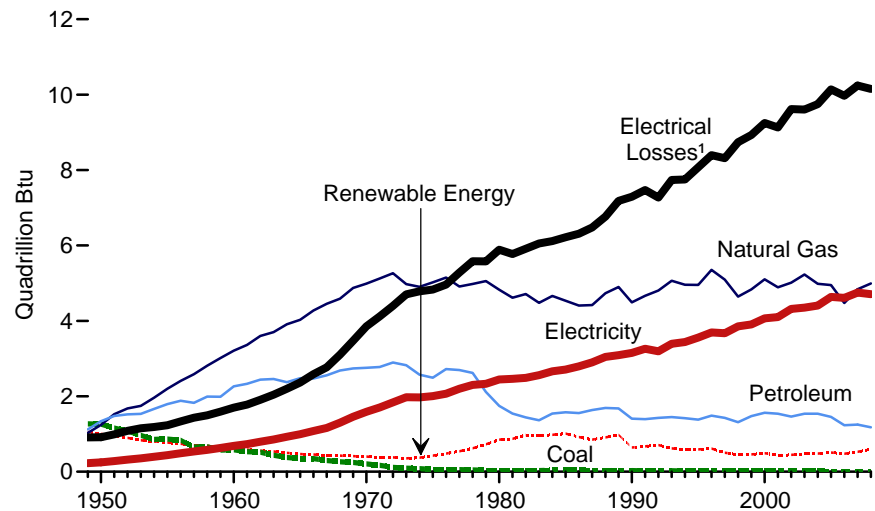


¹ Conventional hydroelectric power, geothermal, solar/photovoltaic, wind, and biomass.
 Note: See Note 2, "Primary Energy Consumption," at end of Section 1.

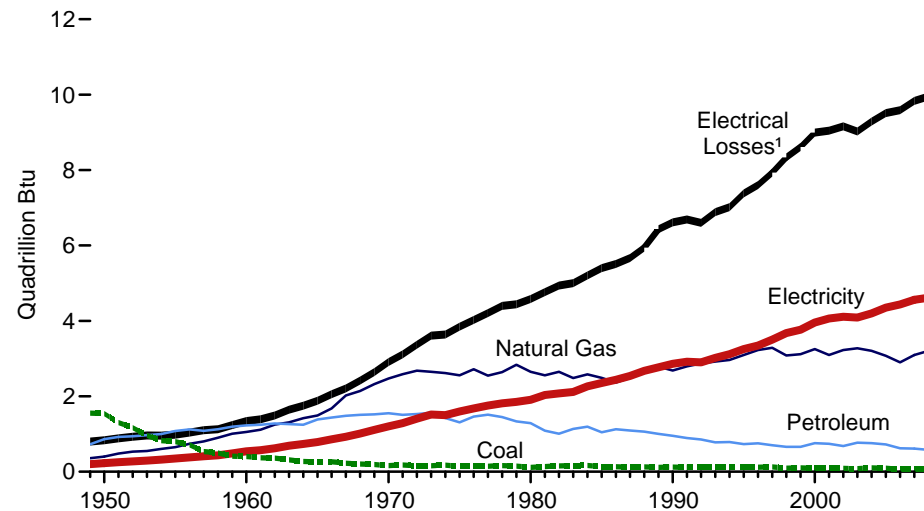
Sources: Tables 2.1a and 2.1f.

Figure 2.1b Energy Consumption by End-Use Sector, 1949-2008

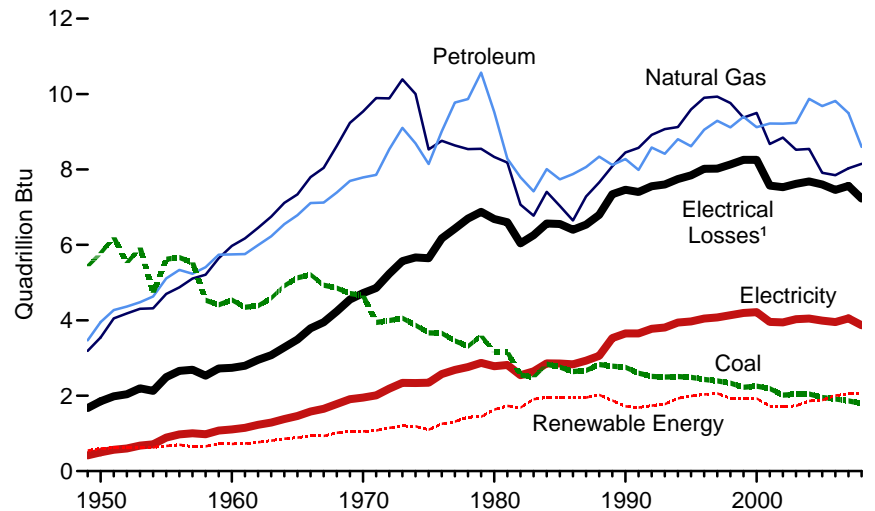
Residential, By Major Source



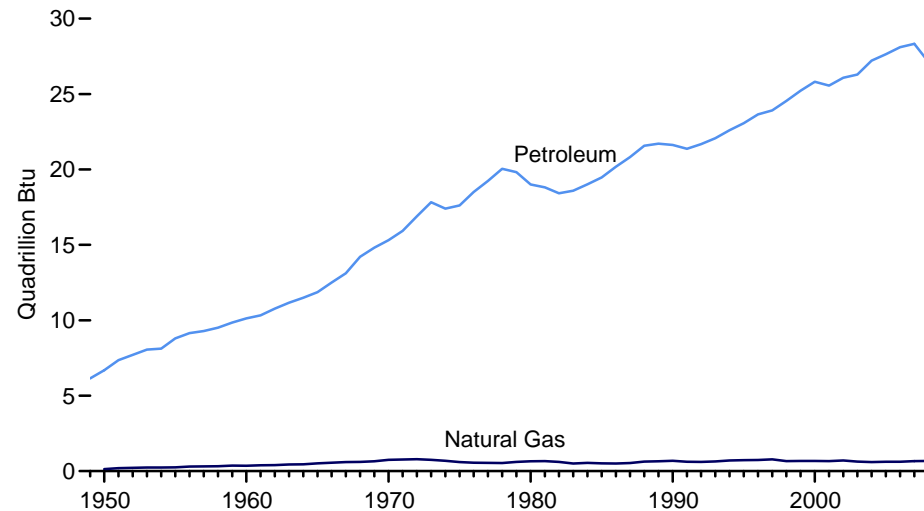
Commercial, By Major Source



Industrial, By Major Source



Transportation, By Major Source



¹ Electrical system energy losses associated with the generation, transmission, and distribution of energy in the form of electricity.

Sources: Tables 2.1b–2.1e.

Table 2.1a Energy Consumption by Sector, Selected Years, 1949-2008
(Trillion Btu)

| Year | End-Use Sectors | | | | | | | | Electric Power Sector ^{3,4} | Balancing Item ⁷ | Total ⁸ |
|-------------------|----------------------|---------------------|-------------------------|---------------------|-------------------------|---------------------|----------------------|---------------------|--------------------------------------|-----------------------------|----------------------|
| | Residential | | Commercial ¹ | | Industrial ² | | Transportation | | | | |
| | Primary ⁵ | Total ⁶ | Primary ⁵ | Total ⁶ | Primary ⁵ | Total ⁶ | Primary ⁵ | Total ⁶ | Primary ⁵ | | |
| 1949 | 4,475 | 5,614 | 2,661 | 3,661 | 12,627 | 14,717 | 7,880 | 7,990 | 4,339 | (s) | 31,982 |
| 1950 | 4,848 | 6,007 | 2,824 | 3,883 | 13,881 | 16,233 | 8,384 | 8,493 | 4,679 | (s) | 34,616 |
| 1955 | 5,633 | 7,303 | 2,548 | 3,882 | 16,091 | 19,472 | 9,475 | 9,551 | 6,461 | (s) | 40,208 |
| 1960 | 6,689 | 9,078 | 2,702 | 4,589 | 16,977 | 20,823 | 10,560 | 10,597 | 8,158 | (s) | 45,087 |
| 1965 | 7,328 | 10,689 | 3,150 | 5,820 | 20,124 | 25,075 | 12,400 | 12,434 | 11,014 | (s) | 54,017 |
| 1970 | 8,353 | 13,798 | 4,196 | 8,307 | 22,975 | 29,641 | 16,061 | 16,098 | 16,259 | (s) | 67,844 |
| 1971 | 8,457 | 14,278 | 4,283 | 8,681 | 22,732 | 29,601 | 16,693 | 16,729 | 17,124 | (s) | 69,289 |
| 1972 | 8,655 | 14,891 | 4,369 | 9,145 | 23,532 | 30,953 | 17,681 | 17,716 | 18,466 | (s) | 72,704 |
| 1973 | 8,250 | 14,930 | 4,381 | 9,507 | 24,741 | 32,653 | 18,576 | 18,612 | 19,753 | 7 | 75,708 |
| 1974 | 7,928 | 14,683 | 4,221 | 9,363 | 23,816 | 31,819 | 18,086 | 18,119 | 19,933 | 7 | 73,991 |
| 1975 | 8,006 | 14,842 | 4,023 | 9,466 | 21,454 | 29,447 | 18,209 | 18,244 | 20,307 | 1 | 71,999 |
| 1976 | 8,408 | 15,441 | 4,333 | 10,035 | 22,685 | 31,430 | 19,065 | 19,099 | 21,513 | 8 | 76,012 |
| 1977 | 8,207 | 15,689 | 4,217 | 10,177 | 23,193 | 32,307 | 19,784 | 19,820 | 22,591 | 7 | 78,000 |
| 1978 | 8,272 | 16,156 | 4,269 | 10,481 | 23,276 | 32,733 | 20,580 | 20,615 | 23,587 | 2 | 79,986 |
| 1979 | 7,934 | 15,842 | 4,333 | 10,627 | ^R 24,212 | 33,962 | 20,436 | 20,471 | 23,987 | 2 | 80,903 |
| 1980 | 7,453 | 15,787 | 4,074 | 10,563 | 22,610 | 32,077 | 19,658 | 19,696 | 24,327 | -1 | 78,122 |
| 1981 | 7,058 | 15,295 | 3,805 | 10,602 | 21,338 | 30,756 | 19,476 | 19,513 | 24,488 | 3 | 76,168 |
| 1982 | 7,154 | 15,557 | 3,835 | 10,847 | ^R 19,076 | ^R 27,657 | 19,051 | 19,088 | 24,034 | 4 | 73,153 |
| 1983 | 6,841 | 15,457 | 3,806 | 10,923 | ^R 18,578 | ^R 27,481 | 19,132 | 19,175 | 24,679 | 3 | ^R 73,039 |
| 1984 | ^R 7,221 | ^R 15,998 | ^R 3,969 | ^R 11,436 | ^R 20,198 | ^R 29,625 | 19,607 | 19,654 | 25,719 | 3 | ^R 76,715 |
| 1985 | 7,161 | 16,088 | 3,695 | 11,444 | ^R 19,468 | ^R 28,877 | 20,041 | 20,087 | 26,132 | -4 | ^R 76,493 |
| 1986 | 6,922 | 16,029 | 3,657 | 11,604 | ^R 19,099 | ^R 28,333 | 20,740 | 20,789 | 26,338 | 3 | ^R 76,759 |
| 1987 | 6,941 | 16,321 | 3,736 | 11,943 | ^R 19,977 | ^R 29,444 | 21,419 | 21,469 | 27,104 | -3 | ^R 79,175 |
| 1988 | 7,372 | 17,186 | 3,958 | 12,575 | ^R 20,884 | ^R 30,739 | 22,267 | 22,318 | 28,338 | 3 | ^R 82,822 |
| 1989 | 7,586 | 17,858 | 4,004 | 13,203 | ^R 20,897 | ^R 31,398 | 22,425 | 22,479 | ⁴ 30,025 | 9 | ^R 84,946 |
| 1990 | 6,570 | 17,015 | 3,858 | 13,333 | ^R 21,208 | ^R 31,895 | 22,366 | 22,420 | 30,660 | -9 | ^R 84,654 |
| 1991 | 6,758 | 17,490 | 3,906 | ^R 13,513 | ^R 20,854 | ^R 31,487 | 22,065 | 22,118 | 31,025 | 1 | ^R 84,609 |
| 1992 | 6,963 | 17,427 | 3,951 | 13,454 | ^R 21,787 | ^R 32,661 | 22,363 | 22,416 | 30,893 | (s) | ^R 85,958 |
| 1993 | 7,156 | 18,289 | 3,934 | 13,836 | ^R 21,785 | ^R 32,721 | 22,716 | 22,770 | 32,025 | -10 | ^R 87,605 |
| 1994 | 6,991 | 18,181 | 3,979 | 14,111 | ^R 22,422 | ^R 33,607 | 23,312 | 23,367 | 32,563 | -6 | ^R 89,261 |
| 1995 | 6,946 | 18,578 | 4,063 | 14,698 | ^R 22,748 | ^R 34,047 | 23,793 | 23,849 | 33,621 | 3 | ^R 91,174 |
| 1996 | 7,471 | 19,562 | 4,235 | 15,181 | ^R 23,444 | ^R 34,989 | 24,384 | 24,439 | 34,638 | 4 | ^R 94,176 |
| 1997 | 7,040 | 19,026 | 4,257 | 15,694 | ^R 23,722 | 35,288 | 24,697 | 24,752 | 35,045 | 6 | ^R 94,766 |
| 1998 | 6,424 | 19,021 | 3,964 | 15,979 | 23,211 | 34,928 | 25,203 | 25,258 | 36,385 | -3 | 95,183 |
| 1999 | 6,784 | 19,621 | 4,007 | 16,384 | 22,991 | 34,855 | 25,894 | 25,951 | 37,136 | 6 | 96,817 |
| 2000 | 7,169 | 20,488 | 4,227 | 17,176 | 22,871 | 34,757 | 26,492 | 26,552 | 38,214 | 2 | 98,975 |
| 2001 | 6,879 | 20,106 | 4,036 | 17,141 | 21,836 | 32,806 | ^R 26,216 | ^R 26,279 | 37,366 | -6 | 96,326 |
| 2002 | 6,938 | 20,874 | 4,099 | 17,367 | 21,857 | ^R 32,764 | ^R 26,788 | ^R 26,849 | 38,171 | 5 | 97,858 |
| 2003 | 7,252 | 21,208 | 4,239 | 17,351 | 21,576 | 32,650 | 26,928 | 27,002 | 38,218 | -3 | 98,209 |
| 2004 | 7,019 | 21,178 | 4,180 | 17,664 | 22,455 | 33,609 | 27,820 | 27,899 | 38,876 | (s) | 100,351 |
| 2005 | ^R 6,921 | ^R 21,697 | 4,014 | 17,875 | ^R 21,466 | ^R 32,545 | 28,280 | 28,361 | 39,799 | 6 | ^R 100,485 |
| 2006 | ^R 6,191 | ^R 20,770 | ^R 3,703 | ^R 17,724 | ^R 21,632 | ^R 32,541 | ^R 28,761 | ^R 28,841 | 39,589 | (s) | ^R 99,875 |
| 2007 | ^R 6,626 | ^R 21,619 | ^R 3,896 | ^R 18,287 | ^R 21,454 | ^R 32,523 | ^R 29,046 | ^R 29,134 | ^R 40,542 | ^R -10 | ^R 101,554 |
| 2008 ^P | 6,778 | 21,637 | 3,972 | 18,541 | 20,630 | 31,210 | 27,842 | 27,925 | 40,090 | -10 | 99,304 |

¹ Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

² Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

³ Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

⁴ Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

⁵ See "Primary Energy Consumption" in Glossary.

⁶ Total energy consumption in the end-use sectors consists of primary energy consumption, electricity retail sales, and electrical system energy losses. See Note, "Electrical System Energy Losses," at end of

section.

⁷ A balancing item. The sum of primary consumption in the five energy-use sectors equals the sum of total consumption in the four end-use sectors. However, total energy consumption does not equal the sum of the sectoral components due to the use of sector-specific conversion factors for natural gas and coal.

⁸ Primary energy consumption total. See Table 1.3.

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

Notes: • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 8.

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

Web Page: For all data beginning in 1949, see <http://www.eia.doe.gov/emeu/aer/consump.html>.

Sources: Tables 1.3 and 2.1b-2.1f.

Table 2.1b Residential Sector Energy Consumption, Selected Years, 1949-2008
(Trillion Btu)

| Year | Primary Consumption ¹ | | | | | | | | Total Primary | Electricity Retail Sales ⁴ | Electrical System Energy Losses ⁵ | Total |
|-------------------|----------------------------------|--------------------------|-----------|--------|-------------------------------|----------|---------|-------|---------------|---------------------------------------|--|---------|
| | Fossil Fuels | | | | Renewable Energy ² | | | | | | | |
| | Coal | Natural Gas ³ | Petroleum | Total | Geothermal | Solar/PV | Biomass | Total | | | | |
| 1949 | 1,272 | 1,027 | 1,121 | 3,420 | NA | NA | 1,055 | 1,055 | 4,475 | 228 | 911 | 5,614 |
| 1950 | 1,261 | 1,240 | 1,340 | 3,842 | NA | NA | 1,006 | 1,006 | 4,848 | 246 | 913 | 6,007 |
| 1955 | 867 | 2,198 | 1,792 | 4,858 | NA | NA | 775 | 775 | 5,633 | 438 | 1,232 | 7,303 |
| 1960 | 585 | 3,212 | 2,265 | 6,062 | NA | NA | 627 | 627 | 6,689 | 687 | 1,701 | 9,078 |
| 1965 | 352 | 4,028 | 2,481 | 6,860 | NA | NA | 468 | 468 | 7,328 | 993 | 2,368 | 10,689 |
| 1970 | 209 | 4,987 | 2,755 | 7,952 | NA | NA | 401 | 401 | 8,353 | 1,591 | 3,854 | 13,798 |
| 1971 | 172 | 5,126 | 2,777 | 8,075 | NA | NA | 382 | 382 | 8,457 | 1,704 | 4,116 | 14,278 |
| 1972 | 116 | 5,264 | 2,895 | 8,276 | NA | NA | 380 | 380 | 8,655 | 1,838 | 4,397 | 14,891 |
| 1973 | 94 | 4,977 | 2,825 | 7,896 | NA | NA | 354 | 354 | 8,250 | 1,976 | 4,703 | 14,930 |
| 1974 | 82 | 4,901 | 2,573 | 7,557 | NA | NA | 371 | 371 | 7,928 | 1,973 | 4,783 | 14,683 |
| 1975 | 63 | 5,023 | 2,495 | 7,580 | NA | NA | 425 | 425 | 8,006 | 2,007 | 4,829 | 14,842 |
| 1976 | 59 | 5,147 | 2,720 | 7,927 | NA | NA | 482 | 482 | 8,408 | 2,069 | 4,963 | 15,441 |
| 1977 | 57 | 4,913 | 2,695 | 7,666 | NA | NA | 542 | 542 | 8,207 | 2,202 | 5,280 | 15,689 |
| 1978 | 49 | 4,981 | 2,620 | 7,651 | NA | NA | 622 | 622 | 8,272 | 2,301 | 5,582 | 16,156 |
| 1979 | 37 | 5,055 | 2,114 | 7,206 | NA | NA | 728 | 728 | 7,934 | 2,330 | 5,578 | 15,842 |
| 1980 | 31 | 4,825 | 1,748 | 6,603 | NA | NA | 850 | 850 | 7,453 | 2,448 | 5,885 | 15,787 |
| 1981 | 30 | 4,614 | 1,543 | 6,188 | NA | NA | 870 | 870 | 7,058 | 2,464 | 5,773 | 15,295 |
| 1982 | 32 | 4,711 | 1,441 | 6,184 | NA | NA | 970 | 970 | 7,154 | 2,489 | 5,914 | 15,557 |
| 1983 | 31 | 4,478 | 1,362 | 5,871 | NA | NA | 970 | 970 | 6,841 | 2,562 | 6,054 | 15,457 |
| 1984 | 40 | 4,661 | R1,540 | R6,241 | NA | NA | 980 | 980 | R7,221 | 2,662 | 6,116 | R15,998 |
| 1985 | 39 | 4,534 | 1,578 | 6,151 | NA | NA | 1,010 | 1,010 | 7,161 | 2,709 | 6,219 | 16,088 |
| 1986 | 40 | 4,405 | 1,556 | 6,002 | NA | NA | 920 | 920 | 6,922 | 2,795 | 6,313 | 16,029 |
| 1987 | 37 | 4,420 | 1,634 | 6,091 | NA | NA | 850 | 850 | 6,941 | 2,902 | 6,479 | 16,321 |
| 1988 | 37 | 4,735 | 1,690 | 6,462 | NA | NA | 910 | 910 | 7,372 | 3,046 | 6,768 | 17,186 |
| 1989 | 31 | 4,899 | 1,679 | 6,608 | 5 | 53 | 920 | 978 | 7,586 | 3,090 | 7,182 | 17,858 |
| 1990 | 31 | 4,491 | 1,407 | 5,929 | 6 | 56 | 580 | 641 | 6,570 | 3,153 | 7,291 | 17,015 |
| 1991 | 25 | 4,667 | 1,392 | 6,085 | 6 | 58 | 610 | 674 | 6,758 | 3,260 | 7,472 | 17,490 |
| 1992 | 26 | 4,805 | 1,427 | 6,257 | 6 | 60 | 640 | 706 | 6,963 | 3,193 | 7,270 | 17,427 |
| 1993 | 26 | 5,063 | 1,448 | 6,537 | 7 | 62 | 550 | 618 | 7,156 | 3,394 | 7,739 | 18,289 |
| 1994 | 21 | 4,960 | 1,420 | 6,401 | 6 | 64 | 520 | 590 | 6,991 | 3,441 | 7,750 | 18,181 |
| 1995 | 17 | 4,954 | 1,383 | 6,355 | 7 | 65 | 520 | 591 | 6,946 | 3,557 | 8,075 | 18,578 |
| 1996 | 17 | 5,354 | 1,488 | 6,859 | 7 | 65 | 540 | 612 | 7,471 | 3,694 | 8,397 | 19,562 |
| 1997 | 16 | 5,093 | 1,428 | 6,537 | 8 | 65 | 430 | 503 | 7,040 | 3,671 | 8,315 | 19,026 |
| 1998 | 12 | 4,646 | 1,314 | 5,971 | 8 | 65 | 380 | 452 | 6,424 | 3,856 | 8,741 | 19,021 |
| 1999 | 14 | 4,835 | 1,473 | 6,322 | 9 | 64 | 390 | 462 | 6,784 | 3,906 | 8,931 | 19,621 |
| 2000 | 11 | 5,105 | 1,563 | 6,679 | 9 | 61 | 420 | 490 | 7,169 | 4,069 | 9,250 | 20,488 |
| 2001 | 12 | 4,889 | 1,539 | 6,440 | 9 | 60 | 370 | 439 | 6,879 | 4,100 | 9,127 | 20,106 |
| 2002 | 12 | 5,014 | 1,463 | 6,489 | 10 | 59 | 380 | 449 | 6,938 | 4,317 | 9,619 | 20,874 |
| 2003 | 12 | 5,230 | 1,539 | 6,781 | 13 | 58 | 400 | 471 | 7,252 | 4,353 | 9,603 | 21,208 |
| 2004 | 11 | 4,986 | 1,539 | 6,537 | 14 | 59 | 410 | 483 | 7,019 | 4,408 | 9,750 | 21,178 |
| 2005 | 8 | 4,951 | 1,455 | 6,414 | 16 | 61 | R430 | R507 | R6,921 | 4,638 | 10,139 | R21,697 |
| 2006 | 6 | 4,476 | R1,233 | R5,715 | 18 | 67 | R390 | R475 | R6,191 | 4,611 | 9,968 | R20,770 |
| 2007 | R8 | R4,840 | R1,251 | R6,099 | 22 | R75 | R430 | R527 | R6,626 | R4,750 | R10,243 | R21,619 |
| 2008 ^P | 7 | 4,994 | 1,178 | 6,179 | 26 | 83 | 490 | 599 | 6,778 | 4,706 | 10,152 | 21,637 |

¹ See "Primary Energy Consumption" in Glossary.

² Data are estimates. See Table 10.2a for notes on series components.

³ Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 1, "Supplemental Gaseous Fuels," at end of Section 6.

⁴ Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

⁵ Total losses are calculated as the primary energy consumed by the electric power sector minus the

energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note, "Electrical System Energy Losses," at end of section.

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

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

Web Page: For all data beginning in 1949, see <http://www.eia.doe.gov/erneu/aer/consump.html>.

Sources: Tables 2.1f, 5.14a, 6.5, 7.3, 8.9, 10.2a, A4, A5, and A6.

Table 2.1c Commercial Sector Energy Consumption, Selected Years, 1949-2008
(Trillion Btu)

| Year | Primary Consumption ¹ | | | | | | | | | Electricity Retail Sales ⁶ | Electrical System Energy Losses ⁷ | Total |
|-------------------|----------------------------------|--------------------------|------------------------|--------------------|----------------------------------|------------|------------------|------------------|--------------------|---------------------------------------|--|---------------------|
| | Fossil Fuels | | | | Renewable Energy ² | | | | Total Primary | | | |
| | Coal | Natural Gas ³ | Petroleum ⁴ | Total | Hydroelectric Power ⁵ | Geothermal | Biomass | Total | | | | |
| 1949 | 1,554 | 360 | 727 | 2,641 | NA | NA | 20 | 20 | 2,661 | 200 | 800 | 3,661 |
| 1950 | 1,542 | 401 | 862 | 2,805 | NA | NA | 19 | 19 | 2,824 | 225 | 834 | 3,883 |
| 1955 | 801 | 651 | 1,081 | 2,533 | NA | NA | 15 | 15 | 2,548 | 350 | 984 | 3,882 |
| 1960 | 407 | 1,056 | 1,228 | 2,690 | NA | NA | 12 | 12 | 2,702 | 543 | 1,344 | 4,589 |
| 1965 | 265 | 1,490 | 1,386 | 3,142 | NA | NA | 9 | 9 | 3,150 | 789 | 1,880 | 5,820 |
| 1970 | 165 | 2,473 | 1,551 | 4,189 | NA | NA | 8 | 8 | 4,196 | 1,201 | 2,910 | 8,307 |
| 1971 | 179 | 2,587 | 1,510 | 4,276 | NA | NA | 7 | 7 | 4,283 | 1,288 | 3,111 | 8,681 |
| 1972 | 153 | 2,678 | 1,530 | 4,362 | NA | NA | 7 | 7 | 4,369 | 1,408 | 3,368 | 9,145 |
| 1973 | 160 | 2,649 | 1,565 | 4,374 | NA | NA | 7 | 7 | 4,381 | 1,517 | 3,609 | 9,507 |
| 1974 | 175 | 2,617 | 1,423 | 4,214 | NA | NA | 7 | 7 | 4,221 | 1,501 | 3,640 | 9,363 |
| 1975 | 147 | 2,558 | 1,310 | 4,015 | NA | NA | 8 | 8 | 4,023 | 1,598 | 3,845 | 9,466 |
| 1976 | 144 | 2,718 | 1,461 | 4,323 | NA | NA | 9 | 9 | 4,333 | 1,678 | 4,025 | 10,035 |
| 1977 | 148 | 2,548 | 1,511 | 4,207 | NA | NA | 10 | 10 | 4,217 | 1,754 | 4,206 | 10,177 |
| 1978 | 165 | 2,643 | 1,450 | 4,257 | NA | NA | 12 | 12 | 4,269 | 1,813 | 4,398 | 10,481 |
| 1979 | 149 | 2,836 | 1,334 | 4,319 | NA | NA | 14 | 14 | 4,333 | 1,854 | 4,439 | 10,627 |
| 1980 | 115 | 2,651 | 1,287 | 4,053 | NA | NA | 21 | 21 | 4,074 | 1,906 | 4,582 | 10,563 |
| 1981 | 137 | 2,557 | 1,090 | 3,784 | NA | NA | 21 | 21 | 3,805 | 2,033 | 4,763 | 10,602 |
| 1982 | 155 | 2,650 | 1,008 | 3,813 | NA | NA | 22 | 22 | 3,835 | 2,077 | 4,935 | 10,847 |
| 1983 | 162 | 2,486 | 1,136 | 3,784 | NA | NA | 22 | 22 | 3,806 | 2,116 | 5,001 | 10,923 |
| 1984 | 169 | 2,582 | ^R 1,195 | ^R 3,946 | NA | NA | 22 | 22 | ^R 3,969 | 2,264 | 5,203 | ^R 11,436 |
| 1985 | 137 | 2,488 | 1,045 | 3,670 | NA | NA | 24 | 24 | 3,695 | 2,351 | 5,398 | 11,444 |
| 1986 | 135 | 2,367 | 1,126 | 3,629 | NA | NA | 27 | 27 | 3,657 | 2,439 | 5,508 | 11,604 |
| 1987 | 125 | 2,489 | 1,093 | 3,707 | NA | NA | 30 | 30 | 3,736 | 2,539 | 5,669 | 11,943 |
| 1988 | 131 | 2,731 | 1,063 | 3,925 | NA | NA | 33 | 33 | 3,958 | 2,675 | 5,943 | 12,575 |
| 1989 | 115 | 2,785 | 1,002 | 3,902 | 1 | 3 | 99 | 102 | 4,004 | 2,767 | 6,431 | 13,203 |
| 1990 | 124 | 2,682 | 953 | 3,760 | 1 | 3 | 94 | 98 | 3,858 | 2,860 | 6,615 | 13,333 |
| 1991 | 116 | 2,795 | 895 | 3,806 | 1 | 3 | 95 | 100 | 3,906 | 2,918 | 6,689 | ^R 13,513 |
| 1992 | 117 | 2,871 | 854 | 3,842 | 1 | 3 | 105 | 109 | 3,951 | 2,900 | 6,603 | 13,454 |
| 1993 | 117 | 2,923 | 780 | 3,820 | 1 | 3 | 109 | 114 | 3,934 | 3,019 | 6,883 | 13,836 |
| 1994 | 118 | 2,962 | 787 | 3,867 | 1 | 4 | 106 | 112 | 3,979 | 3,116 | 7,017 | 14,111 |
| 1995 | 117 | 3,096 | 732 | 3,945 | 1 | 5 | 113 | 118 | 4,063 | 3,252 | 7,382 | 14,698 |
| 1996 | 122 | 3,226 | 751 | 4,099 | 1 | 5 | 129 | 135 | 4,235 | 3,344 | 7,603 | 15,181 |
| 1997 | 129 | 3,285 | 704 | 4,118 | 1 | 6 | 131 | 138 | 4,257 | 3,503 | 7,935 | 15,694 |
| 1998 | 93 | 3,083 | 661 | 3,837 | 1 | 7 | 118 | 127 | 3,964 | 3,678 | 8,338 | 15,979 |
| 1999 | 103 | 3,115 | 661 | 3,879 | 1 | 7 | 121 | 129 | 4,007 | 3,766 | 8,610 | 16,384 |
| 2000 | 92 | 3,252 | 756 | 4,099 | 1 | 8 | 119 | 128 | 4,227 | 3,956 | 8,993 | 17,176 |
| 2001 | 97 | 3,097 | 741 | 3,935 | 1 | 8 | 92 | 101 | 4,036 | 4,062 | 9,043 | 17,141 |
| 2002 | 90 | 3,225 | 680 | 3,995 | (s) | 9 | 95 | 104 | 4,099 | 4,110 | 9,158 | 17,367 |
| 2003 | 82 | 3,274 | 770 | 4,126 | 1 | 11 | 101 | 113 | 4,239 | 4,090 | 9,023 | 17,351 |
| 2004 | 103 | 3,204 | 755 | 4,062 | 1 | 12 | 105 | 118 | 4,180 | 4,198 | 9,286 | 17,664 |
| 2005 | 97 | 3,076 | 721 | 3,894 | 1 | 14 | 105 | 119 | 4,014 | 4,351 | 9,511 | 17,875 |
| 2006 | ^R 65 | ^R 2,902 | ^R 620 | ^R 3,586 | 1 | 14 | 102 | 117 | ^R 3,703 | 4,435 | 9,586 | ^R 17,724 |
| 2007 | ^R 70 | ^R 3,095 | ^R 613 | ^R 3,778 | 1 | 14 | ^R 102 | ^R 118 | ^R 3,896 | ^R 4,560 | ^R 9,832 | ^R 18,287 |
| 2008 ^P | 67 | 3,204 | 578 | 3,850 | 1 | 15 | 107 | 123 | 3,972 | 4,615 | 9,955 | 18,541 |

¹ See "Primary Energy Consumption" in Glossary.

² Most data are estimates. See Table 10.2a for notes on series components and estimation.

³ Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 1, "Supplemental Gaseous Fuels," at end of Section 6.

⁴ Does not include the fuel ethanol portion of motor gasoline—fuel ethanol is included in "Biomass."

⁵ Conventional hydroelectric power.

⁶ Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

⁷ Total losses are calculated as the primary energy consumed by the electric power sector minus the

energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note, "Electrical System Energy Losses," at end of section.

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

Notes: • The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 8. • Totals may not equal sum of components due to independent rounding.

Web Page: For all data beginning in 1949, see <http://www.eia.doe.gov/emeu/aer/consump.html>.

Sources: Tables 2.1f, 5.14a, 6.5, 7.3, 8.9, 10.2a, A4, A5, and A6.

Table 2.1d Industrial Sector Energy Consumption, Selected Years, 1949-2008

(Trillion Btu)

| Year | Primary Consumption ¹ | | | | | | | | | | Electricity Retail Sales ⁶ | Electrical System Energy Losses ⁷ | Total |
|-------------------|----------------------------------|-----------------------|--------------------------|------------------------|---------|----------------------------------|------------|---------|--------|---------------|---------------------------------------|--|---------|
| | Fossil Fuels | | | | | Renewable Energy ² | | | | | | | |
| | Coal | Coal Coke Net Imports | Natural Gas ³ | Petroleum ⁴ | Total | Hydroelectric Power ⁵ | Geothermal | Biomass | Total | Total Primary | | | |
| 1949 | 5,433 | -7 | 3,188 | 3,468 | 12,083 | 76 | NA | 468 | 544 | 12,627 | 418 | 1,672 | 14,717 |
| 1950 | 5,781 | 1 | 3,546 | 3,951 | 13,279 | 69 | NA | 532 | 602 | 13,881 | 500 | 1,852 | 16,233 |
| 1955 | 5,620 | -10 | 4,701 | 5,111 | 15,421 | 38 | NA | 631 | 669 | 16,091 | 887 | 2,495 | 19,472 |
| 1960 | 4,543 | -6 | 5,973 | 5,747 | 16,258 | 39 | NA | 680 | 719 | 16,977 | 1,107 | 2,739 | 20,823 |
| 1965 | 5,127 | -18 | 7,339 | 6,789 | 19,236 | 33 | NA | 855 | 888 | 20,124 | 1,463 | 3,488 | 25,075 |
| 1970 | 4,656 | -58 | 9,536 | 7,787 | 21,922 | 34 | NA | 1,019 | 1,053 | 22,975 | 1,948 | 4,719 | 29,641 |
| 1971 | 3,944 | -33 | 9,892 | 7,856 | 21,659 | 34 | NA | 1,040 | 1,074 | 22,732 | 2,011 | 4,857 | 29,601 |
| 1972 | 3,993 | -26 | 9,884 | 8,534 | 22,385 | 34 | NA | 1,113 | 1,147 | 23,532 | 2,187 | 5,233 | 30,953 |
| 1973 | 4,057 | -7 | 10,388 | 9,104 | 23,541 | 35 | NA | 1,165 | 1,200 | 24,741 | 2,341 | 5,571 | 32,653 |
| 1974 | 3,870 | 56 | 10,004 | 8,694 | 22,624 | 33 | NA | 1,159 | 1,192 | 23,816 | 2,337 | 5,666 | 31,819 |
| 1975 | 3,667 | 14 | 8,532 | 8,146 | 20,359 | 32 | NA | 1,063 | 1,096 | 21,454 | 2,346 | 5,647 | 29,447 |
| 1976 | 3,661 | (s) | 8,762 | 9,010 | 21,432 | 33 | NA | 1,220 | 1,253 | 22,685 | 2,573 | 6,171 | 31,430 |
| 1977 | 3,454 | 15 | 8,635 | 9,774 | 21,879 | 33 | NA | 1,281 | 1,314 | 23,193 | 2,682 | 6,432 | 32,307 |
| 1978 | 3,314 | 125 | 8,539 | 9,867 | 21,845 | 32 | NA | 1,400 | 1,432 | 23,276 | 2,761 | 6,696 | 32,733 |
| 1979 | 3,593 | 63 | 8,549 | 10,568 | 22,773 | 34 | NA | 1,405 | 1,439 | R24,212 | 2,873 | 6,878 | 33,962 |
| 1980 | 3,155 | -35 | 8,333 | 9,525 | 20,977 | 33 | NA | 1,600 | 1,633 | 22,610 | 2,781 | 6,686 | 32,077 |
| 1981 | 3,157 | -16 | 8,185 | 8,285 | 19,610 | 33 | NA | 1,695 | 1,728 | 21,338 | 2,817 | 6,600 | 30,756 |
| 1982 | 2,552 | -22 | 7,068 | 7,795 | 17,393 | 33 | NA | R1,650 | R1,683 | R19,076 | 2,542 | 6,039 | R27,657 |
| 1983 | 2,490 | -16 | 6,776 | 7,420 | 16,670 | 33 | NA | R1,875 | R1,908 | R18,578 | 2,648 | 6,256 | R27,481 |
| 1984 | 2,842 | -11 | 7,405 | R8,010 | R18,246 | 33 | NA | R1,919 | R1,952 | R20,198 | 2,859 | 6,568 | R29,625 |
| 1985 | 2,760 | -13 | 7,032 | 7,738 | 17,516 | 33 | NA | R1,919 | R1,952 | R19,468 | 2,855 | 6,554 | R28,877 |
| 1986 | 2,641 | -17 | 6,646 | 7,880 | 17,150 | 33 | NA | R1,916 | R1,949 | R19,099 | 2,834 | 6,401 | R28,333 |
| 1987 | 2,673 | 9 | 7,283 | 8,065 | 18,029 | 33 | NA | R1,915 | R1,948 | R19,977 | 2,928 | 6,538 | R29,444 |
| 1988 | 2,828 | 40 | 7,655 | 8,339 | 18,861 | 33 | NA | R1,990 | R2,023 | R20,884 | 3,059 | 6,795 | R30,739 |
| 1989 | 2,787 | 30 | 8,088 | 8,120 | 19,025 | 28 | 2 | R1,842 | R1,872 | R20,897 | 3,158 | 7,342 | R31,398 |
| 1990 | 2,756 | 5 | 8,451 | 8,278 | 19,490 | 31 | 2 | R1,685 | R1,718 | R21,208 | 3,226 | 7,461 | R31,895 |
| 1991 | 2,601 | 10 | 8,572 | 7,987 | 19,169 | 30 | 2 | R1,653 | R1,685 | R20,854 | 3,230 | 7,403 | R31,487 |
| 1992 | 2,515 | 35 | 8,918 | 8,581 | 20,048 | 31 | 2 | R1,706 | R1,739 | R21,787 | 3,319 | 7,556 | R32,661 |
| 1993 | 2,496 | 27 | 9,070 | 8,417 | 20,011 | 30 | 2 | R1,742 | R1,774 | R21,785 | 3,334 | 7,602 | R32,721 |
| 1994 | 2,510 | 58 | 9,126 | 8,799 | 20,493 | 62 | 3 | R1,864 | R1,929 | R22,422 | 3,439 | 7,746 | R33,607 |
| 1995 | 2,488 | 61 | 9,592 | 8,613 | 20,754 | 55 | 3 | R1,936 | R1,994 | R22,748 | 3,455 | 7,844 | R34,047 |
| 1996 | 2,434 | 23 | 9,901 | 9,052 | 21,410 | 61 | 3 | 1,970 | R2,034 | R23,444 | 3,527 | 8,018 | R34,989 |
| 1997 | 2,395 | 46 | 9,933 | 9,289 | 21,663 | 58 | 3 | R1,998 | R2,059 | R23,722 | 3,542 | 8,024 | 35,288 |
| 1998 | 2,335 | 67 | 9,763 | 9,114 | 21,280 | 55 | 3 | 1,873 | 1,931 | 23,211 | 3,587 | 8,131 | 34,928 |
| 1999 | 2,227 | 58 | 9,375 | 9,395 | 21,054 | 49 | 4 | 1,883 | 1,936 | 22,991 | 3,611 | 8,254 | 34,855 |
| 2000 | 2,256 | 65 | 9,500 | 9,119 | 20,941 | 42 | 4 | 1,884 | 1,930 | 22,871 | 3,631 | 8,255 | 34,757 |
| 2001 | 2,192 | 29 | 8,676 | 9,217 | 20,115 | 33 | 5 | 1,684 | 1,721 | 21,836 | 3,400 | 7,570 | 32,806 |
| 2002 | 2,019 | 61 | 8,845 | 9,209 | 20,135 | 39 | 5 | 1,679 | R1,722 | 21,857 | 3,379 | 7,528 | R32,764 |
| 2003 | 2,041 | 51 | 8,521 | 9,232 | 19,845 | 43 | 3 | 1,684 | R1,730 | 21,576 | 3,454 | 7,620 | 32,650 |
| 2004 | 2,047 | 138 | 8,544 | 9,865 | 20,594 | 33 | 4 | 1,824 | R1,860 | 22,455 | 3,473 | 7,682 | 33,609 |
| 2005 | 1,954 | 44 | 7,911 | 9,673 | 19,583 | 32 | 4 | R1,847 | R1,883 | R21,466 | 3,477 | 7,602 | R32,545 |
| 2006 | 1,914 | 61 | R7,846 | R9,806 | R19,627 | 29 | 4 | R1,972 | R2,005 | R21,632 | 3,451 | 7,459 | R32,541 |
| 2007 | R1,865 | 25 | R8,030 | R9,486 | R19,406 | R16 | 5 | R2,028 | R2,048 | R21,454 | R3,507 | R7,562 | R32,523 |
| 2008 ^P | 1,799 | 41 | 8,149 | 8,586 | 18,575 | 19 | 5 | 2,032 | 2,056 | 20,630 | 3,351 | 7,229 | 31,210 |

¹ See "Primary Energy Consumption" in Glossary.

² Most data are estimates. See Table 10.2b for notes on series components and estimation.

³ Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 1, "Supplemental Gaseous Fuels," at end of Section 6.

⁴ Does not include the fuel ethanol portion of motor gasoline—fuel ethanol is included in "Biomass."

⁵ Conventional hydroelectric power.

⁶ Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

⁷ Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to

each sector's share of total electricity retail sales. See Note, "Electrical System Energy Losses," at end of section.

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

Notes: • The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 8. • Totals may not equal sum of components due to independent rounding.

Web Page: For all data beginning in 1949, see <http://www.eia.doe.gov/emeu/aer/consump.html>.

Sources: Tables 2.1f, 5.14b, 6.5, 7.3, 7.7, 8.9, 10.2b, A4, A5, and A6.

Table 2.1e Transportation Sector Energy Consumption, Selected Years, 1949-2008
(Trillion Btu)

| Year | Primary Consumption ¹ | | | | | Electricity Retail Sales ⁵ | Electrical System Energy Losses ⁶ | Total | |
|-------------------|----------------------------------|--------------------------|------------------------|---------------------|-------------------------------|---------------------------------------|--|-----------------|---------------------|
| | Fossil Fuels | | | Total | Renewable Energy ² | | | | |
| | Coal | Natural Gas ³ | Petroleum ⁴ | | Biomass | | | | |
| 1949 | 1,727 | NA | 6,152 | 7,880 | NA | 7,880 | 22 | 88 | 7,990 |
| 1950 | 1,564 | 130 | 6,690 | 8,384 | NA | 8,384 | 23 | 86 | 8,493 |
| 1955 | 421 | 254 | 8,800 | 9,475 | NA | 9,475 | 20 | 56 | 9,551 |
| 1960 | 75 | 359 | 10,126 | 10,560 | NA | 10,560 | 10 | 26 | 10,597 |
| 1965 | 16 | 517 | 11,868 | 12,400 | NA | 12,400 | 10 | 24 | 12,434 |
| 1970 | 7 | 745 | 15,310 | 16,061 | NA | 16,061 | 11 | 26 | 16,098 |
| 1971 | 5 | 766 | 15,923 | 16,693 | NA | 16,693 | 10 | 25 | 16,729 |
| 1972 | 4 | 787 | 16,891 | 17,681 | NA | 17,681 | 10 | 25 | 17,716 |
| 1973 | 3 | 743 | 17,831 | 18,576 | NA | 18,576 | 11 | 25 | 18,612 |
| 1974 | 2 | 685 | 17,399 | 18,086 | NA | 18,086 | 10 | 24 | 18,119 |
| 1975 | 1 | 595 | 17,614 | 18,209 | NA | 18,209 | 10 | 24 | 18,244 |
| 1976 | (s) | 559 | 18,506 | 19,065 | NA | 19,065 | 10 | 24 | 19,099 |
| 1977 | (s) | 543 | 19,241 | 19,784 | NA | 19,784 | 10 | 25 | 19,820 |
| 1978 | (7) | 539 | 20,041 | 20,580 | NA | 20,580 | 10 | 24 | 20,615 |
| 1979 | (7) | 612 | 19,825 | 20,436 | NA | 20,436 | 10 | 24 | 20,471 |
| 1980 | (7) | 650 | ^R 19,009 | 19,658 | NA | 19,658 | 11 | 27 | 19,696 |
| 1981 | (7) | 658 | 18,811 | 19,469 | 7 | 19,476 | 11 | 25 | 19,513 |
| 1982 | (7) | 612 | 18,420 | 19,032 | 19 | 19,051 | 11 | 26 | 19,088 |
| 1983 | (7) | 505 | 18,593 | 19,098 | 34 | 19,132 | 13 | 30 | 19,175 |
| 1984 | (7) | 545 | 19,020 | 19,565 | 42 | 19,607 | 14 | 33 | 19,654 |
| 1985 | (7) | 519 | 19,471 | 19,990 | 51 | 20,041 | 14 | 32 | 20,087 |
| 1986 | (7) | 499 | 20,182 | 20,681 | 59 | 20,740 | 15 | 34 | 20,789 |
| 1987 | (7) | 535 | 20,816 | 21,352 | 67 | 21,419 | 16 | 35 | 21,469 |
| 1988 | (7) | 632 | 21,567 | 22,198 | 68 | 22,267 | 16 | 35 | 22,318 |
| 1989 | (7) | 649 | 21,706 | 22,355 | 69 | 22,425 | 16 | 38 | 22,479 |
| 1990 | (7) | 680 | 21,625 | 22,305 | 62 | 22,367 | 16 | 37 | 22,420 |
| 1991 | (7) | 620 | 21,373 | 21,994 | 72 | 22,065 | 16 | 37 | 22,118 |
| 1992 | (7) | 608 | 21,674 | 22,282 | 81 | 22,363 | 16 | 37 | 22,416 |
| 1993 | (7) | 645 | 21,976 | 22,621 | 96 | 22,716 | 16 | 37 | 22,770 |
| 1994 | (7) | 709 | 22,496 | 23,205 | 107 | 23,312 | 17 | 38 | 23,367 |
| 1995 | (7) | 724 | 22,954 | 23,678 | 115 | 23,793 | 17 | 39 | 23,849 |
| 1996 | (7) | 737 | 23,565 | 24,302 | 82 | 24,384 | 17 | 38 | 24,439 |
| 1997 | (7) | 780 | 23,813 | 24,593 | 104 | 24,697 | 17 | 38 | 24,752 |
| 1998 | (7) | 666 | 24,422 | 25,088 | 115 | 25,203 | 17 | 38 | 25,258 |
| 1999 | (7) | 675 | 25,098 | 25,774 | 120 | 25,894 | 17 | 40 | 25,951 |
| 2000 | (7) | 672 | 25,682 | 26,354 | 138 | 26,492 | 18 | 42 | 26,552 |
| 2001 | (7) | 658 | 25,413 | 26,071 | 145 | ^R 26,216 | 20 | 43 | ^R 26,279 |
| 2002 | (7) | 702 | 25,913 | 26,615 | ^R 173 | ^R 26,788 | 19 | 42 | ^R 26,849 |
| 2003 | (7) | 630 | 26,063 | 26,693 | ^R 234 | 26,928 | 23 | 51 | 27,002 |
| 2004 | (7) | 603 | 26,922 | 27,525 | ^R 295 | 27,820 | 25 | 55 | 27,899 |
| 2005 | (7) | 625 | 27,309 | 27,934 | 346 | 28,280 | 26 | 56 | 28,361 |
| 2006 | (7) | ^R 625 | ^R 27,652 | ^R 28,277 | ^R 484 | ^R 28,761 | 25 | 54 | ^R 28,841 |
| 2007 | (7) | 667 | ^R 27,766 | ^R 28,432 | ^R 614 | ^R 29,046 | ^R 28 | ^R 60 | ^R 29,134 |
| 2008 ^P | (7) | 677 | 26,332 | 27,009 | 833 | 27,842 | 26 | 56 | 27,925 |

¹ See "Primary Energy Consumption" in Glossary.

² Data are estimates. See Table 10.2b for notes on series components.

³ Natural gas only; does not include supplemental gaseous fuels—see Note 1, "Supplemental Gaseous Fuels," at end of Section 6. Data are for natural gas consumed in the operation of pipelines (primarily in compressors) and small amounts consumed as vehicle fuel—see Table 6.5.

⁴ Does not include the fuel ethanol portion of motor gasoline—fuel ethanol is included in "Biomass."

⁵ Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

⁶ Total losses are calculated as the primary energy consumed by the electric power sector minus the

energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note, "Electrical System Energy Losses," at end of section.

⁷ Beginning in 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

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

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

Web Page: For all data beginning in 1949, see <http://www.eia.doe.gov/emeu/aer/consump.html>.

Sources: Tables 2.1f, 5.14c, 6.5, 7.3, 8.9, 10.2b, A4, A5, and A6.

Table 2.1f Electric Power Sector Energy Consumption, Selected Years, 1949-2008

(Trillion Btu)

| Year | Primary Consumption ¹ | | | | | | | | | | | | Electricity Net Imports ⁶ | Total Primary |
|-------------------|----------------------------------|--------------------------|------------------------|---------------------|------------------------|----------------------------------|------------------|----------|------------------|------------------|--------------------|-----|--------------------------------------|---------------|
| | Fossil Fuels | | | | Nuclear Electric Power | Renewable Energy ² | | | | | | | | |
| | Coal | Natural Gas ³ | Petroleum ⁴ | Total | | Hydroelectric Power ⁵ | Geothermal | Solar/PV | Wind | Biomass | Total | | | |
| 1949 | 1,995 | 569 | 415 | 2,979 | 0 | 1,349 | NA | NA | NA | 6 | 1,355 | 5 | 4,339 | |
| 1950 | 2,199 | 651 | 472 | 3,322 | 0 | 1,346 | NA | NA | NA | 5 | 1,351 | 6 | 4,679 | |
| 1955 | 3,458 | 1,194 | 471 | 5,123 | 0 | 1,322 | NA | NA | NA | 3 | 1,325 | 14 | 6,461 | |
| 1960 | 4,228 | 1,785 | 553 | 6,565 | 6 | 1,569 | 1 | NA | NA | 2 | 1,571 | 15 | 8,158 | |
| 1965 | 5,821 | 2,395 | 722 | 8,938 | 43 | 2,026 | 4 | NA | NA | 3 | 2,033 | (s) | 11,014 | |
| 1970 | 7,227 | 4,054 | 2,117 | 13,399 | 239 | 2,600 | 11 | NA | NA | 4 | 2,615 | 7 | 16,259 | |
| 1971 | 7,299 | 4,099 | 2,495 | 13,893 | 413 | 2,790 | 12 | NA | NA | 3 | 2,806 | 12 | 17,124 | |
| 1972 | 7,811 | 4,084 | 3,097 | 14,992 | 584 | 2,829 | 31 | NA | NA | 3 | 2,864 | 26 | 18,466 | |
| 1973 | 8,658 | 3,748 | 3,515 | 15,921 | 910 | 2,827 | 43 | NA | NA | 3 | 2,873 | 49 | 19,753 | |
| 1974 | 8,534 | 3,519 | 3,365 | 15,418 | 1,272 | 3,143 | 53 | NA | NA | 3 | 3,199 | 43 | 19,933 | |
| 1975 | 8,786 | 3,240 | 3,166 | 15,191 | 1,900 | 3,122 | 70 | NA | NA | 2 | 3,194 | 21 | 20,307 | |
| 1976 | 9,720 | 3,152 | 3,477 | 16,349 | 2,111 | 2,943 | 78 | NA | NA | 3 | 3,024 | 29 | 21,513 | |
| 1977 | 10,262 | 3,284 | 3,901 | 17,446 | 2,702 | 2,301 | 77 | NA | NA | 5 | 2,383 | 59 | 22,591 | |
| 1978 | 10,238 | 3,297 | 3,987 | 17,522 | 3,024 | 2,905 | 64 | NA | NA | 3 | 2,973 | 67 | 23,587 | |
| 1979 | 11,260 | 3,613 | 3,283 | 18,156 | 2,776 | 2,897 | 84 | NA | NA | 5 | 2,986 | 69 | 23,987 | |
| 1980 | 12,123 | 3,778 | 2,634 | 18,534 | 2,739 | 2,867 | 110 | NA | NA | 5 | 2,982 | 71 | 24,327 | |
| 1981 | 12,583 | 3,730 | 2,202 | 18,516 | 3,008 | 2,725 | 123 | NA | NA | 4 | 2,852 | 113 | 24,488 | |
| 1982 | 12,582 | 3,312 | 1,568 | 17,462 | 3,131 | 3,233 | 105 | NA | NA | 3 | 3,341 | 100 | 24,034 | |
| 1983 | 13,213 | 2,972 | 1,544 | 17,729 | 3,203 | 3,494 | 129 | NA | (s) | 4 | 3,627 | 121 | 24,679 | |
| 1984 | 14,019 | 3,199 | 1,286 | 18,504 | 3,553 | 3,353 | 165 | (s) | (s) | 9 | 3,527 | 135 | 25,719 | |
| 1985 | 14,542 | 3,135 | 1,090 | 18,767 | 4,076 | 2,937 | 198 | (s) | (s) | 14 | 3,150 | 140 | 26,132 | |
| 1986 | 14,444 | 2,670 | 1,452 | 18,566 | 4,380 | 3,038 | 219 | (s) | (s) | 12 | 3,270 | 122 | 26,338 | |
| 1987 | 15,173 | 2,916 | 1,257 | 19,346 | 4,754 | 2,602 | 229 | (s) | (s) | 15 | 2,846 | 158 | 27,104 | |
| 1988 | 15,850 | 2,693 | 1,563 | 20,106 | 5,587 | 2,302 | 217 | (s) | (s) | 17 | 2,536 | 108 | 28,338 | |
| 1989 ⁷ | 16,137 | 3,173 | 1,703 | 21,013 | 5,602 | 2,808 | 308 | 3 | 22 | 232 | 3,372 | 37 | 30,025 | |
| 1990 | 16,261 | 3,309 | 1,289 | 20,859 | 6,104 | 3,014 | 326 | 4 | 29 | 317 | 3,689 | 8 | 30,660 | |
| 1991 | 16,250 | 3,377 | 1,198 | 20,825 | 6,422 | 2,985 | 335 | 5 | 31 | 354 | 3,710 | 67 | 31,025 | |
| 1992 | 16,466 | 3,512 | 991 | 20,968 | 6,479 | 2,586 | 338 | 4 | 30 | 402 | 3,360 | 87 | 30,893 | |
| 1993 | 17,196 | 3,538 | 1,124 | 21,857 | 6,410 | 2,861 | 351 | 5 | 31 | 415 | 3,662 | 95 | 32,025 | |
| 1994 | 17,261 | 3,977 | 1,059 | 22,297 | 6,694 | 2,620 | 325 | 5 | 36 | 434 | 3,420 | 153 | 32,563 | |
| 1995 | 17,466 | 4,302 | 755 | 22,523 | 7,075 | 3,149 | 280 | 5 | 33 | 422 | 3,889 | 134 | 33,621 | |
| 1996 | 18,429 | 3,862 | 817 | 23,109 | 7,087 | 3,528 | 300 | 5 | 33 | 438 | 4,305 | 137 | 34,638 | |
| 1997 | 18,905 | 4,126 | 927 | 23,957 | 6,597 | 3,581 | 309 | 5 | 34 | 446 | 4,375 | 116 | 35,045 | |
| 1998 | 19,216 | 4,675 | 1,306 | 25,197 | 7,068 | 3,241 | 311 | 5 | 31 | 444 | 4,032 | 88 | 36,385 | |
| 1999 | 19,279 | 4,902 | 1,211 | 25,393 | 7,610 | 3,218 | 312 | 5 | 46 | 453 | 4,034 | 99 | 37,136 | |
| 2000 | 20,220 | 5,293 | 1,144 | 26,658 | 7,862 | 2,768 | 296 | 5 | 57 | 453 | 3,579 | 115 | 38,214 | |
| 2001 | 19,614 | 5,458 | 1,277 | 26,348 | 8,033 | 2,209 | 289 | 6 | 70 | 337 | 2,910 | 75 | 37,366 | |
| 2002 | 19,783 | 5,767 | 961 | 26,511 | 8,143 | 2,650 | 305 | 6 | 105 | 380 | 3,445 | 72 | 38,171 | |
| 2003 | 20,185 | 5,246 | 1,205 | 26,636 | 7,959 | 2,781 | 303 | 5 | 115 | 397 | 3,601 | 22 | 38,218 | |
| 2004 | 20,305 | 5,595 | 1,212 | 27,112 | 8,222 | 2,656 | 311 | 6 | 142 | 388 | 3,503 | 39 | 38,876 | |
| 2005 | 20,737 | 6,015 | 1,235 | 27,986 | 8,160 | 2,670 | 309 | 6 | 178 | 406 | 3,568 | 84 | 39,799 | |
| 2006 | 20,462 | 6,375 | 648 | 27,485 | 8,214 | 2,839 | 306 | 5 | 264 | 412 | 3,827 | 63 | 39,589 | |
| 2007 | ^R 20,808 | ^R 7,005 | ^R 657 | ^R 28,470 | ^R 8,458 | ^R 2,430 | ^R 308 | 6 | ^R 341 | ^R 423 | ^R 3,508 | 107 | ^R 40,542 | |
| 2008 ^P | 20,547 | 6,823 | 463 | 27,833 | 8,455 | 2,432 | 312 | 8 | 514 | 423 | 3,690 | 112 | 40,090 | |

¹ See "Primary Energy Consumption" in Glossary.

² See Table 10.2c for notes on series components.

³ Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 1, "Supplemental Gaseous Fuels," at end of Section 6.

⁴ See Table 5.14c for series components.

⁵ Conventional hydroelectric power.

⁶ Net imports equal imports minus exports.

⁷ Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

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

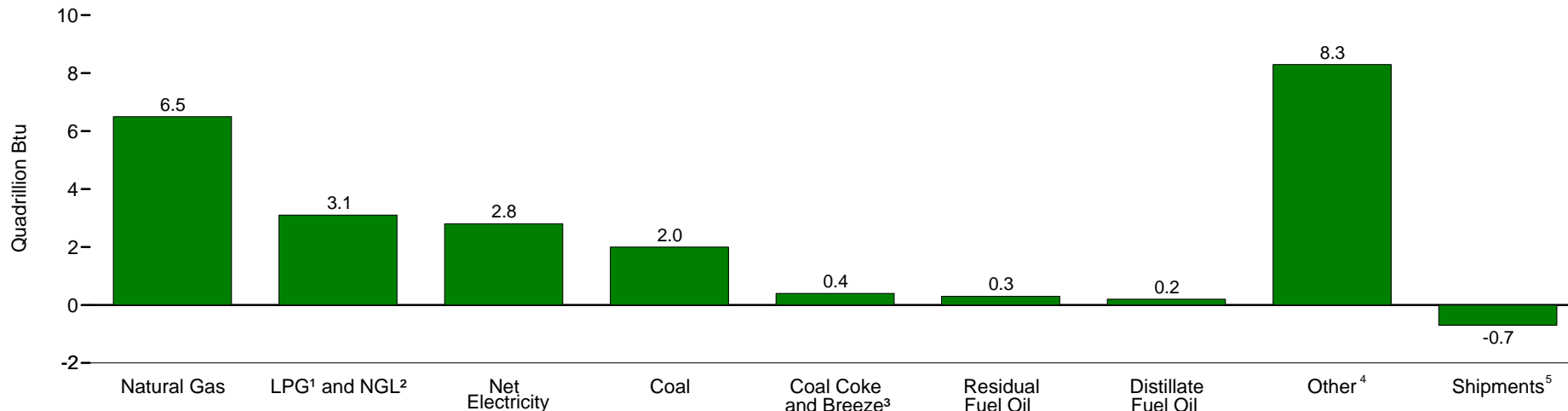
Notes: • Data are for fuels consumed to produce electricity and useful thermal output. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 3, "Electricity Imports and Exports," at end of Section 8. • Totals may not equal sum of components due to independent rounding.

Web Page: For all data beginning in 1949, see <http://www.eia.doe.gov/emeu/aer/consump.html>.

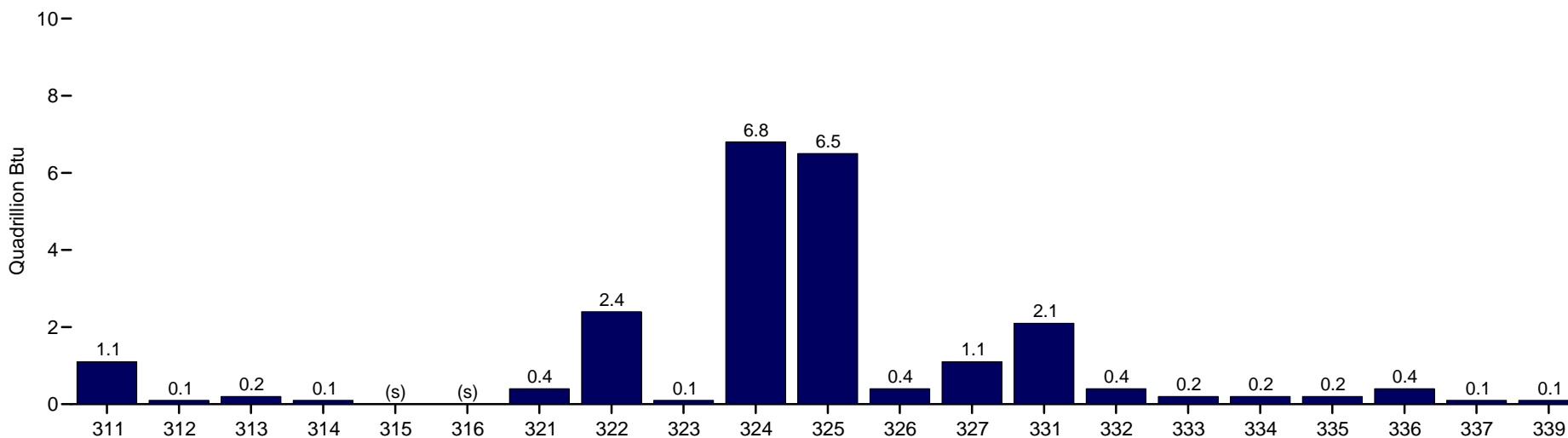
Sources: Tables 5.14c, 6.5, 7.3, 8.1, 8.2b, 10.2c, A4, A5, and A6.

Figure 2.2 Manufacturing Energy Consumption for All Purposes, 2002

By Energy Source



By North American Industry Classification System (NAICS) Code⁶



¹ Liquefied petroleum gases.
² Natural gas liquids.
³ See "Breeze" in Glossary.
⁴ Includes all other types of energy that respondents indicated were consumed or allocated.
⁵ Energy sources produced onsite from the use of other energy sources but sold or transferred to another entity.

⁶ See Table 2.2 for Manufacturing Group titles of industries that correspond to the 3-digit NAICS codes.
 (s)=Less than 0.05 quadrillion Btu.
 Source: Table 2.2.

Table 2.2 Manufacturing Energy Consumption for All Purposes, 2002

(Trillion Btu)

| NAICS ¹ Code | Manufacturing Group | Coal | Coal Coke and Breeze ² | Natural Gas | Distillate Fuel Oil | LPG ³ and NGL ⁴ | Residual Fuel Oil | Net Electricity ⁵ | Other ⁶ | Shipments of Energy Sources ⁷ | Total ⁸ |
|----------------------------|--|-------|-----------------------------------|-------------|---------------------|---------------------------------------|-------------------|------------------------------|--------------------|--|--------------------|
| 311 | Food | 184 | 1 | 582 | 19 | 5 | 13 | 230 | 89 | -0 | 1,123 |
| 312 | Beverage and Tobacco Products | 17 | 0 | 46 | 2 | 1 | 2 | 26 | 11 | -0 | 105 |
| 313 | Textile Mills | 22 | 0 | 75 | 2 | 2 | 4 | 86 | 15 | -0 | 207 |
| 314 | Textile Product Mills | Q | 0 | 29 | Q | 1 | 2 | 17 | Q | -0 | 60 |
| 315 | Apparel | 0 | 0 | 16 | 1 | (s) | (s) | 12 | (s) | -0 | 30 |
| 316 | Leather and Allied Products | 0 | 0 | 4 | (s) | (s) | (s) | 2 | (s) | -0 | 7 |
| 321 | Wood Products | 1 | 0 | 57 | 13 | 5 | 1 | 72 | 228 | -0 | 377 |
| 322 | Paper | 236 | 4 | 504 | 13 | 6 | 100 | 223 | 1,276 | -0 | 2,363 |
| 323 | Printing and Related Support | 0 | 0 | 46 | (s) | 1 | (s) | 50 | 1 | -0 | 98 |
| 324 | Petroleum and Coal Products | Q | 2 | 878 | 19 | 24 | 25 | 127 | 5,520 | -83 | 6,799 |
| 325 | Chemicals | 344 | 6 | 2,307 | 14 | 3,001 | 87 | 522 | 687 | -504 | 6,465 |
| 326 | Plastics and Rubber Products | Q | 0 | 128 | 2 | 6 | 7 | 181 | 5 | -0 | 351 |
| 327 | Nonmetallic Mineral Products | 309 | 11 | 422 | 34 | 3 | 3 | 142 | 136 | -0 | 1,059 |
| 331 | Primary Metals | 515 | 355 | 704 | 15 | 3 | 1 | 493 | 178 | -143 | 2,120 |
| 332 | Fabricated Metal Products | 1 | Q | 210 | 6 | 3 | Q | 161 | 3 | -0 | 388 |
| 333 | Machinery | 1 | 0 | 82 | 3 | 3 | (s) | 84 | 4 | -0 | 177 |
| 334 | Computer and Electronic Products | (s) | 0 | 65 | 1 | (s) | 1 | 131 | 3 | -0 | 201 |
| 335 | Electrical Equipment, Appliances, and Components | (s) | (s) | 53 | 1 | 1 | (s) | 47 | 70 | -0 | 172 |
| 336 | Transportation Equipment | 8 | Q | 203 | 4 | 4 | 6 | 172 | 30 | -0 | 429 |
| 337 | Furniture and Related Products | 1 | 0 | 25 | 1 | 1 | (s) | 24 | 11 | -0 | 64 |
| 339 | Miscellaneous | 0 | 0 | 32 | 1 | 1 | (s) | 35 | 2 | -0 | 71 |
| — | Total Manufacturing | 1,958 | 385 | 6,468 | 152 | 3,070 | 255 | 2,840 | 8,271 | -730 | 22,666 |

¹ North American Industry Classification System (NAICS).

² See "Breeze" in Glossary.

³ Liquefied petroleum gases.

⁴ Natural gas liquids.

⁵ "Net Electricity" is the sum of purchases, transfers in, and onsite generation from noncombustible renewable energy sources, minus quantities sold and transferred out; it excludes onsite generation from combustible fuels.

⁶ Includes all other types of energy that respondents indicated were consumed or allocated, such as asphalt and road oil, lubricants, naphtha less than 401 degrees Fahrenheit, other oils greater than or equal to 401 degrees Fahrenheit, special naphthas, waxes, and miscellaneous nonfuel products, which are nonfuel products assigned to the petroleum refining industry group (NAICS Code 324110).

⁷ Energy sources produced onsite from the use of other energy sources but sold or transferred to

another entity. Note that shipments of energy sources are subtracted from consumption.

⁸ The sum of coal, coal coke and breeze, natural gas, distillate fuel oil, liquefied petroleum gases, natural gas liquids, residual fuel oil, net electricity, and other, minus shipments of energy sources.

(s)=Less than 0.5 trillion Btu. Q=Data withheld because the relative standard error was greater than 50 percent.

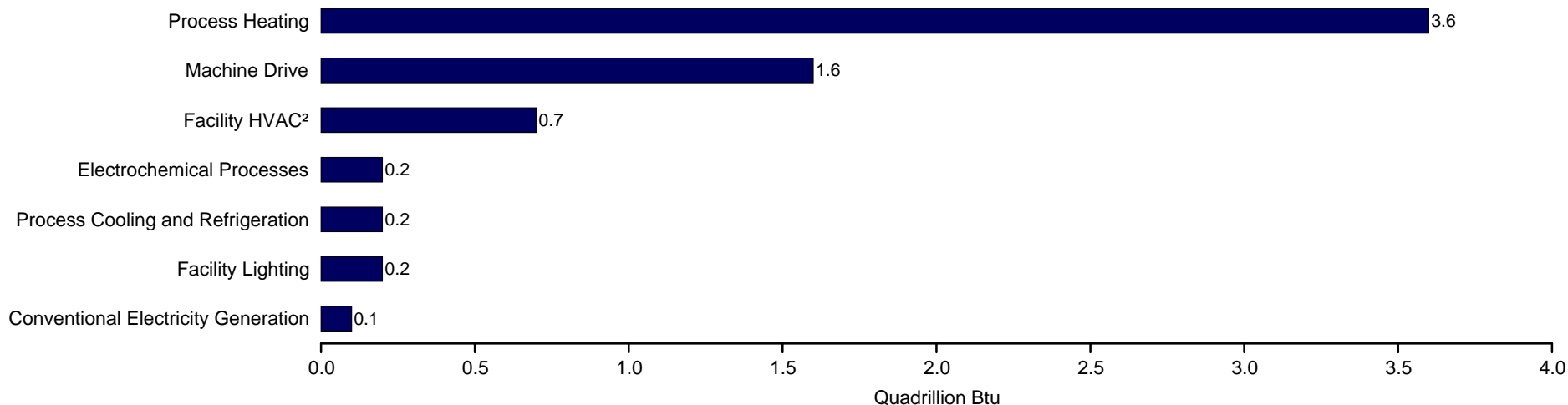
Notes: • Data are estimates for the first use of energy for heat and power and as feedstocks or raw material inputs. "First use" is the consumption of energy that was originally produced offsite or was produced onsite from input materials not classified as energy. • Totals may not equal sum of components due to independent rounding.

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

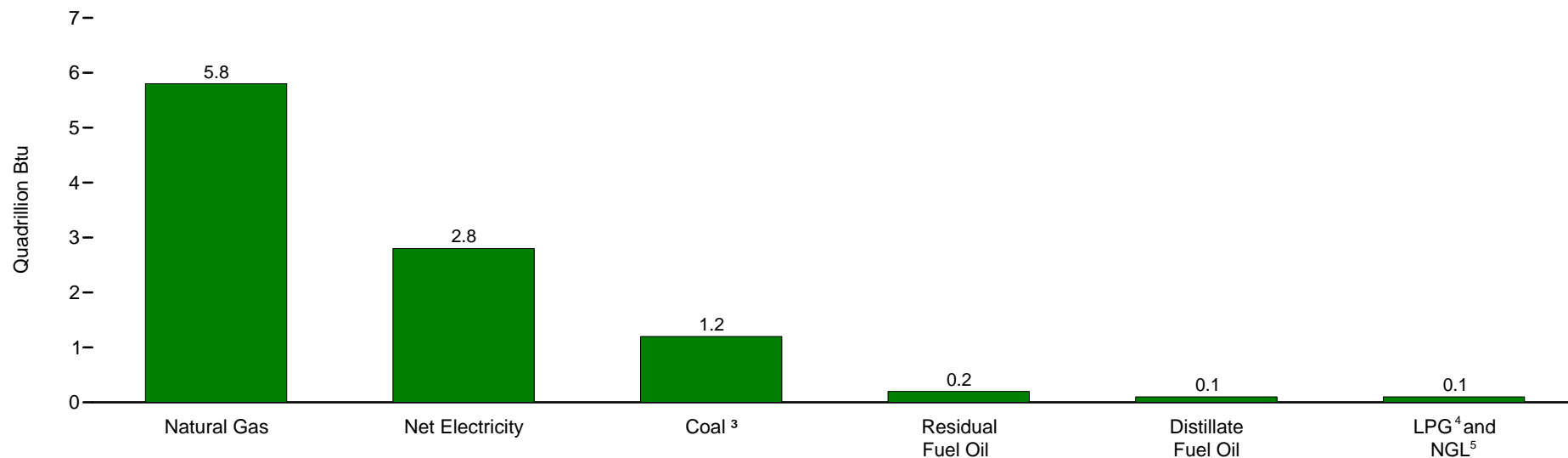
Source: Energy Information Administration, Form EIA-846, "2002 Manufacturing Energy Consumption Survey."

Figure 2.3 Manufacturing Energy Consumption for Heat, Power, and Electricity Generation, 2002

By Selected End Use¹



By Energy Source



¹ Excludes inputs of unallocated energy sources (6,006 trillion Btu).

² Heating, ventilation, and air conditioning. Excludes steam and hot water.

³ Excludes coal coke and breeze.

⁴ Liquefied petroleum gases.

⁵ Natural gas liquids.

Source: Table 2.3.

Table 2.3 Manufacturing Energy Consumption for Heat, Power, and Electricity Generation by End Use, 2002

| End-Use Category | Net Electricity ¹ | Residual Fuel Oil | Distillate Fuel Oil | LPG ² and NGL ³ | Natural Gas | Coal ⁴ | Total ⁵ |
|--|------------------------------|-------------------|---------------------|---------------------------------------|--------------------|--------------------|--------------------|
| | Million Kilowatthours | Million Barrels | | | Billion Cubic Feet | Million Short Tons | |
| Indirect End Use (Boiler Fuel) | 3,540 | 20 | 6 | 2 | 2,105 | 35 | -- |
| Conventional Boiler Use | 2,496 | 12 | 4 | 2 | 1,271 | 11 | -- |
| CHP ⁶ and/or Cogeneration Process | 1,043 | 8 | 2 | (s) | 834 | 23 | -- |
| Direct End Use | | | | | | | |
| All Process Uses | 650,100 | 10 | 7 | 16 | 2,878 | 17 | -- |
| Process Heating | 100,541 | 9 | 4 | 15 | 2,670 | 17 | -- |
| Process Cooling and Refrigeration | 56,723 | (s) | (s) | (s) | 44 | (s) | -- |
| Machine Drive | 417,998 | (s) | 3 | 1 | 106 | (s) | -- |
| Electrochemical Processes | 71,045 | -- | -- | -- | -- | -- | -- |
| Other Process Uses | 3,793 | (s) | (s) | (s) | 58 | (s) | -- |
| All Non-Process Uses | 150,530 | 1 | 9 | 6 | 500 | 1 | -- |
| Facility Heating, Ventilation, and Air Conditioning ⁷ ... | 76,840 | 1 | 1 | 1 | 406 | (s) | -- |
| Facility Lighting | 57,460 | -- | -- | -- | -- | -- | -- |
| Other Facility Support | 14,087 | (s) | (s) | (s) | 29 | (s) | -- |
| Onsite Transportation | 1,212 | -- | 6 | 5 | 2 | -- | -- |
| Conventional Electricity Generation | -- | (s) | Q | (s) | 54 | 1 | -- |
| Other Non-Process Use | 931 | (s) | Q | (s) | 10 | 0 | -- |
| End Use Not Reported | 28,087 | 3 | 2 | 2 | 157 | (s) | -- |
| Total | 832,257 | 33 | 24 | 26 | 5,641 | 53 | -- |
| | | | | | Trillion Btu | | |
| Indirect End Use (Boiler Fuel) | 12 | 127 | 35 | 8 | 2,162 | 776 | 3,120 |
| Conventional Boiler Use | 9 | 76 | 25 | 8 | 1,306 | 255 | 1,679 |
| CHP ⁶ and/or Cogeneration Process | 4 | 51 | 10 | (s) | 857 | 521 | 1,443 |
| Direct End Use | | | | | | | |
| All Process Uses | 2,218 | 60 | 43 | 64 | 2,956 | 381 | 5,722 |
| Process Heating | 343 | 58 | 24 | 60 | 2,742 | 368 | 3,595 |
| Process Cooling and Refrigeration | 194 | (s) | 2 | (s) | 45 | (s) | 241 |
| Machine Drive | 1,426 | 2 | 16 | 4 | 109 | 5 | 1,562 |
| Electrochemical Processes | 242 | -- | -- | -- | -- | -- | 242 |
| Other Process Uses | 13 | (s) | 1 | (s) | 60 | 7 | 81 |
| All Non-Process Uses | 514 | 4 | 50 | 24 | 513 | 19 | 1,124 |
| Facility Heating, Ventilation, and Air Conditioning ⁷ ... | 262 | 3 | 5 | 5 | 417 | 5 | 697 |
| Facility Lighting | 196 | -- | -- | -- | -- | -- | 196 |
| Other Facility Support | 48 | (s) | 1 | (s) | 30 | (s) | 79 |
| Onsite Transportation | 4 | -- | 35 | 18 | 2 | -- | 59 |
| Conventional Electricity Generation | -- | 1 | Q | (s) | 55 | 14 | 70 |
| Other Non-Process Use | 3 | (s) | Q | (s) | 10 | 0 | 13 |
| End Use Not Reported | 96 | 17 | 12 | 6 | 162 | 6 | 299 |
| Total | 2,840 | 208 | 141 | 103 | 5,794 | 1,182 | 10,268 |

¹ "Net Electricity" is the sum of purchases, transfers in, and onsite generation from noncombustible renewable energy sources, minus quantities sold and transferred out; it excludes onsite generation from combustible fuels.

² Liquefied petroleum gases.

³ Natural gas liquids.

⁴ Excludes coal coke and breeze.

⁵ Total of listed energy sources. Excludes inputs of unallocated energy sources (6,006 trillion Btu).

⁶ Combined-heat-and-power plants.

⁷ Excludes steam and hot water.

-- = Not applicable. (s)=Estimate less than 0.5. Q=Withheld because relative standard error is greater than 50 percent.

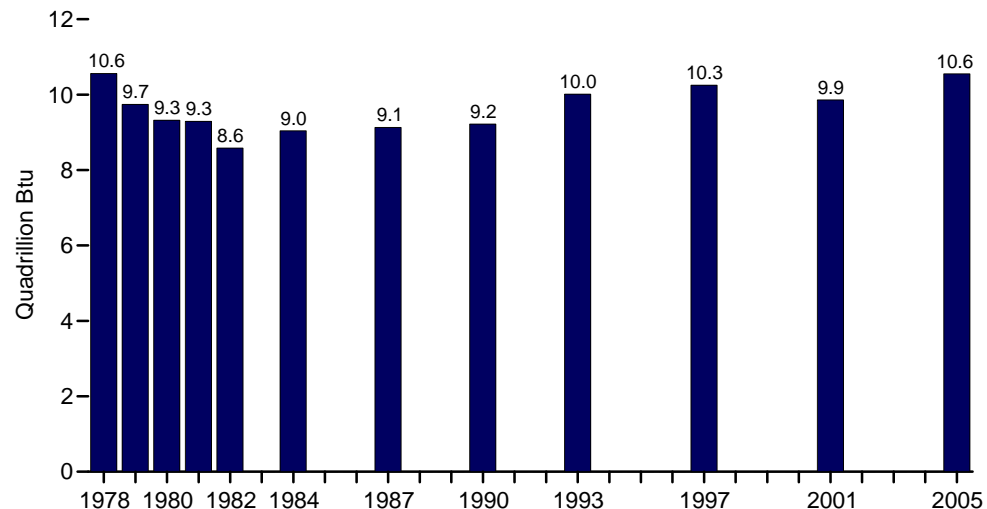
Notes: • Data are estimates for the total consumption of energy for the production of heat, power, and electricity generation, regardless of where the energy was produced. Specifically, the estimates include the quantities of energy that were originally produced offsite and purchased by or transferred to the establishment, plus those that were produced onsite from other energy or input materials not classified as energy, or were extracted from captive (onsite) mines or wells. • Allocations to end uses are made on the basis of reasonable approximations by respondents. • Totals may not equal sum of components due to independent rounding, the presence of estimates that round to zero, and the presence of estimates that are withheld because the relative standard error is greater than 50 percent.

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

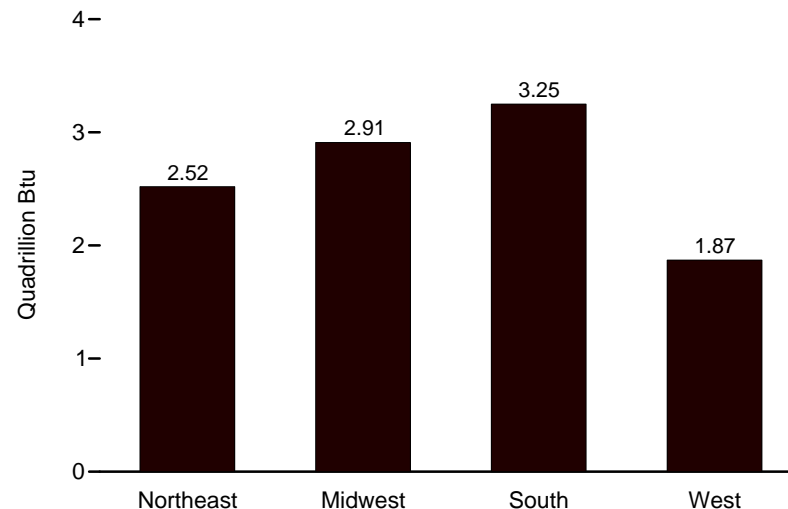
Source: Energy Information Administration, Form EIA-846, "2002 Manufacturing Energy Consumption Survey."

Figure 2.4 Household Energy Consumption

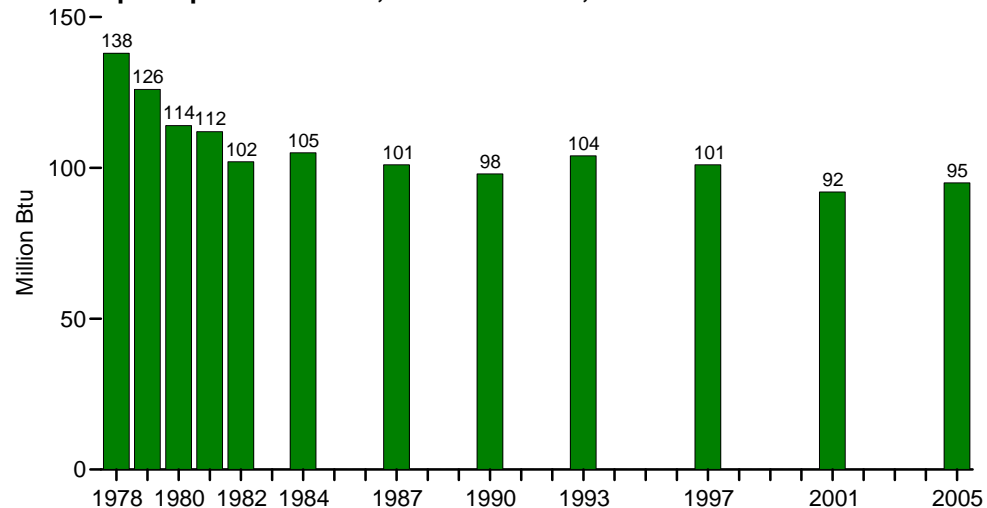
Consumption by All Households, Selected Years, 1978-2005



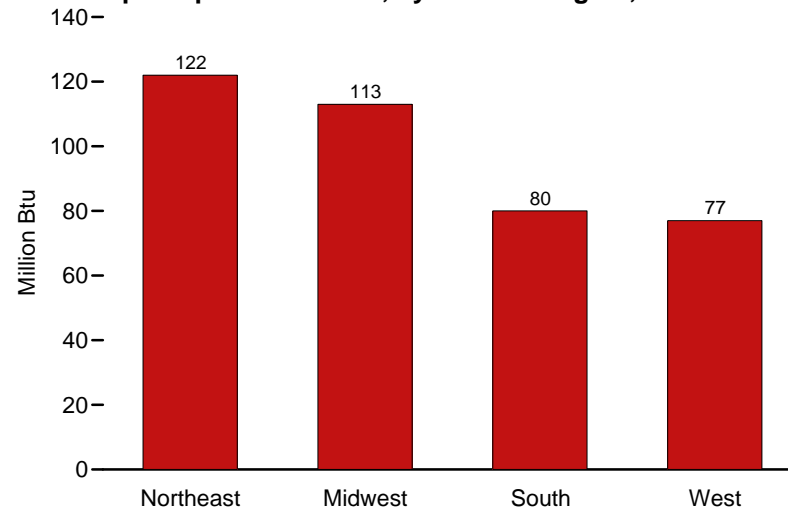
Consumption by All Households, by Census Region, 2005



Consumption per Household, Selected Years, 1978-2005



Consumption per Household, by Census Region, 2005



Notes: • Data include natural gas, electricity, distillate fuel oil, kerosene, and liquefied petroleum gases; data do not include wood. • For years not shown, there are no data available. Data for 1978-1984 are for April of the year shown through March of following year; data for 1987 forward are for the calendar year. • See Appendix C for map of Census regions.

Source: Table 2.4.

Table 2.4 Household Energy Consumption by Census Region, Selected Years, 1978-2005

(Quadrillion Btu, Except as Noted)

| Census Region ¹ | 1978 | 1979 | 1980 | 1981 | 1982 | 1984 | 1987 | 1990 | 1993 | 1997 | 2001 | 2005 |
|--|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|--------------|
| Northeast (total does not include wood) | 2.89 | 2.50 | 2.44 | 2.36 | 2.19 | 2.29 | 2.37 | 2.30 | 2.38 | 2.38 | 2.16 | 2.52 |
| Natural Gas | 1.14 | 1.05 | .94 | 1.01 | .96 | .93 | 1.03 | 1.03 | 1.11 | 1.03 | .98 | 1.15 |
| Electricity ² | .39 | .39 | .41 | .40 | .37 | .41 | .44 | .47 | .47 | .49 | .53 | .58 |
| Distillate Fuel Oil and Kerosene | 1.32 | 1.03 | 1.07 | .93 | .83 | .93 | .87 | .78 | .78 | .84 | .60 | .72 |
| Liquefied Petroleum Gases | .03 | .03 | .03 | .03 | .02 | .03 | .02 | .02 | .03 | .03 | .05 | .07 |
| Wood ³ | NA | NA | .26 | .27 | .24 | .21 | .17 | .12 | .14 | .14 | .10 | .09 |
| Consumption per Household (million Btu) ³ | 166 | 145 | 138 | 132 | 122 | 125 | 124 | 120 | 122 | 121 | 107 | 122 |
| Midwest (total does not include wood) | 3.70 | 3.48 | 2.96 | 3.09 | 2.61 | 2.80 | 2.73 | 2.81 | 3.13 | 3.22 | 2.86 | 2.91 |
| Natural Gas | 2.53 | 2.48 | 2.05 | 2.22 | 1.78 | 1.99 | 1.83 | 1.88 | 2.07 | 2.20 | 1.84 | 1.72 |
| Electricity ² | .60 | .59 | .60 | .56 | .56 | .55 | .61 | .66 | .74 | .75 | .81 | .94 |
| Distillate Fuel Oil and Kerosene | .46 | .31 | .17 | .19 | .16 | .13 | .16 | .13 | .13 | .11 | .06 | .06 |
| Liquefied Petroleum Gases | .12 | .10 | .15 | .13 | .11 | .13 | .13 | .13 | .19 | .17 | .15 | .18 |
| Wood ³ | NA | NA | .25 | .25 | .27 | .27 | .25 | .17 | .11 | .08 | .09 | .13 |
| Consumption per Household (million Btu) ³ | 180 | 168 | 141 | 146 | 122 | 129 | 123 | 122 | 134 | 134 | 117 | 113 |
| South (total does not include wood) | 2.43 | 2.30 | 2.57 | 2.41 | 2.45 | 2.50 | 2.61 | 2.60 | 2.95 | 3.01 | 3.21 | 3.25 |
| Natural Gas | .96 | .91 | 1.12 | 1.15 | 1.14 | 1.15 | 1.09 | 1.03 | 1.18 | 1.13 | 1.13 | .94 |
| Electricity ² | 1.00 | .97 | 1.06 | 1.01 | 1.01 | 1.06 | 1.22 | 1.36 | 1.51 | 1.67 | 1.89 | 2.07 |
| Distillate Fuel Oil and Kerosene | .32 | .28 | .25 | .14 | .18 | .16 | .17 | .11 | .13 | .10 | .08 | .07 |
| Liquefied Petroleum Gases | .15 | .14 | .14 | .12 | .12 | .12 | .12 | .10 | .13 | .12 | .12 | .18 |
| Wood ³ | NA | NA | .23 | .21 | .33 | .33 | .26 | .17 | .17 | .12 | .09 | .12 |
| Consumption per Household (million Btu) ³ | 99 | 92 | 95 | 87 | 87 | 85 | 84 | 81 | 88 | 84 | 83 | 80 |
| West (total does not include wood) | 1.54 | 1.47 | 1.34 | 1.42 | 1.33 | 1.45 | 1.42 | 1.51 | 1.55 | 1.63 | 1.63 | 1.87 |
| Natural Gas | .95 | .88 | .86 | .90 | .85 | .91 | .88 | .92 | .91 | .93 | .90 | .98 |
| Electricity ² | .48 | .47 | .41 | .46 | .41 | .47 | .48 | .54 | .56 | .64 | .66 | .76 |
| Distillate Fuel Oil and Kerosene | .09 | .09 | .04 | .03 | .03 | .04 | .02 | .02 | .03 | .03 | .02 | .03 |
| Liquefied Petroleum Gases | .03 | .04 | .04 | .04 | .04 | .03 | .05 | .03 | .04 | .04 | .06 | .10 |
| Wood ³ | NA | NA | .11 | .13 | .13 | .17 | .17 | .12 | .12 | .10 | .10 | .09 |
| Consumption per Household (million Btu) ³ | 110 | 100 | 84 | 87 | 81 | 85 | 78 | 78 | 76 | 75 | 70 | 77 |
| United States (total does not include wood) | 10.56 | 9.74 | 9.32 | 9.29 | 8.58 | 9.04 | 9.13 | 9.22 | 10.01 | 10.25 | 9.86 | 10.55 |
| Natural Gas | 5.58 | 5.31 | 4.97 | 5.27 | 4.74 | 4.98 | 4.83 | 4.86 | 5.27 | 5.28 | 4.84 | 4.79 |
| Electricity ² | 2.47 | 2.42 | 2.48 | 2.42 | 2.35 | 2.48 | 2.76 | 3.03 | 3.28 | 3.54 | 3.89 | 4.35 |
| Distillate Fuel Oil and Kerosene | 2.19 | 1.71 | 1.52 | 1.28 | 1.20 | 1.26 | 1.22 | 1.04 | 1.07 | 1.07 | .75 | .88 |
| Liquefied Petroleum Gases | .33 | .31 | .35 | .31 | .29 | .31 | .32 | .28 | .38 | .36 | .38 | .52 |
| Wood ³ | NA | NA | .85 | .87 | .97 | .98 | .85 | .58 | .55 | .43 | .37 | .43 |
| Consumption per Household (million Btu) ³ | 138 | 126 | 114 | 112 | 102 | 105 | 101 | 98 | 104 | 101 | 92 | 95 |

¹ See Appendix C for map of Census regions.

² Retail electricity. One kilowatthour = 3,412 Btu.

³ Wood is not included in the region and U.S. totals, or in the consumption-per-household data.

R=Revised. NA=Not available.

Notes: • Data are estimates, and are for major energy sources only. • For years not shown, there are no data available. • Data for 1978-1984 are for April of year shown through March of following year; data

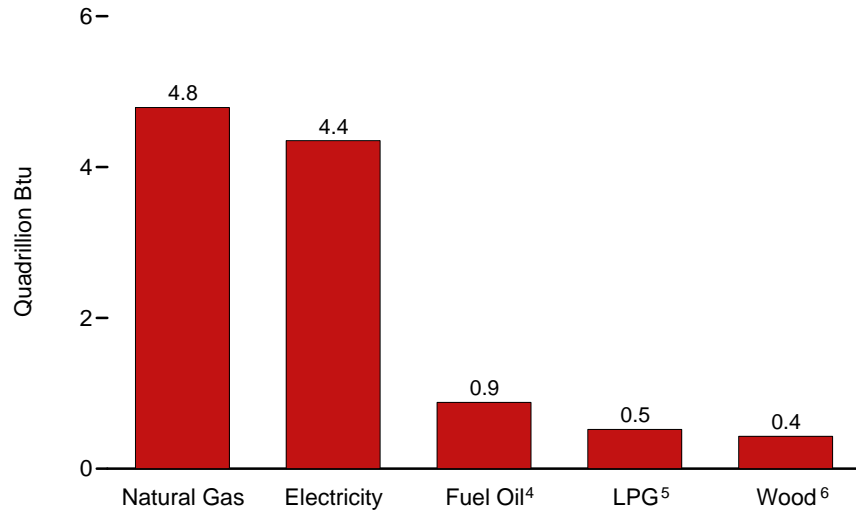
for 1987 forward are for the calendar year. • Totals may not equal sum of components due to independent rounding.

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

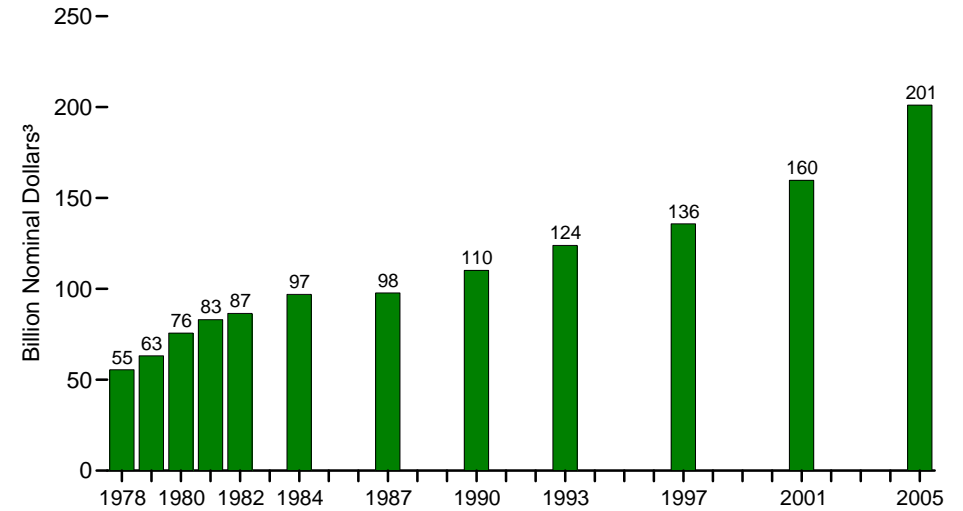
Sources: • 1978 and 1979—Energy Information Administration (EIA), Form EIA-84, "Residential Energy Consumption Survey." • 1980 forward—EIA, Form EIA-457, "Residential Energy Consumption Survey."

Figure 2.5 Household Energy Consumption and Expenditures

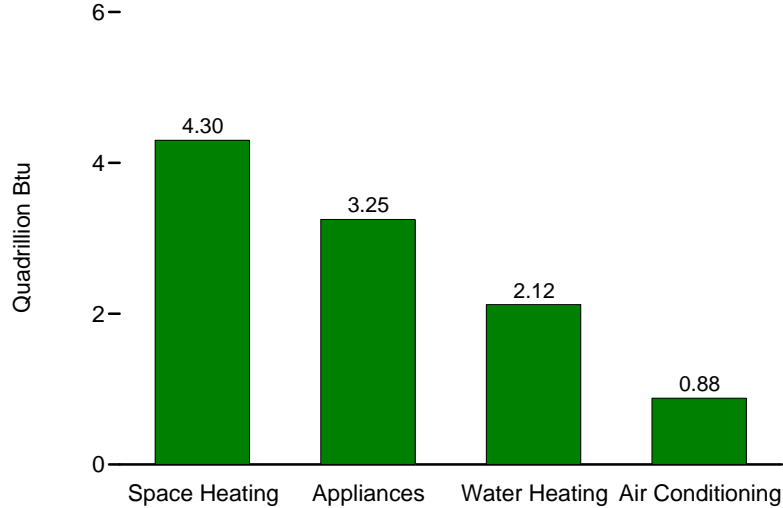
Consumption by Energy Source, 2005



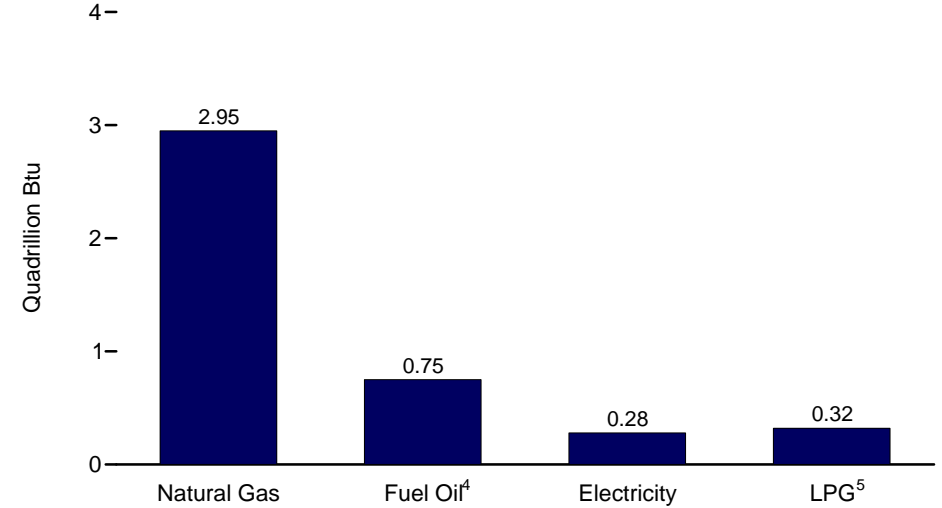
Expenditures¹, Selected Years, 1978-2005²



Consumption¹ by End Use, 2005



Consumption¹ for Space Heating, 2005



¹ Does not include wood, which is used for both space heating and ambiance.

² For years not shown, there are no data available.

³ See "Nominal Dollars" in Glossary.

⁴ Distillate fuel oil and kerosene.

⁵ Liquefied petroleum gases.

⁶ Used for both space heating and ambiance.

Source: Table 2.5.

Table 2.5 Household Energy Consumption and Expenditures by End Use and Energy Source, Selected Years, 1978-2005

| Year | Space Heating ¹ | | | | Air Conditioning ² | Water Heating | | | | Appliances ^{3,4} | | | Total | | | | |
|--|----------------------------|----------------------------|-----------------------|------------------|-------------------------------|---------------|----------------------------|-----------------------|------------------|---------------------------|----------------------------|------------------|--------------------------|----------------------------|-------------------------|------------------|-------------------|
| | Natural Gas | Elec- tricity ⁵ | Fuel Oil ⁶ | LPG ⁷ | Electricity ⁵ | Natural Gas | Elec- tricity ⁵ | Fuel Oil ⁶ | LPG ⁷ | Natural Gas | Elec- tricity ⁵ | LPG ⁷ | Natural Gas ² | Elec- tricity ⁵ | Fuel Oil ^{4,6} | LPG ⁷ | Wood ⁸ |
| Consumption (quadrillion Btu) | | | | | | | | | | | | | | | | | |
| 1978 | 4.26 | 0.40 | 2.05 | 0.23 | ^R 0.31 | 1.04 | 0.29 | 0.14 | 0.06 | 0.28 | ^R 1.46 | 0.03 | 5.58 | 2.47 | 2.19 | 0.33 | NA |
| 1979 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5.31 | 2.42 | 1.71 | .31 | NA |
| 1980 | 3.41 | .27 | 1.30 | .23 | .36 | 1.15 | .30 | .22 | .07 | .36 | 1.54 | .05 | 4.97 | 2.48 | 1.52 | .35 | .85 |
| 1981 | 3.69 | .26 | 1.06 | .21 | .34 | 1.13 | .30 | .22 | .06 | .43 | 1.52 | .05 | 5.27 | 2.42 | 1.28 | .31 | .87 |
| 1982 | 3.14 | .25 | 1.04 | .19 | .31 | 1.15 | .28 | .15 | .06 | .43 | 1.50 | .05 | 4.74 | 2.35 | 1.20 | .29 | .97 |
| 1984 | 3.51 | .25 | 1.11 | .21 | .32 | 1.10 | .32 | .15 | .06 | .35 | 1.59 | .04 | 4.98 | 2.48 | 1.26 | .31 | .98 |
| 1987 | 3.38 | .28 | 1.05 | .22 | .44 | 1.10 | .31 | .17 | .06 | .34 | 1.72 | .04 | 4.83 | 2.76 | 1.22 | .32 | .85 |
| 1990 | 3.37 | .30 | .93 | .19 | .48 | 1.16 | .34 | .11 | .06 | .33 | 1.91 | .03 | 4.86 | 3.03 | 1.04 | .28 | .58 |
| 1993 | 3.67 | .41 | .95 | .30 | .46 | 1.31 | .34 | .12 | .05 | .29 | 2.08 | .03 | 5.27 | 3.28 | 1.07 | .38 | .55 |
| 1997 | 3.61 | .40 | .91 | .26 | .42 | 1.29 | .39 | .16 | .08 | .37 | 2.33 | .02 | 5.28 | 3.54 | 1.07 | .36 | .43 |
| 2001 | 3.32 | .39 | .62 | .28 | .62 | 1.15 | .36 | .13 | .05 | .37 | 2.52 | .05 | 4.84 | 3.89 | .75 | .38 | .37 |
| 2005 | 2.95 | .28 | .75 | .32 | .88 | 1.41 | .42 | .14 | .15 | .43 | 2.77 | .05 | 4.79 | 4.35 | .88 | .52 | .43 |
| Expenditures (billion nominal dollars ⁹) | | | | | | | | | | | | | | | | | |
| 1978 | 11.49 | 3.53 | 8.06 | 1.05 | ^R 3.97 | 2.88 | ^R 3.15 | 0.56 | 0.36 | 0.93 | ^R 19.24 | 0.25 | 15.30 | 29.89 | 8.62 | 1.66 | NA |
| 1979 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 17.84 | 32.56 | 10.73 | 2.06 | NA |
| 1980 | 13.22 | 3.78 | 10.48 | 1.78 | 5.84 | 4.51 | 4.45 | 1.76 | .57 | 1.91 | 26.74 | .44 | 19.77 | 40.81 | 12.24 | 2.80 | NA |
| 1981 | 16.62 | 3.93 | 9.44 | 1.78 | 6.23 | 5.13 | 4.94 | 1.94 | .51 | 2.17 | 29.70 | .52 | 24.03 | 44.80 | ^R 11.39 | 2.81 | NA |
| 1982 | 17.74 | 4.21 | 8.80 | 1.69 | 6.23 | 6.51 | 5.00 | 1.28 | .54 | 2.58 | 31.29 | .52 | 26.96 | 46.74 | 10.07 | 2.75 | NA |
| 1984 | 20.66 | 4.62 | 8.51 | 2.00 | 7.06 | 6.63 | 6.44 | 1.09 | .58 | 2.31 | 36.36 | .54 | 29.78 | 54.48 | 9.60 | 3.12 | NA |
| 1987 | 18.05 | 5.53 | 6.25 | 1.85 | 9.77 | 6.02 | 6.45 | .94 | .50 | 2.02 | 39.83 | .46 | 26.15 | 61.58 | 7.21 | 2.81 | NA |
| 1990 | 18.59 | 6.16 | 7.42 | 2.01 | 11.23 | 6.59 | 7.21 | .83 | .65 | 2.03 | 46.95 | .48 | 27.26 | 71.54 | 8.25 | 3.14 | NA |
| 1993 | 21.95 | 8.66 | 6.24 | 2.81 | 11.31 | 8.08 | 7.58 | .74 | .58 | 1.98 | 53.52 | .42 | 32.04 | 81.08 | 6.98 | 3.81 | NA |
| 1997 | 24.11 | 8.56 | 6.57 | 2.79 | 10.20 | 8.84 | 8.99 | 1.04 | .89 | 2.86 | 60.57 | .36 | 35.81 | 88.33 | 7.61 | 4.04 | NA |
| 2001 | 31.84 | 8.98 | 5.66 | 4.04 | 15.94 | 11.31 | 8.47 | 1.15 | .69 | 3.83 | 66.94 | .86 | 46.98 | 100.34 | 6.83 | 5.60 | NA |
| 2005 | 31.97 | 7.42 | 10.99 | 6.35 | 25.26 | 15.57 | 11.13 | 2.00 | 3.28 | 4.80 | 80.92 | 1.37 | 52.37 | 124.74 | 12.99 | 11.00 | NA |

¹ Wood used for space heating is included in "Total Wood."

² A small amount of natural gas used for air conditioning is included in "Total Natural Gas."

³ Includes refrigerators.

⁴ A small amount of distillate fuel oil and kerosene used for appliances is included in "Fuel Oil" under "Total."

⁵ Retail electricity. One kilowatt-hour=3,412 Btu.

⁶ Distillate fuel oil and kerosene.

⁷ Liquefied petroleum gases.

⁸ Wood used for both space heating and ambience.

⁹ See "Nominal Dollars" in Glossary.

R=Revised. NA=Not available.

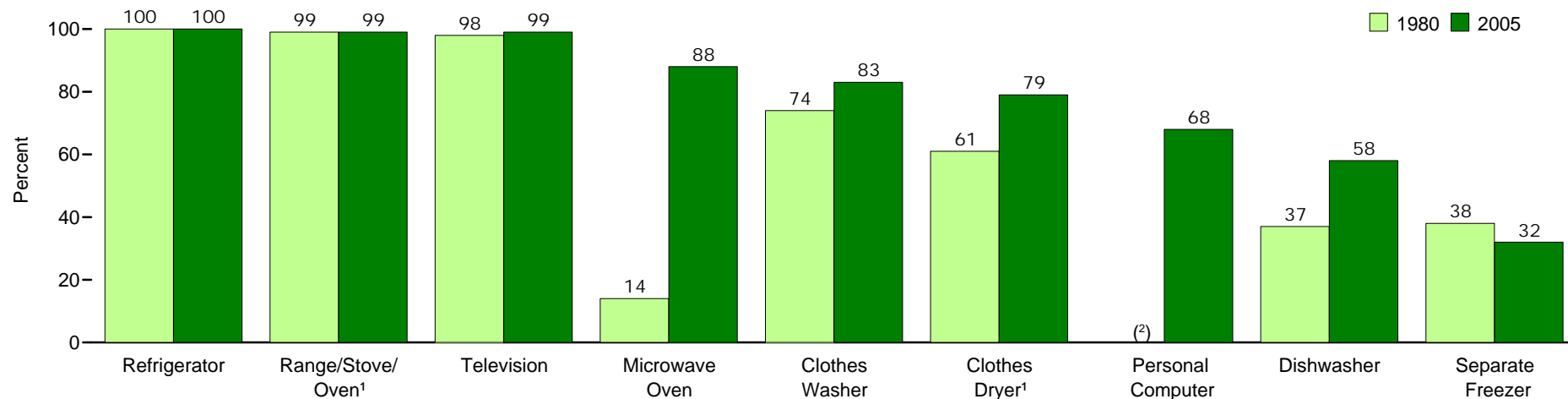
Notes: • Data are estimates. • For years not shown, there are no data available. • Totals may not equal sum of components due to independent rounding.

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

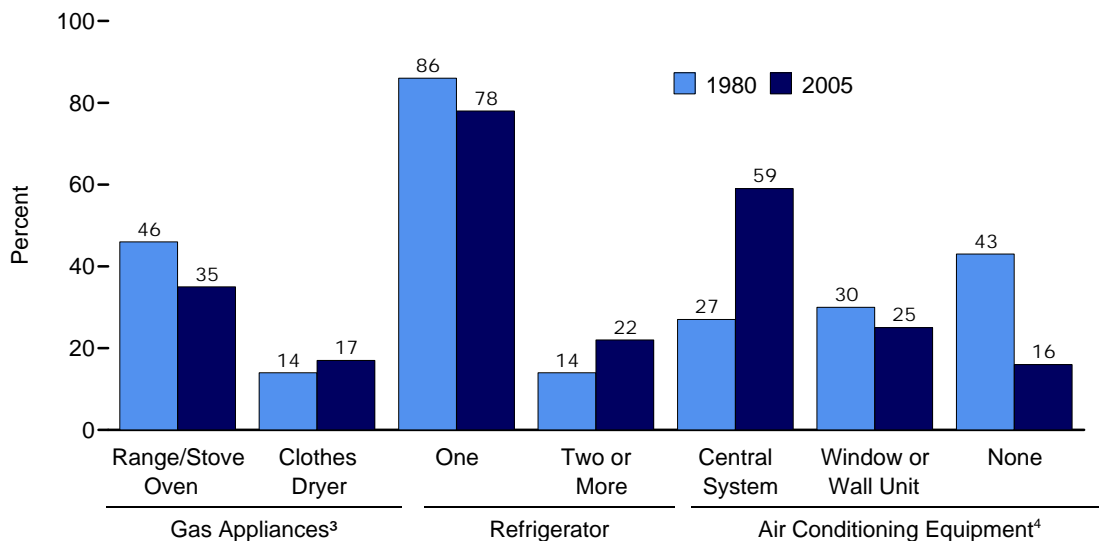
Sources: • 1978 and 1979—Energy Information Administration (EIA), Form EIA-84, "Residential Energy Consumption Survey." • 1980 forward—EIA, Form EIA-457, "Residential Energy Consumption Survey."

Figure 2.6 Household End Uses: Fuel Types and Appliances

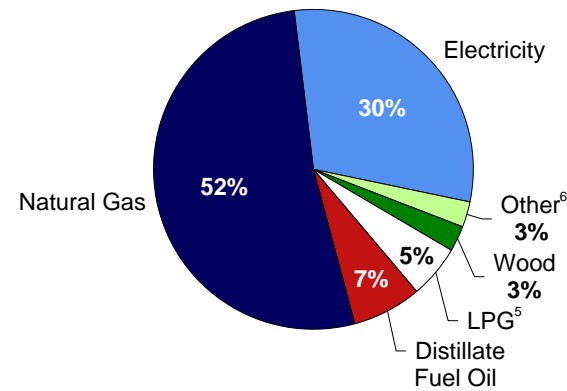
Share of Households With Selected Appliances and Electronics, 1980 and 2005



Share of Households With Other Selected Appliances, 1980 and 2005



Space Heating by Main Fuel, 2005



¹ Natural gas and electric.

² Not collected in 1980.

³ Natural gas or liquefied petroleum gases.

⁴ Households with both central and individual room units are counted only under "Central."

⁵ Liquefied petroleum gases.

⁶ Kerosene, coal, solar, other fuel, or no heat.

Source: Table 2.6.

Table 2.6 Household End Uses: Fuel Types and Appliances, Selected Years, 1978-2005

| Appliance | Year | | | | | | | | | | | | Change |
|--|------|------|------|------|------|------|------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|
| | 1978 | 1979 | 1980 | 1981 | 1982 | 1984 | 1987 | 1990 | 1993 | 1997 | 2001 | 2005 | 1980 to 2005 |
| Total Households (millions) | 77 | 78 | 82 | 83 | 84 | 86 | 91 | 94 | 97 | 101 | 107 | 111 | 29 |
| Percent of Households | | | | | | | | | | | | | |
| Space Heating - Main Fuel | | | | | | | | | | | | | |
| Natural Gas | 55 | 55 | 55 | 56 | 57 | 55 | 55 | 55 | 53 | ^R 52 | 55 | 52 | -3 |
| Electricity ¹ | 16 | 17 | 18 | 17 | 16 | 17 | 20 | 23 | 26 | 29 | 29 | 30 | 12 |
| Liquefied Petroleum Gases | 4 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 0 |
| Distillate Fuel Oil | 20 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 9 | ^R 7 | 7 | -8 |
| Wood | 2 | 4 | 6 | 6 | 7 | 7 | 6 | 4 | 3 | 2 | 2 | 3 | -3 |
| Other ² or No Space Heating | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | ^R 2 | ^R 3 | ^R 1 |
| Air Conditioning - Equipment | | | | | | | | | | | | | |
| Central System ³ | 23 | 24 | 27 | 27 | 28 | 30 | 34 | 39 | 44 | 47 | 55 | 59 | 32 |
| Window/Wall Unit ³ | 33 | 31 | 30 | 31 | 30 | 30 | 30 | 29 | 25 | 25 | 23 | 25 | -5 |
| None | 44 | 45 | 43 | 42 | 42 | 40 | 36 | 32 | 32 | 28 | 23 | 16 | -27 |
| Water Heating - Main Fuel | | | | | | | | | | | | | |
| Natural Gas | 55 | 55 | 54 | 55 | 56 | 54 | 54 | 53 | 53 | 52 | 54 | 53 | -1 |
| Electricity ¹ | 33 | 33 | 32 | 33 | 32 | 33 | 35 | 37 | 38 | 39 | 38 | 39 | 7 |
| Liquefied Petroleum Gases | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 0 |
| Distillate Fuel Oil | 8 | 7 | 9 | 7 | 7 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | -5 |
| Other ² or No Water Heating | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | -1 |
| Appliances and Electronics | | | | | | | | | | | | | |
| Refrigerator ⁴ | 100 | NA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 0 |
| One | 86 | NA | 86 | 87 | 86 | 88 | 86 | 84 | 85 | 85 | 83 | 78 | -8 |
| Two or More | 14 | NA | 14 | 13 | 13 | 12 | 14 | 15 | 15 | 15 | 17 | 22 | 8 |
| Separate Freezer | 35 | NA | 38 | 38 | 37 | 37 | 34 | 34 | 35 | 33 | 32 | 32 | -6 |
| Clothes Washer | 74 | NA | 74 | 73 | 71 | 73 | 75 | 76 | 77 | 77 | 79 | 83 | 9 |
| Clothes Dryer - Total | 59 | NA | 61 | 61 | 60 | 62 | 66 | 69 | 70 | 71 | 74 | 79 | 18 |
| Natural Gas | 14 | NA | 14 | 16 | 15 | 16 | 15 | 16 | ^R 14 | ^R 15 | ^R 16 | ^R 17 | ^R 3 |
| Electric | 45 | NA | 47 | 45 | 45 | 46 | 51 | 53 | 57 | 55 | 57 | 61 | 14 |
| Dishwasher | 35 | NA | 37 | 37 | 36 | 38 | 43 | 45 | 45 | 50 | 53 | 58 | 21 |
| Range/Stove/Oven | 99 | NA | 99 | 100 | 99 | 99 | 99 | 100 | 100 | 99 | 100 | 99 | 0 |
| Natural Gas | 48 | NA | 46 | 46 | 47 | 46 | 43 | 42 | 33 | 35 | 35 | 35 | -11 |
| Electric | 53 | NA | 57 | 56 | 56 | 57 | 60 | 59 | 63 | 62 | 62 | 62 | 5 |
| Microwave Oven | 8 | NA | 14 | 17 | 21 | 34 | 61 | 79 | 84 | 83 | 86 | 88 | 74 |
| Television | NA | NA | 98 | 98 | 98 | 98 | 98 | 99 | 99 | ^R 99 | ^R 99 | ^R 99 | ^R 1 |
| One or Two | NA | NA | 85 | 84 | 83 | 80 | 75 | 71 | 70 | 69 | 63 | 56 | -29 |
| Three or More | NA | NA | 14 | 14 | 15 | 18 | 23 | 28 | 28 | 29 | 36 | 43 | 29 |
| Personal Computer | NA | NA | NA | NA | NA | NA | NA | ^R NA | ^R NA | 35 | 56 | 68 | NA |
| One | NA | NA | NA | NA | NA | NA | NA | NA | NA | 29 | 42 | 45 | NA |
| Two or More | NA | NA | NA | NA | NA | NA | NA | NA | NA | 6 | 15 | 23 | NA |

¹ Retail electricity.

² Kerosene, solar, or other fuel.

³ Households with both a central system and a window or wall unit are counted only under "Central System."

⁴ Fewer than 0.5 percent of the households do not have a refrigerator.

R=Revised. NA=Not available. (s)=Less than 0.5 percent.

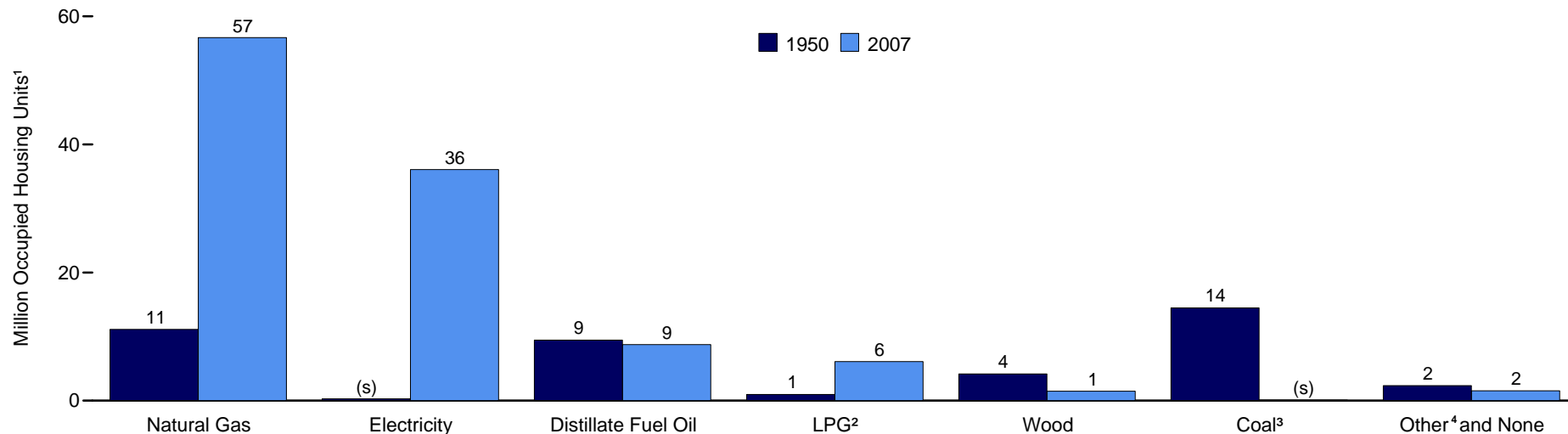
Notes: • Data are estimates. • For years not shown, there are no data available.

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

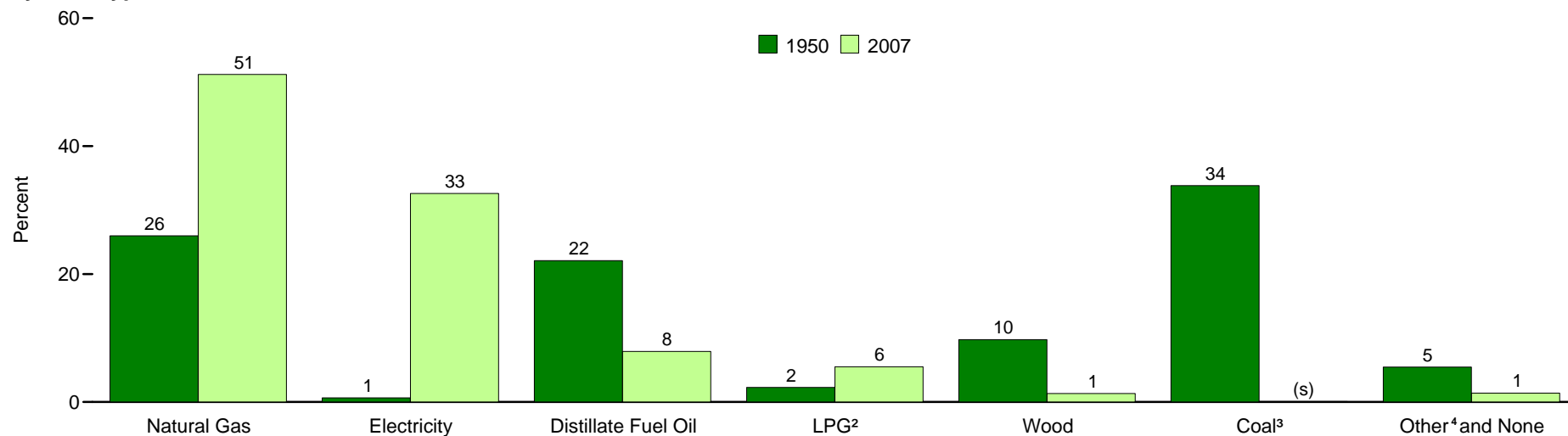
Sources: • 1978 and 1979—Energy Information Administration (EIA), Form EIA-84, "Residential Energy Consumption Survey." • 1980 forward—EIA, Form EIA-457, "Residential Energy Consumption Survey."

Figure 2.7 Type of Heating in Occupied Housing Units, 1950 and 2007

By Fuel Type



By Fuel Type, Share of Total



¹ Sum of components do not equal total due to independent rounding.

² Liquefied petroleum gases.

³ Includes coal coke.

⁴ Kerosene, solar, and other.

(s)=Less than 0.5.

Source: Table 2.7.

Table 2.7 Type of Heating in Occupied Housing Units, Selected Years, 1950-2007

| Year | Coal ¹ | Distillate Fuel Oil | Kerosene | Liquefied Petroleum Gases | Natural Gas | Electricity | Wood | Solar | Other ² | None ³ | Total |
|--------------------------------|-------------------|---------------------|------------------|---------------------------|-------------|-------------|------|-------|--------------------|-------------------|--------|
| Million Occupied Housing Units | | | | | | | | | | | |
| 1950 | 14.48 | 9.46 | (⁴) | 0.98 | 11.12 | 0.28 | 4.17 | NA | 0.77 | 1.57 | 42.83 |
| 1960 | 6.46 | 17.16 | (⁴) | 2.69 | 22.85 | .93 | 2.24 | NA | .22 | .48 | 53.02 |
| 1970 | 1.82 | 16.47 | (⁴) | 3.81 | 35.01 | 4.88 | .79 | NA | .27 | .40 | 63.45 |
| 1973 | .80 | 17.24 | (⁴) | 4.42 | 38.46 | 7.21 | .60 | NA | .15 | .45 | 69.34 |
| 1974 | .74 | 16.84 | (⁴) | 4.14 | 39.47 | 8.41 | .66 | NA | .09 | .48 | 70.83 |
| 1975 | .57 | 16.30 | (⁴) | 4.15 | 40.93 | 9.17 | .85 | NA | .08 | .47 | 72.52 |
| 1976 | .48 | 16.45 | (⁴) | 4.24 | 41.22 | 10.15 | .91 | NA | .09 | .46 | 74.01 |
| 1977 | .45 | 15.62 | .44 | 4.18 | 41.54 | 11.15 | 1.24 | NA | .15 | .51 | 75.28 |
| 1978 | .40 | 15.65 | .42 | 4.13 | 42.52 | 12.26 | 1.07 | NA | .12 | .60 | 77.17 |
| 1979 | .36 | 15.30 | .41 | 4.13 | 43.32 | 13.24 | 1.14 | NA | .10 | .57 | 78.57 |
| 1980 | .33 | 14.50 | .37 | 4.17 | 44.40 | 14.21 | 1.38 | NA | .11 | .61 | 80.07 |
| 1981 | .36 | 14.13 | .37 | 4.17 | 46.08 | 15.49 | 1.89 | NA | .10 | .59 | 83.18 |
| 1983 ⁵ | .43 | 12.59 | .45 | 3.87 | 46.70 | 15.68 | 4.09 | NA | .16 | .68 | 84.64 |
| 1985 | .45 | 12.44 | 1.06 | 3.58 | 45.33 | 18.36 | 6.25 | .05 | .37 | .53 | 88.43 |
| 1987 | .41 | 12.74 | 1.08 | 3.66 | 45.96 | 20.61 | 5.45 | .05 | .28 | .66 | 90.89 |
| 1989 | .34 | 12.47 | 1.07 | 3.66 | 47.40 | 23.06 | 4.59 | .04 | .40 | .66 | 93.68 |
| 1991 | .32 | 11.47 | .99 | 3.88 | 47.02 | 23.71 | 4.44 | .03 | .41 | .86 | 93.15 |
| 1993 | .30 | 11.17 | 1.02 | 3.92 | 47.67 | 25.11 | 4.10 | .03 | .50 | .91 | 94.73 |
| 1995 | .21 | 10.98 | 1.06 | 4.25 | 49.20 | 26.77 | 3.53 | .02 | .64 | 1.04 | 97.69 |
| 1997 | .18 | 10.10 | .75 | 5.40 | 51.05 | 29.20 | 1.79 | .03 | .36 | .62 | 99.49 |
| 1999 | .17 | 10.03 | .72 | 5.91 | 52.37 | 31.14 | 1.70 | .02 | .21 | .54 | 102.80 |
| 2001 ⁶ | .13 | 9.81 | .65 | 6.04 | 54.13 | 32.41 | 1.67 | .02 | .19 | .39 | 105.44 |
| 2003 | .13 | 9.50 | .64 | 6.13 | 54.93 | 32.34 | 1.56 | .02 | .16 | .44 | 105.84 |
| 2005 | .10 | 9.38 | .55 | 6.23 | 56.32 | 34.26 | 1.41 | .02 | .21 | .40 | 108.87 |
| 2007 | .09 | 8.74 | .57 | 6.10 | 56.68 | 36.08 | 1.47 | .02 | .46 | .48 | 110.69 |
| Percent | | | | | | | | | | | |
| 1950 | 33.8 | 22.1 | (⁴) | 2.3 | 26.0 | 0.6 | 9.7 | NA | 1.8 | 3.7 | 100.0 |
| 1960 | 12.2 | 32.4 | (⁴) | 5.1 | 43.1 | 1.8 | 4.2 | NA | .4 | .9 | 100.0 |
| 1970 | 2.9 | 26.0 | (⁴) | 6.0 | 55.2 | 7.7 | 1.3 | NA | .4 | .6 | 100.0 |
| 1973 | 1.2 | 24.9 | (⁴) | 6.4 | 55.5 | 10.4 | .9 | NA | .2 | .7 | 100.0 |
| 1974 | 1.0 | 23.8 | (⁴) | 5.8 | 55.7 | 11.9 | .9 | NA | .1 | .7 | 100.0 |
| 1975 | .8 | 22.5 | (⁴) | 5.7 | 56.4 | 12.6 | 1.2 | NA | .1 | .6 | 100.0 |
| 1976 | .7 | 22.2 | (⁴) | 5.7 | 55.7 | 13.7 | 1.2 | NA | .1 | .6 | 100.0 |
| 1977 | .6 | 20.7 | .6 | 5.6 | 55.2 | 14.8 | 1.6 | NA | .2 | .7 | 100.0 |
| 1978 | .5 | 20.3 | .5 | 5.4 | 55.1 | 15.9 | 1.4 | NA | .2 | .8 | 100.0 |
| 1979 | .5 | 19.5 | .5 | 5.3 | 55.1 | 16.9 | 1.4 | NA | .1 | .7 | 100.0 |
| 1980 | .4 | 18.1 | .5 | 5.2 | 55.4 | 17.7 | 1.7 | NA | .1 | .8 | 100.0 |
| 1981 | .4 | 17.0 | .4 | 5.0 | 55.4 | 18.6 | 2.3 | NA | .1 | .7 | 100.0 |
| 1983 ⁵ | .5 | 14.9 | .5 | 4.6 | 55.2 | 18.5 | 4.8 | NA | .2 | .8 | 100.0 |
| 1985 | .5 | 14.1 | 1.2 | 4.1 | 51.3 | 20.8 | 7.1 | .1 | .4 | .6 | 100.0 |
| 1987 | .4 | 14.0 | 1.2 | 4.0 | 50.6 | 22.7 | 6.0 | .1 | .3 | .7 | 100.0 |
| 1989 | .4 | 13.3 | 1.1 | 3.9 | 50.6 | 24.6 | 4.9 | (s) | .4 | .7 | 100.0 |
| 1991 | .3 | 12.3 | 1.1 | 4.2 | 50.5 | 25.5 | 4.8 | (s) | .4 | .9 | 100.0 |
| 1993 | .3 | 11.8 | 1.1 | 4.1 | 50.3 | 26.5 | 4.3 | (s) | .5 | 1.0 | 100.0 |
| 1995 | .2 | 11.2 | 1.1 | 4.4 | 50.4 | 27.4 | 3.6 | (s) | .7 | 1.1 | 100.0 |
| 1997 | .2 | 10.2 | .8 | 5.4 | 51.3 | 29.4 | 1.8 | (s) | .4 | .6 | 100.0 |
| 1999 | .2 | 9.8 | .7 | 5.7 | 50.9 | 30.3 | 1.7 | (s) | .2 | .5 | 100.0 |
| 2001 ⁶ | .1 | 9.3 | .6 | 5.7 | 51.3 | 30.7 | 1.6 | (s) | .2 | .4 | 100.0 |
| 2003 | .1 | 9.0 | .6 | 5.8 | 51.9 | 30.6 | 1.5 | (s) | .1 | .4 | 100.0 |
| 2005 | .1 | 8.6 | .5 | 5.7 | 51.7 | 31.5 | 1.3 | (s) | .2 | .4 | 100.0 |
| 2007 | .1 | 7.9 | .5 | 5.5 | 51.2 | 32.6 | 1.3 | (s) | .4 | .4 | 100.0 |

¹ Includes coal coke.

² Includes briquettes (made of pitch and sawdust), coal dust, waste material (such as corncobs), purchased steam, and other fuels not separately displayed.

³ In 1950 and 1960, also includes nonreporting units, which totaled 997 and 2,000 units, respectively.

⁴ Included in "Distillate Fuel Oil."

⁵ Beginning in 1983, the *American Housing Survey for the United States* has been a biennial survey.

⁶ Beginning in 2001, data are consistent with the 2000 Census. For 2001 data consistent with the 1990 Census, see *American Housing Survey for the United States: 2001*.

NA=Not available. (s)=Less than 0.05 percent.

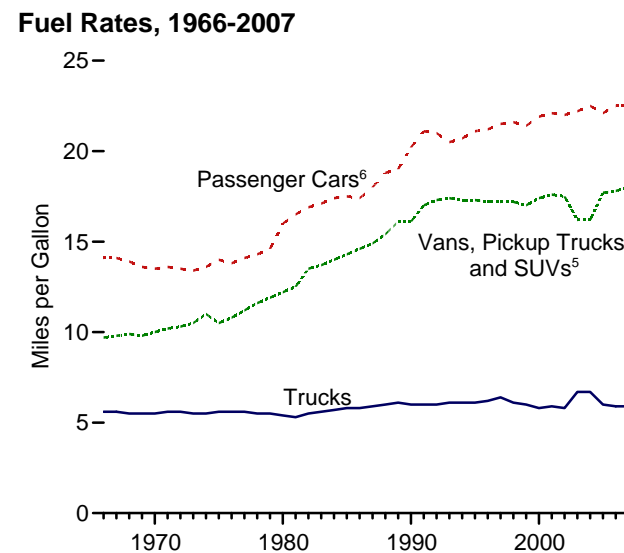
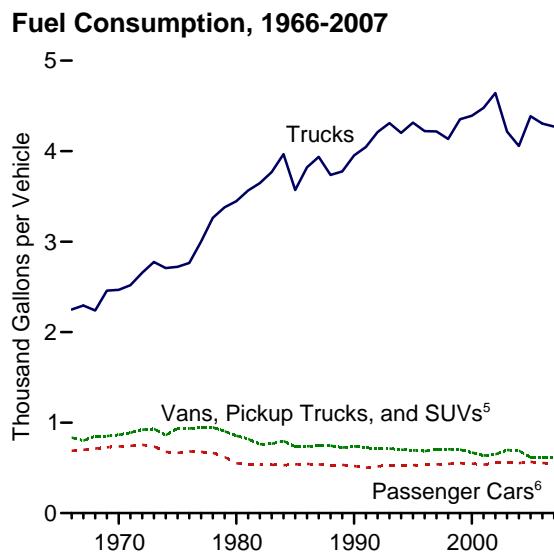
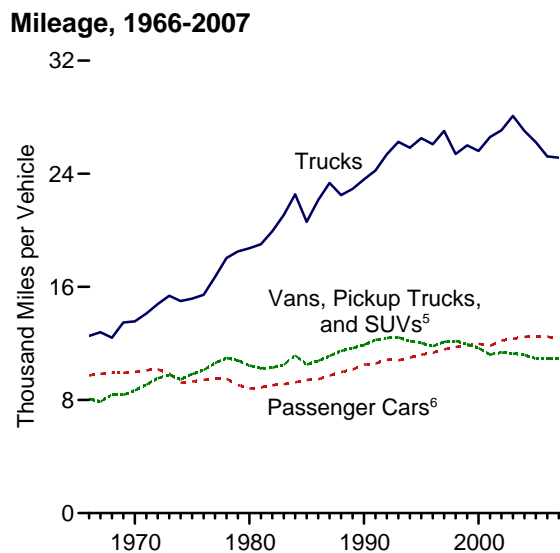
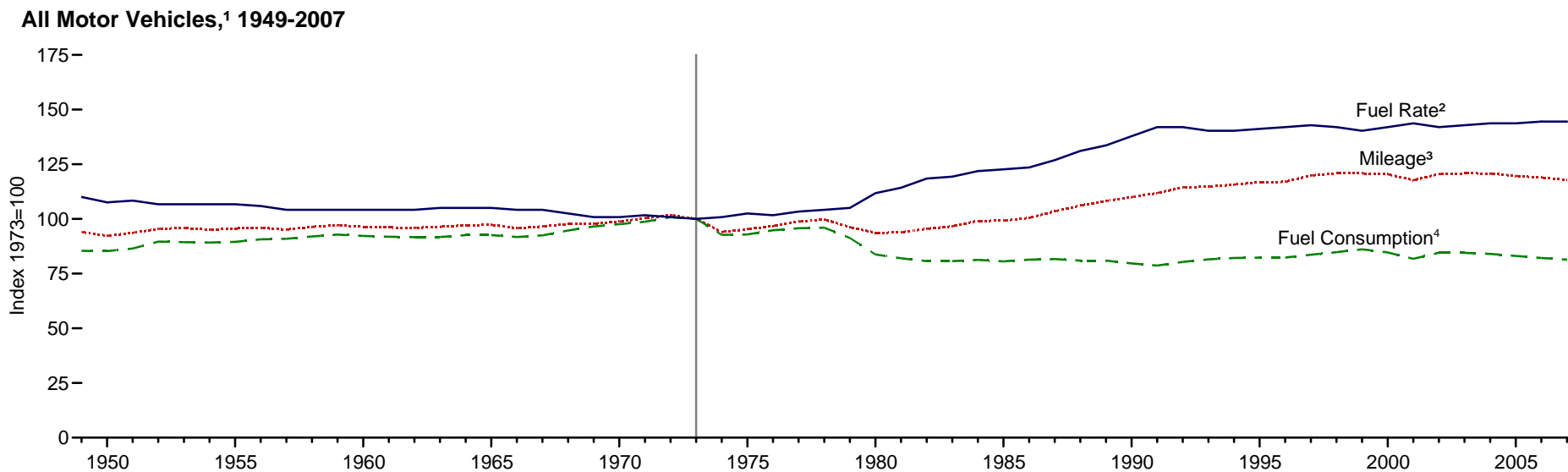
Notes: • Includes mobile homes and individual housing units in apartment buildings. Housing units with more than one type of heating system are classified according to the principal type of heating system.

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

Web Page: For related information, see <http://www.census.gov/hhes/www/ahs.html>.

Sources: • 1950, 1960, and 1970—Bureau of the Census, *Census of Population and Housing*. • 1973 forward—Bureau of the Census, *American Housing Survey for the United States*, biennial surveys, Table 2-5.

Figure 2.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Rates



¹ Passenger cars, motorcycles, vans, pickup trucks, sport utility vehicles, trucks, and buses.

² Miles per gallon.

³ Miles per vehicle.

⁴ Gallons per vehicle.

⁵ Sport utility vehicle.

⁶ Through 1989, includes motorcycles.

Source: Table 2.8.

Table 2.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Rates, Selected Years, 1949-2007

| Year | Passenger Cars ¹ | | | Vans, Pickup Trucks, and Sport Utility Vehicles ² | | | Trucks ³ | | | All Motor Vehicles ⁴ | | |
|-------------------|-----------------------------|---------------------|-------------------|--|---------------------|-------------------|---------------------|---------------------|------------------|---------------------------------|---------------------|-------------------|
| | Mileage | Fuel Consumption | Fuel Rate | Mileage | Fuel Consumption | Fuel Rate | Mileage | Fuel Consumption | Fuel Rate | Mileage | Fuel Consumption | Fuel Rate |
| | Miles per Vehicle | Gallons per Vehicle | Miles per Gallon | Miles per Vehicle | Gallons per Vehicle | Miles per Gallon | Miles per vehicle | Gallons per vehicle | Miles per Gallon | Miles per Vehicle | Gallons per Vehicle | Miles per Gallon |
| 1949 | 9,388 | 627 | 15.0 | (⁵) | (⁵) | (⁵) | 9,712 | 1,080 | 9.0 | 9,498 | 726 | 13.1 |
| 1950 | 9,060 | 603 | 15.0 | (⁵) | (⁵) | (⁵) | 10,316 | 1,229 | 8.4 | 9,321 | 725 | 12.8 |
| 1955 | 9,447 | 645 | 14.6 | (⁵) | (⁵) | (⁵) | 10,576 | 1,293 | 8.2 | 9,661 | 761 | 12.7 |
| 1960 | 9,518 | 668 | 14.3 | (⁵) | (⁵) | (⁵) | 10,693 | 1,333 | 8.0 | 9,732 | 784 | 12.4 |
| 1965 | 9,603 | 661 | 14.5 | (⁵) | (⁵) | (⁵) | 10,851 | 1,387 | 7.8 | 9,826 | 787 | 12.5 |
| 1970 | 9,989 | 737 | 13.5 | 8,676 | 866 | 10.0 | 13,565 | 2,467 | 5.5 | 9,976 | 830 | 12.0 |
| 1971 | 10,097 | 743 | 13.6 | 9,082 | 888 | 10.2 | 14,117 | 2,519 | 5.6 | 10,133 | 839 | 12.1 |
| 1972 | 10,171 | 754 | 13.5 | 9,534 | 922 | 10.3 | 14,780 | 2,657 | 5.6 | 10,279 | 857 | 12.0 |
| 1973 | 9,884 | 737 | 13.4 | 9,779 | 931 | 10.5 | 15,370 | 2,775 | 5.5 | 10,099 | 850 | 11.9 |
| 1974 | 9,221 | 677 | 13.6 | 9,452 | 862 | 11.0 | 14,995 | 2,708 | 5.5 | 9,493 | 788 | 12.0 |
| 1975 | 9,309 | 665 | 14.0 | 9,829 | 934 | 10.5 | 15,167 | 2,722 | 5.6 | 9,627 | 790 | 12.2 |
| 1976 | 9,418 | 681 | 13.8 | 10,127 | 934 | 10.8 | 15,438 | 2,764 | 5.6 | 9,774 | 806 | 12.1 |
| 1977 | 9,517 | 676 | 14.1 | 10,607 | 947 | 11.2 | 16,700 | 3,002 | 5.6 | 9,978 | 814 | 12.3 |
| 1978 | 9,500 | 665 | 14.3 | 10,968 | 948 | 11.6 | 18,045 | 3,263 | 5.5 | 10,077 | 816 | 12.4 |
| 1979 | 9,062 | 620 | 14.6 | 10,802 | 905 | 11.9 | 18,502 | 3,380 | 5.5 | 9,722 | 776 | 12.5 |
| 1980 | 8,813 | 551 | 16.0 | 10,437 | 854 | 12.2 | 18,736 | 3,447 | 5.4 | 9,458 | 712 | 13.3 |
| 1981 | 8,873 | 538 | 16.5 | 10,244 | 819 | 12.5 | 19,016 | 3,565 | 5.3 | 9,477 | 697 | 13.6 |
| 1982 | 9,050 | 535 | 16.9 | 10,276 | 762 | 13.5 | 19,931 | 3,647 | 5.5 | 9,644 | 686 | 14.1 |
| 1983 | 9,118 | 534 | 17.1 | 10,497 | 767 | 13.7 | 21,083 | 3,769 | 5.6 | 9,760 | 686 | 14.2 |
| 1984 | 9,248 | 530 | 17.4 | 11,151 | 797 | 14.0 | 22,550 | 3,967 | 5.7 | 10,017 | 691 | 14.5 |
| 1985 | 9,419 | 538 | 17.5 | 10,506 | 735 | 14.3 | 20,597 | 3,570 | 5.8 | 10,020 | 685 | 14.6 |
| 1986 | 9,464 | 543 | 17.4 | 10,764 | 738 | 14.6 | 22,143 | 3,821 | 5.8 | 10,143 | 692 | 14.7 |
| 1987 | 9,720 | 539 | 18.0 | 11,114 | 744 | 14.9 | 23,349 | 3,937 | 5.9 | 10,453 | 694 | 15.1 |
| 1988 | 9,972 | 531 | 18.8 | 11,465 | 745 | 15.4 | 22,485 | 3,736 | 6.0 | 10,721 | 688 | 15.6 |
| 1989 | ¹ 10,157 | ¹ 533 | ¹ 19.0 | 11,676 | 724 | 16.1 | 22,926 | 3,776 | 6.1 | 10,932 | 688 | 15.9 |
| 1990 | 10,504 | 520 | 20.2 | 11,902 | 738 | 16.1 | 23,603 | 3,953 | 6.0 | 11,107 | 677 | 16.4 |
| 1991 | 10,571 | 501 | 21.1 | 12,245 | 721 | 17.0 | 24,229 | 4,047 | 6.0 | 11,294 | 669 | 16.9 |
| 1992 | 10,857 | 517 | 21.0 | 12,381 | 717 | 17.3 | 25,373 | 4,210 | 6.0 | 11,558 | 683 | 16.9 |
| 1993 | 10,804 | 527 | 20.5 | 12,430 | 714 | 17.4 | 26,262 | 4,309 | 6.1 | 11,595 | 693 | 16.7 |
| 1994 | 10,992 | 531 | 20.7 | 12,156 | 701 | 17.3 | 25,838 | 4,202 | 6.1 | 11,683 | 698 | 16.7 |
| 1995 | 11,203 | 530 | 21.1 | 12,018 | 694 | 17.3 | 26,514 | 4,315 | 6.1 | 11,793 | 700 | 16.8 |
| 1996 | 11,330 | 534 | 21.2 | 11,811 | 685 | 17.2 | 26,092 | 4,221 | 6.2 | 11,813 | 700 | 16.9 |
| 1997 | 11,581 | 539 | 21.5 | 12,115 | 703 | 17.2 | 27,032 | 4,218 | 6.4 | 12,107 | 711 | 17.0 |
| 1998 | 11,754 | 544 | 21.6 | 12,173 | 707 | 17.2 | 25,397 | 4,135 | 6.1 | 12,211 | 721 | 16.9 |
| 1999 | 11,848 | 553 | 21.4 | 11,957 | 701 | 17.0 | 26,014 | 4,352 | 6.0 | 12,206 | 732 | 16.7 |
| 2000 | 11,976 | 547 | 21.9 | 11,672 | 669 | 17.4 | 25,617 | 4,391 | 5.8 | 12,164 | 720 | 16.9 |
| 2001 | 11,831 | 534 | 22.1 | 11,204 | 636 | 17.6 | 26,602 | 4,477 | 5.9 | 11,887 | 695 | 17.1 |
| 2002 | 12,202 | 555 | 22.0 | 11,364 | 650 | 17.5 | 27,071 | 4,642 | 5.8 | 12,171 | 719 | 16.9 |
| 2003 | 12,325 | 556 | 22.2 | 11,287 | 697 | 16.2 | 28,093 | 4,215 | 6.7 | 12,208 | 718 | 17.0 |
| 2004 | 12,460 | 553 | 22.5 | 11,184 | 690 | 16.2 | 27,023 | 4,057 | 6.7 | 12,200 | 714 | 17.1 |
| 2005 | 12,510 | 567 | 22.1 | 10,920 | 617 | 17.7 | 26,235 | 4,385 | 6.0 | 12,082 | 706 | 17.1 |
| 2006 | ^R 12,485 | ^R 554 | ^R 22.5 | ^R 10,920 | ^R 612 | ^R 17.8 | ^R 25,231 | ^R 4,304 | ^R 5.9 | ^R 12,017 | ^R 698 | ^R 17.2 |
| 2007 ^P | 12,293 | 547 | 22.5 | 10,952 | 609 | 18.0 | 25,141 | 4,270 | 5.9 | 11,910 | 692 | 17.2 |

¹ Through 1989, includes motorcycles.

² Includes a small number of trucks with 2 axles and 4 tires, such as step vans.

³ Single-unit trucks with 2 axles and 6 or more tires, and combination trucks.

⁴ Includes buses and motorcycles, which are not separately displayed.

⁵ Included in "Trucks."

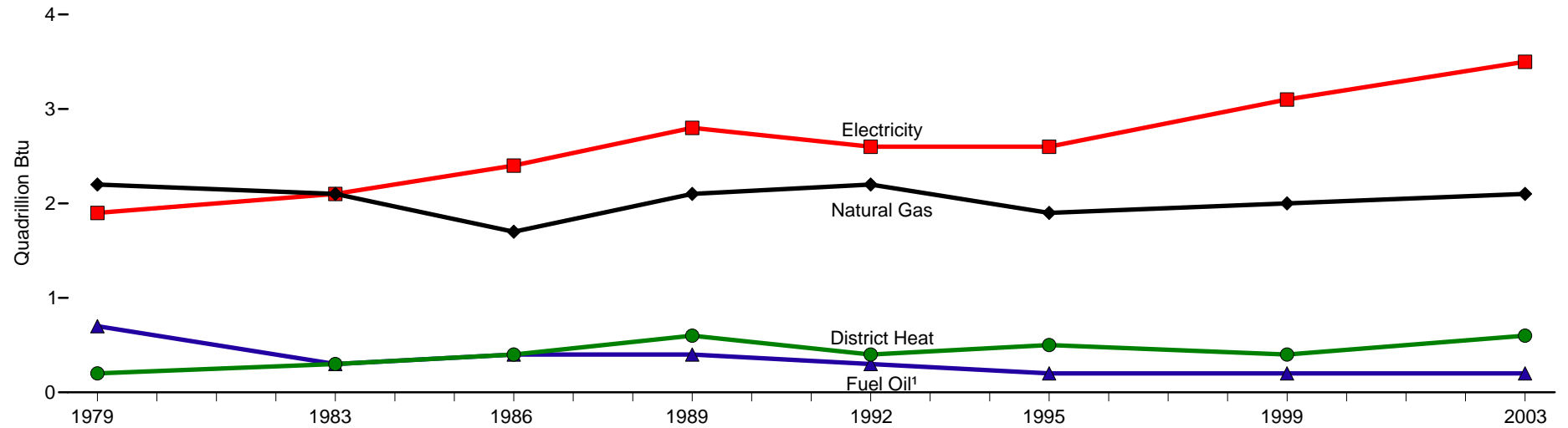
R=Revised. P=Preliminary.

Web Pages: • For all data beginning in 1949, see <http://www.eia.doe.gov/aer/consump.html>. • For related information, see <http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm>.

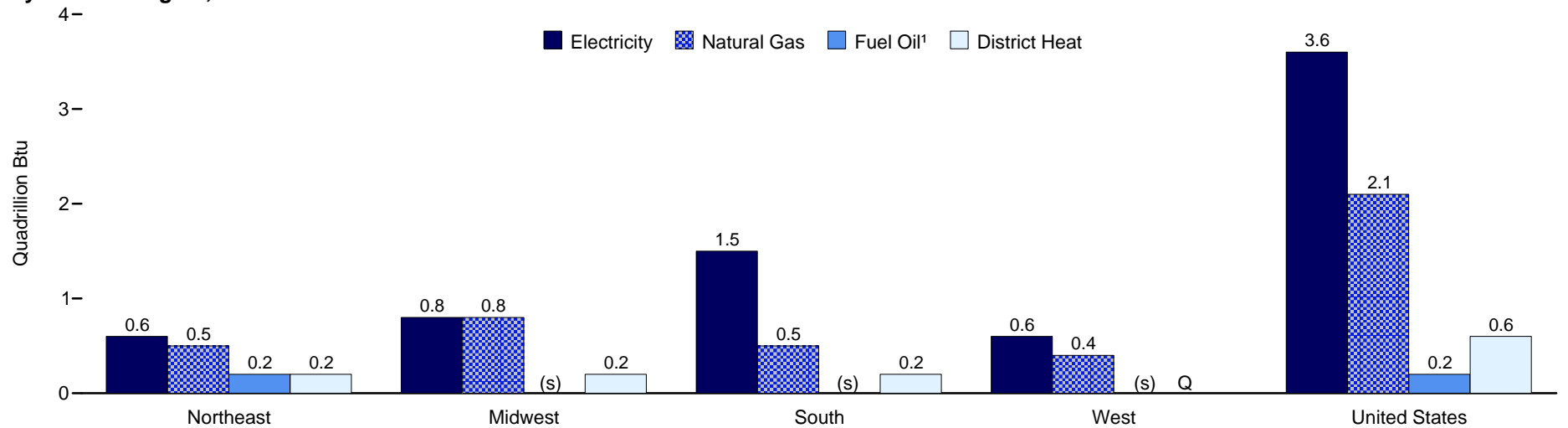
Sources: **Passenger Cars, 1990-1994:** U.S. Department of Transportation, Bureau of Transportation Statistics, *National Transportation Statistics 1998*, Table 4-13. **All Other Data:** • 1949-1994—Federal Highway Administration (FHWA), *Highway Statistics Summary to 1995*, Table VM-201A. • 1995 forward—FHWA, *Highway Statistics*, annual reports, Table VM-1.

Figure 2.9 Commercial Buildings Consumption by Energy Source

By Survey Year, 1979-2003



By Census Region, 2003



¹ Distillate fuel oil, residual fuel oil, and kerosene.

(s)=Less than 0.05 quadrillion Btu.

Q=Data withheld because either the relative standard error was greater than 50 percent or fewer than 20 buildings were sampled.

Note: See Appendix C for map of Census regions.

Source: Table 2.9.

Table 2.9 Commercial Buildings Consumption by Energy Source, Selected Years, 1979-2003
(Trillion Btu)

| Energy Source and Year | Square Footage Category | | | Principal Building Activity | | | | | | | Census Region ¹ | | | | All Buildings | |
|-----------------------------------|-------------------------|-------------------|--------------|-----------------------------|------------------|--------------|-------------|---------|------------------------|--------|----------------------------|-----------|---------|-------|---------------|-------|
| | 1,001 to 10,000 | 10,001 to 100,000 | Over 100,000 | Education | Food Sales | Food Service | Health Care | Lodging | Mercantile and Service | Office | All Other | Northeast | Midwest | South | | West |
| Major Sources ² | | | | | | | | | | | | | | | | |
| 1979 | 1,255 | 2,202 | 1,508 | 511 | (³) | 336 | 469 | 278 | 894 | 861 | 1,616 | 1,217 | 1,826 | 1,395 | 526 | 4,965 |
| 1983 | 1,242 | 1,935 | 1,646 | 480 | (³) | 414 | 463 | 362 | 812 | 1,018 | 1,274 | 858 | 1,821 | 1,462 | 682 | 4,823 |
| 1986 | 1,273 | 2,008 | 1,696 | 633 | 147 | 247 | 456 | 299 | 985 | 1,008 | 1,202 | 1,037 | 1,585 | 1,459 | 896 | 4,977 |
| 1989 | 1,259 | 2,402 | 2,127 | 704 | 139 | 255 | 449 | 425 | 1,048 | 1,230 | 1,538 | 1,354 | 1,659 | 1,648 | 1,126 | 5,788 |
| 1992 | 1,258 | 2,301 | 1,932 | 637 | 137 | 307 | 403 | 463 | 892 | 1,247 | 1,404 | 1,090 | 1,578 | 1,825 | 998 | 5,490 |
| 1995 ⁴ | 1,332 | 2,152 | 1,838 | 614 | 137 | 332 | 561 | 461 | 973 | 1,019 | 1,225 | 1,035 | 1,497 | 1,684 | 1,106 | 5,321 |
| 1999 | 1,381 | 2,300 | 2,053 | 649 | 201 | 447 | 515 | 450 | 1,145 | 1,089 | 1,237 | 1,116 | 1,509 | 1,961 | 1,147 | 5,733 |
| 2003 | 1,248 | 2,553 | 2,721 | 820 | 251 | 427 | 594 | 510 | 1,333 | 1,134 | 1,455 | 1,396 | 1,799 | 2,265 | 1,063 | 6,523 |
| Electricity | | | | | | | | | | | | | | | | |
| 1979 | 429 | 872 | 608 | 163 | (³) | 171 | 129 | 119 | 361 | 424 | 543 | 425 | 593 | 662 | 227 | 1,908 |
| 1983 | 469 | 903 | 758 | 152 | (³) | 212 | 147 | 151 | 426 | 509 | 532 | 324 | 673 | 801 | 331 | 2,129 |
| 1986 | 654 | 927 | 809 | 179 | 99 | 121 | 132 | 120 | 536 | 641 | 563 | 430 | 584 | 867 | 510 | 2,390 |
| 1989 | 572 | 1,145 | 1,056 | 217 | 105 | 113 | 154 | 138 | 550 | 781 | 715 | 586 | 609 | 975 | 604 | 2,773 |
| 1992 | 586 | 991 | 1,033 | 235 | 113 | 138 | 138 | 189 | 444 | 704 | 649 | 419 | 622 | 1,002 | 566 | 2,609 |
| 1995 ⁴ | 618 | 1,064 | 926 | 221 | 119 | 166 | 211 | 187 | 508 | 676 | 521 | 436 | 558 | 1,027 | 587 | 2,608 |
| 1999 | 698 | 1,235 | 1,164 | 257 | 165 | 216 | 232 | 196 | 659 | 767 | 606 | 543 | 662 | 1,247 | 645 | 3,098 |
| 2003 | 685 | 1,405 | 1,469 | 371 | 208 | 217 | 248 | 235 | 883 | 719 | 679 | 587 | 799 | 1,542 | 631 | 3,559 |
| Natural Gas | | | | | | | | | | | | | | | | |
| 1979 | 646 | 996 | 532 | 214 | (³) | 145 | 221 | 115 | 422 | 272 | 784 | 443 | 1,007 | 470 | 255 | 2,174 |
| 1983 | 684 | 809 | 597 | 246 | (³) | 188 | 218 | 170 | 327 | 365 | 576 | 278 | 978 | 523 | 311 | 2,091 |
| 1986 | 485 | 715 | 523 | 254 | 45 | 114 | 205 | 105 | 332 | 258 | 409 | 244 | 742 | 426 | 311 | 1,723 |
| 1989 | 568 | 836 | 670 | 323 | 27 | 128 | 186 | 187 | 417 | 238 | 566 | 353 | 831 | 498 | 391 | 2,073 |
| 1992 | 572 | 1,017 | 586 | 291 | 24 | 157 | 189 | 193 | 381 | 388 | 552 | 354 | 747 | 697 | 376 | 2,174 |
| 1995 ⁴ | 535 | 830 | 580 | 245 | 18 | 158 | 258 | 213 | 395 | 239 | 420 | 297 | 750 | 528 | 371 | 1,946 |
| 1999 | 604 | 803 | 616 | 227 | 31 | 216 | 217 | 181 | 446 | 219 | 486 | 299 | 709 | 618 | 396 | 2,023 |
| 2003 | 482 | 909 | 709 | 268 | 39 | 203 | 243 | 215 | 403 | 269 | 460 | 462 | 751 | 527 | 360 | 2,100 |
| Fuel Oil ⁵ | | | | | | | | | | | | | | | | |
| 1979 | 177 | 272 | 231 | 107 | (³) | 15 | 97 | 20 | 103 | 107 | 232 | 285 | 133 | 237 | 26 | 681 |
| 1983 | 85 | 140 | 90 | 61 | (³) | Q | 28 | 18 | 43 | 75 | 79 | 172 | 28 | 104 | Q | 314 |
| 1986 | 114 | 206 | 121 | 103 | Q | Q | Q | 20 | 105 | 39 | 130 | 270 | 63 | 86 | 23 | 442 |
| 1989 | 101 | 170 | 86 | 71 | Q | Q | 17 | 10 | 76 | 43 | 122 | 237 | 61 | 50 | Q | 357 |
| 1992 | 86 | 111 | 75 | 62 | Q | Q | 21 | 16 | 55 | 47 | 67 | 194 | 26 | 48 | Q | 272 |
| 1995 ⁴ | 71 | 104 | 60 | 57 | Q | Q | 21 | Q | 49 | 28 | 70 | 168 | 16 | 45 | 7 | 235 |
| 1999 | 29 | 73 | 60 | 48 | Q | Q | 19 | Q | 18 | 29 | 65 | 138 | 5 | 29 | 8 | 179 |
| 2003 | 71 | 74 | 83 | 47 | Q | Q | 11 | 35 | 41 | 18 | 68 | 181 | 24 | 15 | 9 | 228 |
| District Heat ⁶ | | | | | | | | | | | | | | | | |
| 1979 | Q | 61 | 136 | 27 | (³) | Q | 22 | 24 | Q | 58 | 57 | 64 | 93 | Q | Q | 201 |
| 1983 | Q | 83 | 202 | 21 | (³) | Q | 70 | 22 | Q | 68 | 87 | 84 | 141 | 34 | 30 | 289 |
| 1986 | Q | 159 | 243 | 97 | Q | Q | 80 | Q | 12 | 71 | 99 | 94 | 196 | 81 | 51 | 422 |
| 1989 | 19 | 252 | 315 | Q | Q | Q | 92 | Q | Q | 167 | 134 | 179 | 159 | 126 | 121 | 585 |
| 1992 | Q | 182 | 238 | 49 | NC | Q | 55 | 65 | Q | 109 | 135 | 123 | 183 | 78 | 51 | 435 |
| 1995 ⁴ | Q | 154 | 271 | 91 | Q | Q | 70 | 57 | Q | 75 | 214 | 135 | 173 | 83 | Q | 533 |
| 1999 | Q | 158 | 213 | 117 | Q | Q | 46 | 68 | Q | 74 | 126 | 136 | 132 | 67 | 98 | 433 |
| 2003 | Q | 165 | 460 | 134 | NC | Q | Q | Q | Q | 128 | 247 | 166 | 225 | 182 | Q | 636 |

¹ See Appendix C for map of Census regions.

² Includes electricity, natural gas, fuel oil, and district heat.

³ Included in "Food Service."

⁴ Beginning in 1995, excludes commercial buildings at multi-building manufacturing facilities, and parking garages.

⁵ Distillate fuel oil, residual fuel oil, and kerosene.

⁶ Through 1983, includes purchased steam only. Beginning in 1986, includes purchased and non-purchased steam and hot water.

Q=Data withheld because either the relative standard error was greater than 50 percent or fewer than 20

buildings were sampled. NC=No cases in the sample.

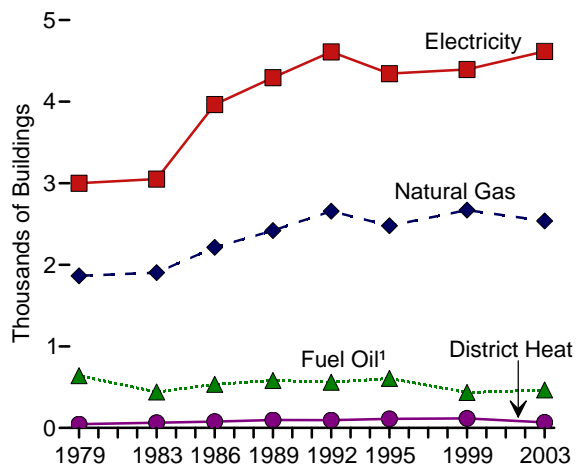
Note: Data are estimates. Statistics for individual fuels are for all buildings using each fuel. Statistics for "Major Sources" are for the sum of "Electricity," "Natural Gas," "Fuel Oil," and "District Heat," across all buildings using any of those fuels.

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

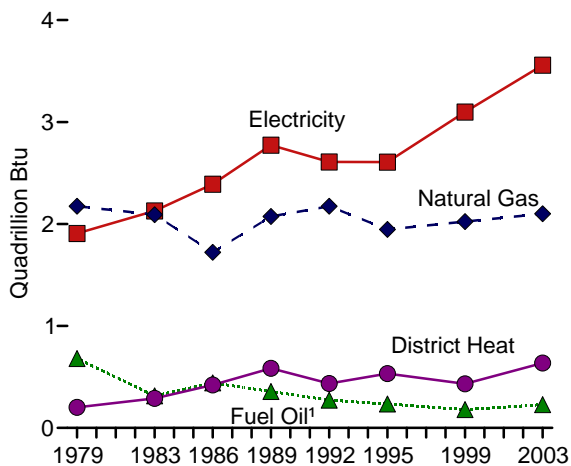
Sources: • 1979—Energy Information Administration (EIA), Form EIA-143, "Nonresidential Buildings Energy Consumption Survey." • 1983—EIA, Form EIA-788, "Nonresidential Buildings Energy Consumption Survey." • 1986—EIA, Form EIA-871, "Nonresidential Buildings Energy Consumption Survey." • 1989 forward—EIA, Form EIA-871A-F, "Commercial Buildings Energy Consumption Survey."

Figure 2.10 Commercial Buildings Energy Consumption and Expenditure Indicators, Selected Years, 1979-2003

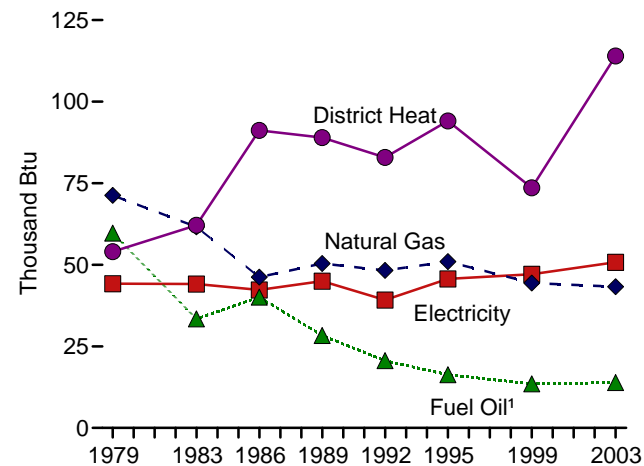
Buildings by Energy Source Used



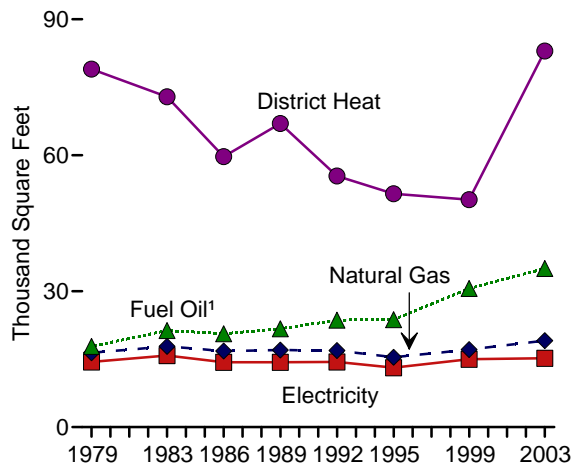
Consumption



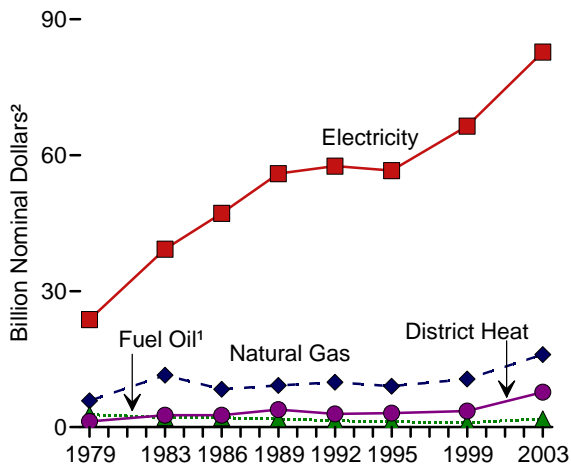
Consumption per Square Foot



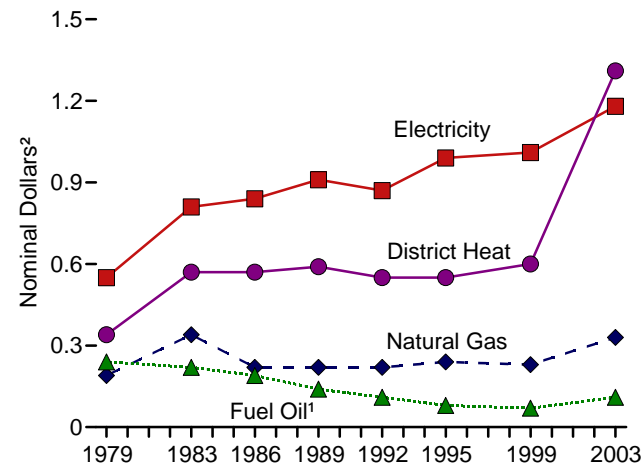
Square Footage per Building by Energy Source Used



Expenditures



Expenditures Per Square Foot



¹ Distillate fuel oil, residual fuel oil, and kerosene.

² See "Nominal Dollars" in Glossary.

Note: For years not shown, there are no data available.

Source: Table 2.10.

Table 2.10 Commercial Buildings Energy Consumption and Expenditure Indicators, Selected Years, 1979-2003

| Energy Source and Year | Building Characteristics | | | Energy Consumption | | | | Energy Expenditures | | | |
|-----------------------------------|--------------------------|-------------------|--------------------------|--------------------|--------------|-----------------|------------------|--------------------------------------|---------------------------------------|------------------------------|------------------------------|
| | Number of Buildings | Total Square Feet | Square Feet per Building | Total | Per Building | Per Square Foot | Per Employee | Total | Per Building | Per Square Foot | Per Million Btu |
| | Thousands | Millions | Thousands | Trillion Btu | Million Btu | Thousand Btu | Million Btu | Million Nominal Dollars ¹ | Thousand Nominal Dollars ¹ | Nominal Dollars ¹ | Nominal Dollars ¹ |
| Major Sources ² | | | | | | | | | | | |
| 1979 | 3,073 | 43,546 | 14.2 | 5,008 | 1,630 | 115.0 | 85.0 | 33,821 | 11.0 | 0.78 | 6.75 |
| 1983 | 3,185 | 49,471 | 15.5 | 4,856 | 1,525 | 98.2 | 65.7 | 55,764 | 17.5 | 1.13 | 11.48 |
| 1986 | 4,154 | 58,199 | 14.0 | 5,040 | 1,213 | 86.6 | 68.6 | 60,762 | 14.6 | 1.04 | 12.06 |
| 1989 | 4,528 | 63,184 | 14.0 | 5,788 | 1,278 | 91.6 | 81.9 | 70,826 | 15.6 | 1.12 | 12.24 |
| 1992 | 4,806 | 67,876 | 14.1 | 5,490 | 1,142 | 80.9 | 77.1 | 71,821 | 14.9 | 1.06 | 13.08 |
| 1995 ³ | 4,579 | 58,772 | 12.8 | 5,321 | 1,162 | 90.5 | 69.3 | 69,918 | 15.3 | 1.19 | 13.14 |
| 1999 | 4,657 | 67,338 | 14.5 | 5,733 | 1,231 | 85.1 | 70.0 | 81,552 | 17.5 | 1.21 | 14.22 |
| 2003 | 4,859 | 71,658 | 14.7 | 6,523 | 1,342 | 91.0 | (⁴) | 107,897 | 22.2 | 1.51 | 16.54 |
| Electricity | | | | | | | | | | | |
| 1979 | 3,001 | 43,153 | 14.4 | 1,908 | 636 | 44.2 | 32.4 | 23,751 | 7.9 | .55 | 12.45 |
| 1983 | 3,052 | 48,327 | 15.8 | 2,129 | 697 | 44.1 | 28.9 | 39,279 | 12.9 | .81 | 18.45 |
| 1986 | 3,965 | 56,508 | 14.3 | 2,390 | 603 | 42.3 | 32.7 | 47,186 | 11.9 | .84 | 19.74 |
| 1989 | 4,294 | 61,563 | 14.3 | 2,773 | 646 | 45.0 | 39.3 | 55,943 | 13.0 | .91 | 22.07 |
| 1992 | 4,611 | 66,525 | 14.4 | 2,609 | 566 | 39.2 | 36.6 | 57,619 | 12.5 | .87 | 20.19 |
| 1995 ³ | 4,343 | 57,076 | 13.1 | 2,608 | 600 | 45.7 | 34.1 | 56,621 | 13.0 | .99 | 21.71 |
| 1999 | 4,395 | 65,716 | 15.0 | 3,098 | 706 | 47.1 | 37.9 | 66,424 | 15.1 | 1.01 | 21.44 |
| 2003 | 4,617 | 70,181 | 15.2 | 3,559 | 771 | 50.7 | (⁴) | 82,783 | 17.9 | 1.18 | 23.26 |
| Natural Gas | | | | | | | | | | | |
| 1979 | 1,864 | 30,477 | 16.4 | 2,174 | 1,167 | 71.3 | 52.5 | 5,814 | 3.1 | .19 | 2.67 |
| 1983 | 1,904 | 33,935 | 17.8 | 2,091 | 1,098 | 61.6 | 40.6 | 11,443 | 6.0 | .34 | 5.47 |
| 1986 | 2,214 | 37,263 | 16.8 | 1,723 | 778 | 46.2 | 35.2 | 8,355 | 3.8 | .22 | 4.85 |
| 1989 | 2,420 | 41,143 | 17.0 | 2,073 | 857 | 50.4 | 43.2 | 9,204 | 3.8 | .22 | 4.44 |
| 1992 | 2,657 | 44,994 | 16.9 | 2,174 | 818 | 48.3 | 42.5 | 9,901 | 3.7 | .22 | 4.55 |
| 1995 ³ | 2,478 | 38,145 | 15.4 | 1,946 | 785 | 51.0 | 38.7 | 9,018 | 3.6 | .24 | 4.63 |
| 1999 | 2,670 | 45,525 | 17.1 | 2,023 | 758 | 44.4 | 36.0 | 10,609 | 4.0 | .23 | 5.24 |
| 2003 | 2,538 | 48,473 | 19.1 | 2,100 | 828 | 43.3 | (⁴) | 16,010 | 6.3 | .33 | 7.62 |
| Fuel Oil ⁵ | | | | | | | | | | | |
| 1979 | 641 | 11,397 | 17.8 | 681 | 1,063 | 59.7 | 40.5 | 2,765 | 4.3 | .24 | 4.06 |
| 1983 | 441 | 9,409 | 21.3 | 314 | 714 | 33.4 | 19.8 | 2,102 | 4.8 | .22 | 6.68 |
| 1986 | 534 | 11,005 | 20.6 | 442 | 827 | 40.1 | 27.7 | 2,059 | 3.9 | .19 | 4.66 |
| 1989 | 581 | 12,600 | 21.7 | 357 | 614 | 28.3 | 21.0 | 1,822 | 3.1 | .14 | 5.11 |
| 1992 | 560 | 13,215 | 23.6 | 272 | 487 | 20.6 | 15.1 | 1,400 | 2.5 | .11 | 5.14 |
| 1995 ³ | 607 | 14,421 | 23.7 | 235 | 387 | 16.3 | 10.2 | 1,175 | 1.9 | .08 | 5.00 |
| 1999 | 434 | 13,285 | 30.6 | 179 | 412 | 13.5 | 9.1 | 956 | 2.2 | .07 | 5.35 |
| 2003 | 465 | 16,265 | 35.0 | 228 | 490 | 14.0 | (⁴) | 1,826 | 3.9 | .11 | 8.01 |
| District Heat ⁶ | | | | | | | | | | | |
| 1979 | 47 | 3,722 | 79.0 | 201 | 4,267 | 54.0 | 26.5 | 1,267 | 26.9 | .34 | 6.30 |
| 1983 | 64 | 4,643 | 72.9 | 289 | 4,530 | 62.1 | 34.4 | 2,627 | 41.2 | .57 | 9.10 |
| 1986 | 77 | 4,625 | 59.7 | 422 | 5,446 | 91.2 | 52.4 | 2,620 | 33.8 | .57 | 6.21 |
| 1989 | 98 | 6,578 | 67.0 | 585 | 5,964 | 89.0 | 56.5 | 3,857 | 39.3 | .59 | 6.59 |
| 1992 | 95 | 5,245 | 55.4 | 435 | 4,596 | 82.9 | 60.9 | 2,901 | 30.7 | .55 | 6.67 |
| 1995 ³ | 110 | 5,658 | 51.5 | 533 | 4,849 | 94.1 | 51.2 | 3,103 | 28.3 | .55 | 5.83 |
| 1999 | 117 | 5,891 | 50.2 | 433 | 3,692 | 73.6 | 50.1 | 3,564 | 30.4 | .60 | 8.23 |
| 2003 | 67 | 5,576 | 83.0 | 636 | 9,470 | 114.0 | (⁴) | 7,279 | 108.4 | 1.31 | 11.45 |

¹ See "Nominal Dollars" in Glossary.

² Includes electricity, natural gas, fuel oil, and district heat.

³ Beginning in 1995, excludes commercial buildings at multi-building manufacturing facilities, and parking garages.

⁴ Total number of employees not collected in 2003.

⁵ Distillate fuel oil, residual fuel oil, and kerosene.

⁶ Through 1983, includes purchased steam only. Beginning in 1986, includes purchased and non-purchased steam and hot water.

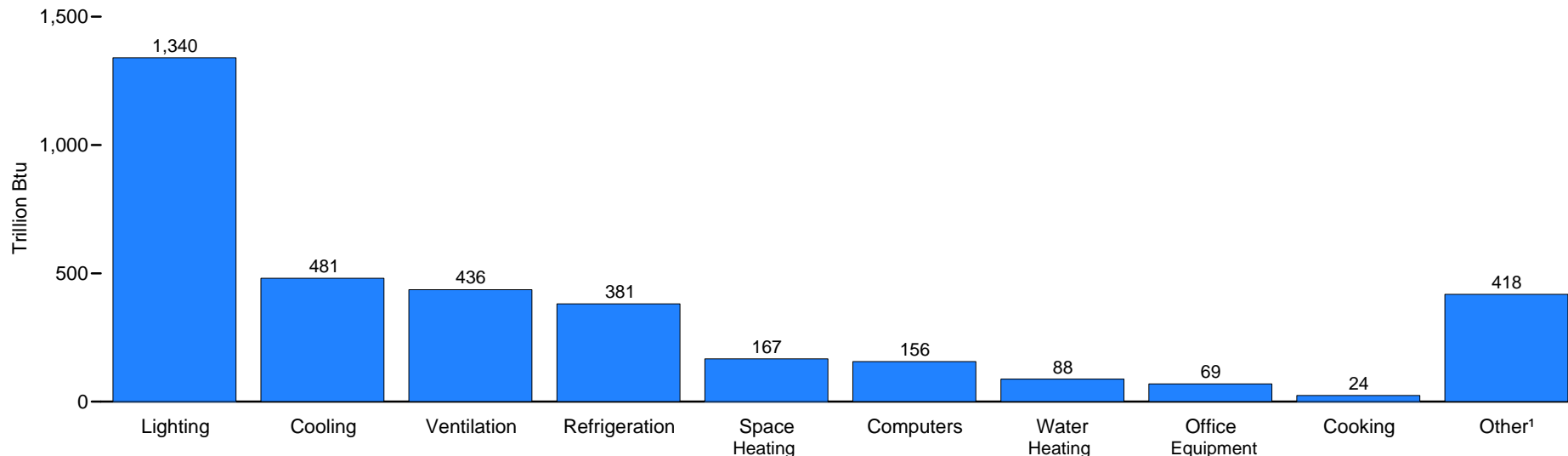
Note: Data are estimates. Statistics for individual fuels are for all buildings using each fuel. Statistics for major sources are for all buildings, even buildings using no major fuel.

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

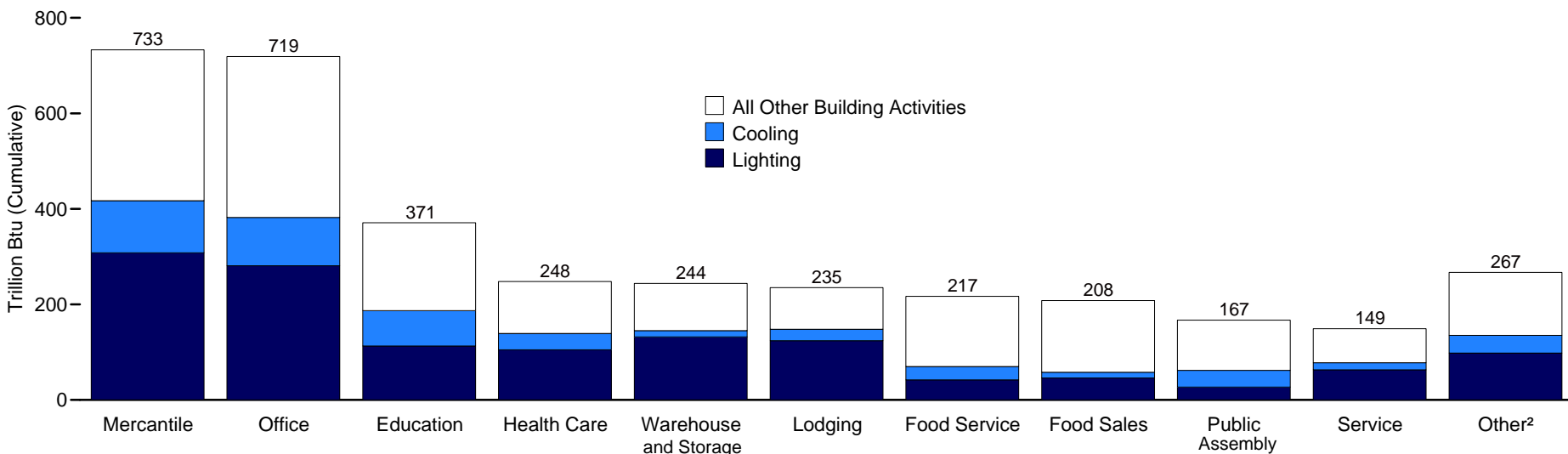
Sources: • 1979—Energy Information Administration (EIA), Form EIA-143, "Nonresidential Buildings Energy Consumption Survey." • 1983—EIA, Form EIA-788, "Nonresidential Buildings Energy Consumption Survey." • 1986—EIA, Form EIA-871, "Nonresidential Buildings Energy Consumption Survey." • 1989 forward—EIA, Form EIA-871A-F, "Commercial Buildings Energy Consumption Survey."

Figure 2.11 Commercial Buildings Electricity Consumption by End Use, 2003

By End Use



By Principal Building Activity



¹ Examples of "other" include medical, electronic, and testing equipment; conveyors, wrappers, hoists, and compactors; washers, disposals, dryers, and cleaning equipment; escalators, elevators, dumb waiters, and window washers; shop tools and electronic testing equipment; sign motors, time clocks, vending machines, phone equipment, and sprinkler controls; scoreboards, fire alarms, intercoms, television sets, radios, projectors, and door operators.

² Religious worship, public order and safety, vacant, and buildings that do not fit into any of the other named categories.
 Note: Data are estimates.
 Source: Table 2.11.

Table 2.11 Commercial Buildings Electricity Consumption by End Use, 2003
(Trillion Btu)

| End Use | Space Heating | Cooling | Ventilation | Water Heating | Lighting | Cooking | Refrigeration | Office Equipment | Computers | Other ¹ | Total |
|------------------------------------|---------------|---------|-------------|---------------|----------|---------|---------------|------------------|-----------|--------------------|-------|
| All Buildings | 167 | 481 | 436 | 88 | 1,340 | 24 | 381 | 69 | 156 | 418 | 3,559 |
| Principal Building Activity | | | | | | | | | | | |
| Education | 15 | 74 | 83 | 11 | 113 | 2 | 16 | 4 | 32 | 21 | 371 |
| Food Sales | 6 | 12 | 7 | Q | 46 | 2 | 119 | 2 | 2 | 10 | 208 |
| Food Service | 10 | 28 | 24 | 10 | 42 | 13 | 70 | 2 | 2 | 15 | 217 |
| Health Care | 6 | 34 | 42 | 2 | 105 | 1 | 8 | 4 | 10 | 36 | 248 |
| Inpatient | 3 | 25 | 38 | 2 | 76 | 1 | 4 | 2 | 7 | 21 | 178 |
| Outpatient | 3 | 9 | 4 | (s) | 28 | (s) | 4 | 2 | 3 | 15 | 69 |
| Lodging | 14 | 24 | 14 | 12 | 124 | 2 | 12 | Q | 6 | 24 | 235 |
| Mercantile | 58 | 109 | 68 | 38 | 308 | 2 | 49 | 8 | 11 | 83 | 733 |
| Retail (Other Than Mall) | 6 | 25 | 16 | 2 | 111 | (s) | 22 | 3 | 4 | 22 | 211 |
| Enclosed and Strip Malls | 52 | 84 | 51 | 36 | 197 | 2 | 27 | 5 | 8 | 61 | 523 |
| Office | 33 | 101 | 63 | 7 | 281 | 1 | 35 | 32 | 74 | 91 | 719 |
| Public Assembly | 5 | 35 | 63 | (s) | 27 | (s) | 9 | Q | 3 | 23 | 167 |
| Public Order and Safety | 2 | 8 | 10 | 3 | 18 | (s) | 3 | 1 | 2 | 10 | 57 |
| Religious Worship | 3 | 11 | 5 | (s) | 17 | (s) | 6 | (s) | 1 | 18 | 62 |
| Service | 6 | 15 | 24 | (s) | 63 | Q | 9 | 1 | 3 | 28 | 149 |
| Warehouse and Storage | 5 | 13 | 20 | 2 | 132 | Q | 36 | 2 | 5 | 30 | 244 |
| Other ² | 2 | 16 | 11 | Q | 59 | Q | 10 | Q | 5 | 22 | 133 |
| Vacant | 1 | 2 | 1 | Q | 4 | Q | (s) | Q | (s) | 7 | 15 |

¹ Examples of "other" include medical, electronic, and testing equipment; conveyors, wrappers, hoists, and compactors; washers, disposals, dryers and cleaning equipment; escalators, elevators, dumb waiters, and window washers; shop tools and electronic testing equipment; sign motors, time clocks, vending machines, phone equipment, and sprinkler controls; scoreboards, fire alarms, intercoms, television sets, radios, projectors, and door operators.

² Includes buildings that do not fit into any of the other named categories.

(s)=Less than 0.5 trillion Btu. Q=Data withheld because either the relative standard error was greater than 50 percent or fewer than 20 buildings were sampled.

Notes: • Data are estimates. • One kilowatthour = 3,412 Btu.

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

Source: Energy Information Administration, "Commercial Buildings Energy Consumption Survey 2003," Table E3A.

Energy Consumption by Sector

Note. Electrical System Energy Losses. Electrical system energy losses are calculated as the difference between total primary consumption by the electric power sector—see Table 2.1f—and the total energy content of electricity retail sales—see Tables 8.9 and A6. Most of these losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output

losses is a result of imputing fossil energy equivalent inputs for hydroelectric, solar, and wind energy sources, since there is no generally accepted practice for measuring those thermal conversion rates. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called "line losses"), and unaccounted for electricity. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales. Overall, about two thirds of total energy input is lost in conversion. Currently, of electricity generated, approximately 5 percent is lost in plant use and 7 percent is lost in transmission and distribution.