

## Appendix B. Thermal Conversion Factors

**Table B1. Approximate Heat Content of Petroleum and Heat Rates for Electricity, Selected Years, 1960-2021**

| Year | Petroleum Consumption                      |  |  |                                       |  | Electricity Net Generation                                 |   |
|------|--|--|--|---------------------------------------|--|--|---|
|      | Distillate Fuel Oil, All Sectors (DFTCKUS) | Hydrocarbon Gas Liquids, Industrial Sector (HLICKUS) | Hydrocarbon Gas Liquids, All Sectors (HLTCKUS) | Motor Gasoline, All Sectors (MGTCKUS) | Total Petroleum Products, All Sectors <sup>a</sup> (PATCKUS) | Fossil-Fueled Steam-Electric Plants <sup>b</sup> (FFETKUS) | Nuclear Steam-Electric Plants (NUETKUS) |
|      | Million Btu per Barrel                     |  |  |                                       |  | Btu per Kilowatthour                                       |   |
| 1960 | 5.825                                      | 3.783  | 3.810  | 5.253                                 | 5.542  | 10,760   | 11,629                                  |
| 1965 | 5.825                                      | 3.786  | 3.810  | 5.253                                 | 5.517  | 10,453   | 11,804                                  |
| 1970 | 5.825                                      | 3.648  | 3.731  | 5.253                                 | 5.499  | 10,494   | 10,977                                  |
| 1975 | 5.825                                      | 3.575  | 3.671  | 5.253                                 | 5.489  | 10,406   | 11,013                                  |
| 1976 | 5.825                                      | 3.533  | 3.645  | 5.253                                 | 5.499  | 10,373   | 11,047                                  |
| 1977 | 5.825                                      | 3.464  | 3.598  | 5.253                                 | 5.512  | 10,435   | 10,769                                  |
| 1978 | 5.825                                      | 3.447  | 3.584  | 5.253                                 | 5.512  | 10,361   | 10,941                                  |
| 1979 | 5.825                                      | 3.596  | 3.644  | 5.253                                 | 5.487  | 10,353   | 10,879                                  |
| 1980 | 5.825                                      | 3.629  | 3.669  | 5.253                                 | 5.472  | 10,388   | 10,908                                  |
| 1981 | 5.825                                      | 3.583  | 3.632  | 5.253                                 | 5.440  | 10,453   | 11,030                                  |
| 1982 | 5.825                                      | 3.532  | 3.588  | 5.253                                 | 5.406  | 10,454   | 11,073                                  |
| 1983 | 5.825                                      | 3.447  | 3.535  | 5.253                                 | 5.396  | 10,520   | 10,905                                  |
| 1984 | 5.825                                      | 3.527  | 3.580  | 5.253                                 | 5.385  | 10,440   | 10,843                                  |
| 1985 | 5.825                                      | 3.527  | 3.584  | 5.253                                 | 5.377  | 10,447   | 10,622                                  |
| 1986 | 5.825                                      | 3.582  | 3.631  | 5.253                                 | 5.410  | 10,446   | 10,579                                  |
| 1987 | 5.825                                      | 3.622  | 3.663  | 5.253                                 | 5.395  | 10,419   | 10,442                                  |
| 1988 | 5.825                                      | 3.598  | 3.643  | 5.253                                 | 5.402  | 10,324   | 10,602                                  |
| 1989 | 5.825                                      | 3.637  | 3.679  | 5.253                                 | 5.403  | 10,432   | 10,583                                  |
| 1990 | 5.825                                      | 3.578  | 3.630  | 5.253                                 | 5.403  | 10,402   | 10,582                                  |
| 1991 | 5.825                                      | 3.575  | 3.626  | 5.253                                 | 5.375  | 10,436   | 10,484                                  |
| 1992 | 5.825                                      | 3.599  | 3.643  | 5.253                                 | 5.369  | 10,342   | 10,471                                  |
| 1993 | 5.825                                      | 3.577  | 3.628  | 5.217                                 | 5.354  | 10,309   | 10,504                                  |
| 1994 | 5.820                                      | 3.616  | 3.657  | 5.214                                 | 5.345  | 10,316   | 10,452                                  |
| 1995 | 5.820                                      | 3.598  | 3.641  | 5.204                                 | 5.327  | 10,312   | 10,507                                  |
| 1996 | 5.820                                      | 3.578  | 3.629  | 5.211                                 | 5.324  | 10,340   | 10,503                                  |
| 1997 | 5.820                                      | 3.577  | 3.627  | 5.205                                 | 5.322  | 10,213   | 10,494                                  |
| 1998 | 5.819                                      | 3.568  | 3.619  | 5.203                                 | 5.335  | 10,197   | 10,491                                  |
| 1999 | 5.819                                      | 3.574  | 3.628  | 5.202                                 | 5.313  | 10,226   | 10,450                                  |
| 2000 | 5.819                                      | 3.549  | 3.610  | 5.201                                 | 5.311  | 10,201   | 10,429                                  |
| 2001 | 5.819                                      | 3.537  | 3.604  | 5.201                                 | 5.331  | 10,333   | 10,443                                  |
| 2002 | 5.819                                      | 3.519  | 3.588  | 5.199                                 | 5.309  | 10,173   | 10,442                                  |
| 2003 | 5.819                                      | 3.539  | 3.610  | 5.197                                 | 5.326  | 10,125   | 10,422                                  |
| 2004 | 5.818                                      | 3.523  | 3.591  | 5.196                                 | 5.330  | 10,016   | 10,428                                  |
| 2005 | 5.818                                      | 3.517  | 3.589  | 5.192                                 | 5.342  | 9,999  | 10,436                                  |
| 2006 | 5.803                                      | 3.479  | 3.551  | 5.185                                 | 5.323  | 9,919  | 10,435                                  |
| 2007 | 5.784                                      | 3.468  | 3.544  | 5.142                                 | 5.293  | 9,884  | 10,489                                  |
| 2008 | 5.780                                      | 3.446  | 3.549  | 5.106                                 | 5.268  | 9,854  | 10,452                                  |
| 2009 | 5.777                                      | 3.375  | 3.487  | 5.090                                 | 5.218  | 9,760  | 10,459                                  |
| 2010 | 5.775                                      | 3.394  | 3.489  | 5.067                                 | 5.204  | 9,756  | 10,452                                  |
| 2011 | 5.770                                      | 3.316  | 3.423  | 5.063                                 | 5.193  | 9,716  | 10,464                                  |
| 2012 | 5.767                                      | 3.360  | 3.440  | 5.062                                 | 5.176  | 9,516  | 10,479                                  |
| 2013 | 5.763                                      | 3.388  | 3.468  | 5.060                                 | 5.157  | 9,541  | 10,449                                  |
| 2014 | 5.763                                      | 3.344  | 3.439  | 5.059                                 | 5.161  | R 9,509  | 10,459                                  |
| 2015 | 5.762                                      | R 3.384  | 3.461  | 5.057                                 | 5.154  | R 9,314  | 10,458                                  |
| 2016 | 5.757                                      | R 3.341  | 3.424  | 5.055                                 | 5.161  | R 9,228  | 10,459                                  |
| 2017 | 5.757                                      | R 3.314  | 3.400  | 5.053                                 | 5.153  | R 9,208  | 10,459                                  |
| 2018 | 5.759                                      | R 3.291  | 3.381  | 5.054                                 | 5.123  | R 9,098  | 10,455                                  |
| 2019 | 5.759                                      | 3.310  | 3.401  | 5.052                                 | 5.111  | R 8,899  | 10,442                                  |
| 2020 | 5.756                                      | 3.259  | 3.349  | 5.052                                 | 5.054  | R 8,767  | R 10,446                                |
| 2021 | 5.764                                      | 3.287  | 3.369  | 5.050                                 | 5.067  | 8,844  | 10,446                                  |

<sup>a</sup> This factor is not actually applied in SEDS but is displayed here for information.

<sup>b</sup> This factor is the average for electricity generated at U.S. fossil-fueled steam-electric plants. In SEDS, it is applied to convert hydroelectricity, electricity generated for distribution from geothermal, solar, and wind energy. Through 2000, it is also used as the thermal conversion factor for wood and waste electricity net generation at electric

utilities; beginning in 2001, Btu data for wood and biomass waste consumed by the electric power sector are available from surveys.

Where shown, R = Revised data, NA = Not available.

Data Source: See source listing at the end of this appendix.

**Table B2. Approximate Heat Content of Natural Gas Consumed by the Electric Power Sector, Selected Years, 1960-2005**  
(Thousand Btu per Cubic Foot)

| State                | 1960  | 1965  | 1970  | 1975  | 1980  | 1985  | 1990  | 1995  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Alabama              | 1.035 | 1.034 | 1.031 | 1.033 | 1.133 | 1.099 | 1.029 | 1.023 | 1.027 | 1.040 | 1.025 | 1.027 | 1.025 | 1.027 |
| Alaska               | --    | 1.010 | 1.005 | 1.006 | 1.006 | 1.006 | 1.027 | 1.003 | 1.003 | 1.004 | 1.009 | 1.004 | 1.007 | 1.006 |
| Arizona              | 1.035 | 1.076 | 1.059 | 1.071 | 1.057 | 1.059 | 1.031 | 1.021 | 1.016 | 1.023 | 1.018 | 1.008 | 1.020 | 1.024 |
| Arkansas             | 1.035 | 1.001 | 1.004 | 1.011 | 1.026 | 1.055 | 1.018 | 1.019 | 1.020 | 1.037 | 1.016 | 1.032 | 1.030 | 1.029 |
| California           | 1.035 | 1.073 | 1.054 | 1.063 | 1.052 | 1.051 | 1.032 | 1.028 | 1.020 | 1.027 | 1.022 | 1.023 | 1.029 | 1.029 |
| Colorado             | 1.035 | 0.912 | 0.974 | 0.996 | 0.981 | 0.989 | 1.041 | 1.063 | 1.056 | 1.047 | 1.017 | 1.034 | 1.041 | 1.035 |
| Connecticut          | 1.035 | 1.022 | 1.016 | 1.005 | --    | 1.031 | 1.031 | 1.021 | 1.012 | 1.014 | 1.021 | 1.008 | 1.015 | 1.011 |
| Delaware             | 1.035 | 1.043 | 1.020 | 1.073 | 1.042 | 1.038 | 1.070 | 1.032 | 1.017 | 1.037 | 1.017 | 1.043 | 1.032 | 1.037 |
| District of Columbia | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    |
| Florida              | 1.035 | 1.037 | 1.041 | 1.009 | 1.015 | 1.011 | 1.013 | 1.014 | 1.036 | 1.042 | 1.025 | 1.034 | 1.031 | 1.034 |
| Georgia              | 1.035 | 1.040 | 1.031 | 1.029 | 1.035 | 1.024 | 1.024 | 1.027 | 1.016 | 1.019 | 1.022 | 1.024 | 1.030 | 1.046 |
| Hawaii               | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    |
| Idaho                | --    | --    | --    | 1.053 | 1.037 | 1.049 | --    | --    | 1.040 | 1.029 | 0.979 | 1.002 | 1.028 | 1.021 |
| Illinois             | 1.035 | 1.029 | 1.025 | 1.029 | 1.024 | 1.027 | 1.023 | 1.017 | 1.020 | 1.022 | 1.012 | 1.015 | 1.025 | 1.020 |
| Indiana              | 1.035 | 0.999 | 1.006 | 1.000 | 1.004 | 1.005 | 1.003 | 1.020 | 1.017 | 1.020 | 1.026 | 1.021 | 1.015 | 1.018 |
| Iowa                 | 1.035 | 1.010 | 1.009 | 1.008 | 1.008 | 1.021 | 1.014 | 1.009 | 1.009 | 1.014 | 1.007 | 1.011 | 0.999 | 1.003 |
| Kansas               | 1.035 | 0.995 | 0.998 | 0.991 | 0.960 | 0.968 | 0.998 | 0.989 | 1.011 | 1.010 | 1.001 | 1.003 | 1.005 | 1.009 |
| Kentucky             | 1.035 | 1.028 | 1.017 | 1.017 | 1.024 | 1.024 | 1.023 | 1.020 | 1.020 | 1.025 | 1.024 | 1.023 | 1.026 | 1.032 |
| Louisiana            | 1.035 | 1.042 | 1.029 | 1.059 | 1.041 | 1.047 | 1.045 | 1.042 | 1.034 | 1.041 | 1.027 | 1.032 | 1.029 | 1.030 |
| Maine                | --    | --    | --    | --    | --    | --    | 1.010 | 1.009 | 1.021 | 1.034 | 1.038 | 1.037 | 1.039 | 1.052 |
| Maryland             | 1.035 | 1.025 | 1.022 | 0.943 | 1.023 | 1.025 | 1.034 | 1.035 | 1.041 | 1.033 | 1.043 | 1.038 | 1.040 | 1.049 |
| Massachusetts        | 1.035 | 1.013 | 1.012 | 1.002 | 1.000 | 1.039 | 1.047 | 1.026 | 1.035 | 1.037 | 1.017 | 1.028 | 1.032 | 1.033 |
| Michigan             | 1.035 | 1.014 | 1.015 | 0.834 | 0.737 | 0.460 | 0.813 | 0.855 | 0.934 | 0.990 | 1.008 | 1.013 | 1.017 | 1.016 |
| Minnesota            | 1.035 | 0.998 | 1.002 | 0.984 | 0.994 | 1.002 | 1.015 | 1.011 | 1.018 | 1.022 | 1.005 | 1.004 | 1.006 | 1.009 |
| Mississippi          | 1.035 | 1.029 | 1.025 | 1.030 | 1.017 | 1.039 | 1.034 | 1.028 | 1.034 | 1.029 | 1.025 | 1.033 | 1.032 | 1.032 |
| Missouri             | 1.035 | 1.020 | 1.007 | 0.977 | 0.979 | 0.992 | 1.018 | 1.008 | 1.014 | 1.099 | 1.009 | 1.016 | 1.022 | 1.021 |
| Montana              | 1.035 | 1.001 | 1.032 | 1.149 | 1.049 | 1.204 | 1.159 | 1.038 | 1.018 | 1.015 | 1.004 | 0.961 | 1.018 | 1.013 |
| Nebraska             | 1.035 | 0.991 | 1.008 | 0.982 | 0.950 | 0.957 | 0.959 | 1.007 | 1.015 | 1.022 | 0.976 | 0.997 | 0.987 | 0.998 |
| Nevada               | 1.035 | 1.062 | 1.082 | 1.067 | 1.071 | 1.065 | 1.031 | 1.033 | 1.024 | 1.026 | 1.020 | 1.024 | 1.030 | 1.037 |
| New Hampshire        | --    | --    | --    | 1.000 | --    | --    | --    | 1.018 | 1.069 | 1.074 | 1.047 | 1.046 | 1.046 | 1.044 |
| New Jersey           | 1.035 | 1.045 | 1.026 | 1.028 | 1.034 | 1.046 | 1.036 | 1.032 | 1.032 | 1.032 | 1.031 | 1.035 | 1.038 | 1.035 |
| New Mexico           | 1.035 | 1.108 | 1.083 | 1.033 | 1.029 | 1.013 | 1.034 | 1.019 | 0.992 | 0.982 | 1.002 | 1.000 | 1.021 | 1.005 |
| New York             | 1.035 | 1.026 | 1.021 | 1.025 | 1.036 | 1.035 | 1.032 | 1.022 | 1.018 | 1.019 | 1.019 | 1.025 | 1.022 | 1.021 |
| North Carolina       | 1.035 | 1.033 | 1.024 | 1.031 | 1.034 | 1.033 | 1.027 | 1.026 | 1.017 | 1.024 | 1.010 | 1.007 | 1.009 | 1.014 |
| North Dakota         | 1.035 | 1.000 | 1.031 | 1.054 | 1.054 | 1.054 | 1.038 | 1.066 | --    | 1.028 | 1.010 | 1.025 | 1.050 | 1.116 |
| Ohio                 | 1.035 | 1.033 | 1.023 | 0.864 | 1.004 | 1.014 | 1.011 | 1.023 | 1.019 | 1.019 | 1.024 | 1.034 | 1.029 | 1.029 |
| Oklahoma             | 1.035 | 1.026 | 1.032 | 1.038 | 1.048 | 1.044 | 1.042 | 1.034 | 1.029 | 1.031 | 1.025 | 1.029 | 1.031 | 1.030 |
| Oregon               | 1.035 | 1.070 | 1.045 | 1.037 | 0.998 | --    | 1.027 | 1.011 | 1.018 | 1.021 | 1.017 | 1.021 | 1.020 | 1.020 |
| Pennsylvania         | 1.035 | 1.038 | 1.033 | 1.000 | 1.020 | 1.000 | 0.935 | 1.030 | 1.034 | 1.033 | 1.028 | 1.039 | 1.037 | 1.036 |
| Rhode Island         | 1.035 | 1.042 | 1.021 | 1.042 | 1.022 | 1.034 | 1.032 | 1.021 | 1.031 | 1.032 | 1.018 | 1.022 | 1.021 | 1.021 |
| South Carolina       | 1.035 | 1.042 | 1.028 | 1.028 | 1.030 | 1.029 | 1.024 | 1.023 | 1.038 | 1.037 | 1.028 | 1.028 | 1.034 | 1.035 |
| South Dakota         | 1.035 | 0.997 | 1.004 | 1.000 | 0.988 | 1.010 | 1.028 | 1.017 | 1.020 | 1.027 | 0.980 | 0.960 | 0.983 | 1.009 |
| Tennessee            | 1.035 | 1.046 | 1.022 | --    | 1.016 | --    | 1.027 | 1.019 | 1.033 | 1.040 | 1.023 | 1.032 | 1.026 | 1.023 |
| Texas                | 1.035 | 1.037 | 1.027 | 1.019 | 1.037 | 1.036 | 1.035 | 1.025 | 1.021 | 1.030 | 1.019 | 1.021 | 1.023 | 1.028 |
| Utah                 | 1.035 | 0.925 | 0.938 | 0.941 | 0.955 | 1.075 | 1.027 | 1.049 | 1.044 | 1.046 | 1.005 | 1.004 | 1.000 | 1.044 |
| Vermont              | --    | --    | --    | 1.000 | 1.000 | 1.000 | 1.027 | 1.001 | 1.012 | 1.012 | 1.018 | 1.019 | 1.020 | 0.890 |
| Virginia             | 1.035 | 1.031 | 1.026 | 1.098 | 1.104 | 1.040 | 1.030 | 1.032 | 1.037 | 1.030 | 1.024 | 1.028 | 1.027 | 1.032 |
| Washington           | --    | --    | --    | --    | 1.030 | 1.033 | 1.029 | 1.028 | 1.025 | 1.028 | 1.026 | 1.021 | 1.024 | 1.023 |
| West Virginia        | 1.035 | 1.071 | 1.029 | 0.575 | 1.000 | 1.000 | 1.000 | 1.028 | 1.006 | 1.026 | 1.036 | 1.057 | 1.060 | 1.039 |
| Wisconsin            | 1.035 | 1.018 | 1.019 | 1.016 | 1.007 | 1.000 | 1.016 | 1.015 | 1.012 | 1.016 | 0.975 | 0.986 | 0.998 | 1.010 |
| Wyoming              | 1.035 | 0.926 | 1.023 | 0.843 | 0.847 | 1.048 | 1.035 | 1.043 | 1.027 | 1.031 | 0.923 | 0.935 | 0.946 | 0.925 |
| U.S. Average         | 1.035 | 1.038 | 1.029 | 1.023 | 1.033 | 1.037 | 1.027 | 1.021 | 1.021 | 1.029 | 1.021 | 1.024 | 1.027 | 1.028 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B3. Approximate Heat Content of Natural Gas Consumed by the Electric Power Sector, 2006-2021**  
(Thousand Btu per Cubic Foot)

| State                | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019    | 2020    | 2021  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|---------|-------|
| Alabama              | 1.029 | 1.033 | 1.028 | 1.025 | 1.020 | 1.019 | 1.016 | 1.018 | 1.026 | 1.032 | 1.031 | 1.031 | 1.029 | 1.028   | 1.031   | 1.031 |
| Alaska               | 1.007 | 1.007 | 1.006 | 1.006 | 1.006 | 1.015 | 1.013 | 1.002 | 1.001 | 1.001 | 1.000 | 1.002 | 0.999 | 1.002   | 1.003   | 1.000 |
| Arizona              | 1.021 | 1.022 | 1.027 | 1.022 | 1.016 | 1.016 | 1.021 | 1.024 | 1.029 | 1.038 | 1.035 | 1.039 | 1.041 | 1.032   | 1.028   | 1.032 |
| Arkansas             | 1.028 | 1.026 | 1.032 | 1.025 | 1.020 | 1.020 | 1.021 | 1.025 | 1.033 | 1.032 | 1.027 | 1.025 | 1.021 | 1.024   | 1.025   | 1.028 |
| California           | 1.032 | 1.031 | 1.029 | 1.027 | 1.026 | 1.022 | 1.025 | 1.029 | 1.033 | 1.035 | 1.034 | 1.034 | 1.032 | 1.034   | 1.031   | 1.033 |
| Colorado             | 1.039 | 1.038 | 1.037 | 1.034 | 1.028 | 1.036 | 1.044 | 1.050 | 1.054 | 1.077 | 1.083 | 1.084 | 1.100 | 1.117   | 1.098   | 1.088 |
| Connecticut          | 1.010 | 1.012 | 1.013 | 1.012 | 1.017 | 1.024 | 1.031 | 1.029 | 1.026 | 1.027 | 1.026 | 1.027 | 1.028 | 1.030   | 1.031   | 1.029 |
| Delaware             | 1.037 | 1.036 | 1.034 | 1.024 | 1.021 | 1.021 | 1.026 | 1.052 | 1.057 | 1.047 | 1.040 | 1.035 | 1.036 | 1.036   | 1.034   | 1.033 |
| District of Columbia | --    | --    | --    | --    | --    | 1.020 | --    | --    | --    | --    | 1.000 | --    | --    | --      | --      | --    |
| Florida              | 1.028 | 1.028 | 1.029 | 1.024 | 1.018 | 1.015 | 1.014 | 1.016 | 1.021 | 1.024 | 1.022 | 1.023 | 1.022 | 1.023   | 1.026   | 1.025 |
| Georgia              | 1.040 | 1.040 | 1.035 | 1.035 | 1.023 | 1.017 | 1.015 | 1.017 | 1.024 | 1.030 | 1.032 | 1.032 | 1.029 | 1.026   | 1.030   | 1.029 |
| Hawaii               | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --    | --      | --      | --    |
| Idaho                | 1.027 | 1.025 | 1.016 | 1.014 | 1.017 | 1.011 | 1.012 | 1.011 | 1.014 | 1.013 | 1.014 | 1.020 | 1.023 | 1.019   | 1.018   | 1.015 |
| Illinois             | 1.022 | 1.023 | 1.019 | 1.019 | 1.015 | 1.018 | 1.012 | 1.014 | 1.014 | 1.018 | 1.021 | 1.023 | 1.027 | 1.035   | 1.026   | 1.038 |
| Indiana              | 1.015 | 1.014 | 1.014 | 1.013 | 1.008 | 1.011 | 1.011 | 1.019 | 1.030 | 1.044 | 1.045 | 1.054 | 1.051 | 1.053   | 1.056   | 1.057 |
| Iowa                 | 1.004 | 1.008 | 1.010 | 1.008 | 1.010 | 1.011 | 1.022 | 1.024 | 1.047 | 1.058 | 1.057 | 1.062 | 1.079 | 1.091   | 1.092   | 1.083 |
| Kansas               | 1.015 | 1.020 | 1.016 | 1.014 | 1.017 | 1.018 | 1.020 | 1.019 | 1.020 | 1.043 | 1.037 | 1.033 | 1.033 | 1.019   | 1.014   | 1.018 |
| Kentucky             | 1.028 | 1.027 | 1.025 | 1.024 | 1.022 | 1.018 | 1.022 | 1.030 | 1.032 | 1.025 | 1.033 | 1.046 | 1.045 | 1.050   | 1.047   | 1.043 |
| Louisiana            | 1.037 | 1.033 | 1.032 | 1.030 | 1.023 | 1.022 | 1.018 | 1.021 | 1.031 | 1.029 | 1.031 | 1.028 | 1.027 | 1.030   | 1.027   | 1.027 |
| Maine                | 1.056 | 1.058 | 1.058 | 1.049 | 1.049 | 1.053 | 1.036 | 1.022 | 1.023 | 1.020 | 1.021 | 1.017 | 1.051 | 1.042   | 1.036   | 1.041 |
| Maryland             | 1.047 | 1.045 | 1.032 | 1.048 | 1.034 | 1.021 | 1.034 | 1.057 | 1.048 | 1.052 | 1.051 | 1.046 | 1.037 | 1.041   | 1.039   | 1.041 |
| Massachusetts        | 1.032 | 1.037 | 1.034 | 1.034 | 1.037 | 1.039 | 1.036 | 1.036 | 1.030 | 1.028 | 1.030 | 1.030 | 1.032 | 1.030   | 1.031   | 1.030 |
| Michigan             | 1.011 | 1.015 | 1.015 | 1.016 | 1.014 | 1.015 | 1.017 | 1.021 | 1.022 | 1.027 | 1.036 | 1.035 | 1.046 | 1.056   | 1.056   | 1.053 |
| Minnesota            | 1.007 | 1.008 | 1.013 | 1.011 | 1.010 | 1.009 | 1.019 | 1.026 | 1.041 | 1.052 | 1.049 | 1.052 | 1.070 | 1.085   | 1.088   | 1.076 |
| Mississippi          | 1.032 | 1.031 | 1.024 | 1.016 | 1.009 | 1.005 | 1.010 | 1.017 | 1.028 | 1.032 | 1.033 | 1.030 | 1.026 | 1.030   | 1.030   | 1.030 |
| Missouri             | 1.025 | 1.023 | 1.018 | 1.018 | 1.017 | 1.022 | 1.027 | 1.028 | 1.027 | 1.031 | 1.028 | 1.030 | 1.032 | 1.034   | 1.027   | 1.027 |
| Montana              | 1.011 | 1.045 | 1.021 | 1.019 | 1.019 | 1.016 | 1.025 | 1.022 | 1.020 | 1.023 | 1.034 | 1.035 | 1.042 | 1.037   | 1.038   | 1.041 |
| Nebraska             | 1.005 | 1.016 | 1.006 | 0.998 | 1.003 | 1.009 | 1.022 | 1.026 | 1.036 | 1.061 | 1.066 | 1.065 | 1.060 | 1.075   | 1.068   | 1.064 |
| Nevada               | 1.029 | 1.030 | 1.042 | 1.032 | 1.031 | 1.024 | 1.026 | 1.034 | 1.034 | 1.043 | 1.041 | 1.039 | 1.037 | 1.044   | 1.038   | 1.040 |
| New Hampshire        | 1.043 | 1.055 | 1.049 | 1.036 | 1.040 | 1.041 | 1.032 | 1.030 | 1.031 | 1.030 | 1.028 | 1.029 | 1.030 | 1.032   | 1.031   | 1.032 |
| New Jersey           | 1.035 | 1.035 | 1.032 | 1.029 | 1.026 | 1.026 | 1.031 | 1.036 | 1.036 | 1.041 | 1.037 | 1.035 | 1.035 | 1.037   | 1.035   | 1.035 |
| New Mexico           | 1.008 | 1.018 | 1.017 | 1.028 | 1.022 | 1.022 | 1.027 | 1.029 | 1.033 | 1.037 | 1.050 | 1.044 | 1.038 | 1.030   | 1.025   | 1.030 |
| New York             | 1.019 | 1.021 | 1.020 | 1.020 | 1.019 | 1.022 | 1.029 | 1.030 | 1.029 | 1.031 | 1.030 | 1.031 | 1.030 | 1.031   | 1.032   | 1.032 |
| North Carolina       | 1.013 | 1.013 | 1.011 | 1.007 | 1.007 | 1.005 | 1.006 | 1.007 | 1.016 | 1.035 | 1.035 | 1.036 | 1.029 | 1.031   | 1.033   | 1.034 |
| North Dakota         | 1.080 | 1.082 | 1.077 | 1.039 | 1.178 | 1.107 | 1.127 | 1.112 | 1.109 | 1.077 | 1.045 | 1.043 | 1.066 | 1.063   | 1.046   | 1.056 |
| Ohio                 | 1.031 | 1.032 | 1.034 | 1.033 | 1.029 | 1.028 | 1.025 | 1.035 | 1.041 | 1.060 | 1.059 | 1.059 | 1.057 | 1.061   | 1.062   | 1.062 |
| Oklahoma             | 1.030 | 1.029 | 1.033 | 1.033 | 1.034 | 1.036 | 1.027 | 1.037 | 1.041 | 1.048 | 1.050 | 1.041 | 1.031 | R 1.034 | R 1.031 | 1.031 |
| Oregon               | 1.025 | 1.033 | 1.021 | 1.022 | 1.024 | 1.018 | 1.021 | 1.026 | 1.030 | 1.043 | 1.044 | 1.051 | 1.053 | 1.053   | 1.050   | 1.052 |
| Pennsylvania         | 1.034 | 1.030 | 1.034 | 1.029 | 1.027 | 1.028 | 1.033 | 1.043 | 1.042 | 1.042 | 1.038 | 1.035 | 1.036 | 1.036   | 1.036   | 1.035 |
| Rhode Island         | 1.017 | 1.026 | 1.020 | 1.022 | 1.013 | 1.018 | 1.031 | 1.033 | 1.027 | 1.028 | 1.027 | 1.028 | 1.028 | 1.029   | 1.029   | 1.029 |
| South Carolina       | 1.049 | 1.038 | 1.036 | 1.038 | 1.031 | 1.032 | 1.027 | 1.023 | 1.025 | 1.030 | 1.028 | 1.030 | 1.026 | 1.027   | 1.031   | 1.031 |
| South Dakota         | 1.005 | 1.010 | 1.006 | 0.994 | 1.007 | 1.001 | 1.025 | 1.030 | 1.040 | 1.056 | 1.060 | 1.061 | 1.079 | 1.087   | 1.096   | 1.081 |
| Tennessee            | 1.028 | 1.026 | 1.028 | 1.029 | 1.020 | 1.005 | 1.010 | 1.019 | 1.020 | 1.006 | 1.006 | 1.003 | 1.000 | 1.000   | 1.000   | 1.000 |
| Texas                | 1.026 | 1.023 | 1.023 | 1.020 | 1.020 | 1.020 | 1.022 | 1.023 | 1.026 | 1.032 | 1.030 | 1.030 | 1.028 | 1.023   | 1.020   | 1.022 |
| Utah                 | 1.050 | 1.041 | 1.049 | 1.035 | 1.038 | 1.032 | 1.034 | 1.032 | 1.028 | 1.036 | 1.033 | 1.036 | 1.033 | 1.042   | 1.039   | 1.043 |
| Vermont              | 1.016 | 1.018 | 1.000 | 1.005 | 1.007 | 1.008 | 1.020 | 1.015 | 1.016 | 1.037 | 1.020 | 1.038 | 1.030 | 1.036   | 1.039   | 1.040 |
| Virginia             | 1.029 | 1.030 | 1.040 | 1.038 | 1.032 | 1.028 | 1.033 | 1.035 | 1.040 | 1.056 | 1.055 | 1.051 | 1.048 | 1.047   | 1.043   | 1.043 |
| Washington           | 1.026 | 1.024 | 1.030 | 1.030 | 1.030 | 1.028 | 1.021 | 1.022 | 1.043 | 1.068 | 1.076 | 1.080 | 1.088 | 1.088   | 1.086   | 1.085 |
| West Virginia        | 1.046 | 1.040 | 1.043 | 1.050 | 1.047 | 1.036 | 1.039 | 1.042 | 1.041 | 1.068 | 1.072 | 1.075 | 1.075 | 1.067   | 1.054   | 1.071 |
| Wisconsin            | 1.012 | 1.017 | 1.014 | 1.015 | 1.010 | 1.012 | 1.016 | 1.018 | 1.022 | 1.025 | 1.018 | 1.017 | 1.018 | 1.020   | 1.033   | 1.036 |
| Wyoming              | 0.991 | 0.977 | 0.976 | 0.987 | 0.990 | 0.983 | 0.977 | 0.966 | 1.004 | 1.041 | 1.047 | 1.049 | 1.050 | 1.054   | 1.047   | 1.054 |
| U.S. Average         | 1.028 | 1.027 | 1.027 | 1.025 | 1.022 | 1.021 | 1.022 | 1.025 | 1.029 | 1.035 | 1.034 | 1.034 | 1.033 | 1.034   | 1.034   | 1.034 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B4. Approximate Heat Content of Natural Gas Consumed by All Sectors Except Electric Power, Selected Years, 1960-2005**  
(Thousand Btu per Cubic Foot)

| State                | 1960  | 1965  | 1970  | 1975  | 1980  | 1985  | 1990  | 1995  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Alabama              | 1.035 | 1.034 | 1.031 | 1.029 | 1.033 | 1.038 | 1.029 | 1.029 | 1.044 | 1.032 | 1.029 | 1.030 | 1.025 | 1.030 |
| Alaska               | 1.035 | 1.010 | 1.005 | 1.005 | 1.002 | 1.006 | 0.946 | 1.006 | 1.027 | 1.011 | 1.004 | 1.004 | 1.004 | 1.004 |
| Arizona              | 1.035 | 1.076 | 1.059 | 1.050 | 1.046 | 1.046 | 1.032 | 1.038 | 1.010 | 1.006 | 1.017 | 1.013 | 1.017 | 1.023 |
| Arkansas             | 1.035 | 1.001 | 1.004 | 0.995 | 0.994 | 1.017 | 1.008 | 1.084 | 1.019 | 1.013 | 1.024 | 1.031 | 1.009 | 1.010 |
| California           | 1.035 | 1.073 | 1.054 | 1.056 | 1.044 | 1.038 | 1.032 | 1.011 | 0.956 | 1.015 | 1.019 | 1.020 | 1.020 | 1.023 |
| Colorado             | 1.035 | 0.912 | 0.974 | 0.896 | 0.995 | 0.999 | 1.003 | 1.014 | 0.998 | 1.005 | 1.007 | 1.010 | 1.006 | 1.028 |
| Connecticut          | 1.035 | 1.022 | 1.016 | 1.005 | 1.022 | 1.030 | 1.033 | 1.030 | 1.028 | 1.023 | 1.024 | 1.026 | 1.024 | 1.025 |
| Delaware             | 1.035 | 1.043 | 1.020 | 1.015 | 1.033 | 1.022 | 1.009 | 1.036 | 1.041 | 1.033 | 1.037 | 1.038 | 1.036 | 1.037 |
| District of Columbia | 1.035 | 1.024 | 1.016 | 1.012 | 1.003 | 1.015 | 1.008 | 1.006 | 1.027 | 1.026 | 1.024 | 1.027 | 1.027 | 1.052 |
| Florida              | 1.035 | 1.037 | 1.041 | 1.078 | 1.070 | 1.109 | 1.084 | 1.070 | 1.108 | 1.065 | 1.036 | 1.042 | 1.036 | 1.038 |
| Georgia              | 1.035 | 1.040 | 1.031 | 1.027 | 1.032 | 1.028 | 1.027 | 1.026 | 1.018 | 1.035 | 1.026 | 1.029 | 1.029 | 1.035 |
| Hawaii               | --    | --    | --    | --    | 0.963 | 1.082 | 1.070 | 1.048 | 1.047 | 1.036 | 1.060 | 1.047 | 1.048 | 1.037 |
| Idaho                | 1.035 | 1.065 | 1.061 | 1.055 | 1.053 | 1.049 | 1.028 | 1.030 | 1.025 | 1.018 | 1.030 | 1.031 | 1.041 | 1.053 |
| Illinois             | 1.035 | 1.029 | 1.025 | 1.026 | 1.022 | 1.040 | 1.022 | 1.020 | 1.022 | 1.020 | 1.013 | 1.015 | 1.014 | 1.015 |
| Indiana              | 1.035 | 0.999 | 1.006 | 0.990 | 0.989 | 1.008 | 1.018 | 1.012 | 1.025 | 1.024 | 1.007 | 1.091 | 1.009 | 1.018 |
| Iowa                 | 1.035 | 1.010 | 1.009 | 1.008 | 1.003 | 1.011 | 1.007 | 1.005 | 1.004 | 1.003 | 1.003 | 1.003 | 1.003 | 1.006 |
| Kansas               | 1.035 | 0.995 | 0.998 | 0.982 | 0.994 | 1.000 | 0.999 | 1.003 | 1.008 | 1.005 | 1.009 | 1.012 | 1.013 | 1.014 |
| Kentucky             | 1.035 | 1.028 | 1.017 | 1.008 | 1.009 | 1.030 | 1.040 | 1.096 | 1.040 | 1.037 | 1.037 | 1.037 | 1.035 | 1.029 |
| Louisiana            | 1.035 | 1.042 | 1.029 | 1.032 | 1.037 | 1.038 | 1.041 | 1.033 | 1.064 | 1.024 | 1.032 | 1.032 | 1.033 | 1.044 |
| Maine                | --    | --    | 1.012 | 1.024 | 1.024 | 1.035 | 1.005 | 1.016 | 1.153 | 1.177 | 1.042 | 1.046 | 1.042 | 1.047 |
| Maryland             | 1.035 | 1.025 | 1.022 | 1.013 | 1.020 | 1.034 | 1.027 | 1.025 | 1.033 | 1.037 | 1.036 | 1.038 | 1.037 | 1.048 |
| Massachusetts        | 1.035 | 1.013 | 1.012 | 1.004 | 1.016 | 1.024 | 1.035 | 1.026 | 1.044 | 1.045 | 1.035 | 1.028 | 1.028 | 1.015 |
| Michigan             | 1.035 | 1.014 | 1.015 | 1.024 | 1.020 | 1.023 | 1.044 | 1.040 | 1.036 | 1.031 | 1.021 | 1.030 | 1.025 | 1.015 |
| Minnesota            | 1.035 | 0.998 | 1.002 | 1.002 | 0.997 | 1.004 | 1.004 | 1.013 | 1.015 | 1.012 | 1.007 | 1.008 | 1.007 | 1.012 |
| Mississippi          | 1.035 | 1.029 | 1.025 | 1.022 | 1.034 | 1.025 | 1.033 | 1.021 | 1.043 | 1.022 | 1.036 | 1.036 | 1.029 | 1.029 |
| Missouri             | 1.035 | 1.020 | 1.007 | 1.008 | 1.016 | 1.017 | 1.011 | 1.007 | 1.015 | 1.006 | 1.012 | 1.014 | 1.020 | 1.020 |
| Montana              | 1.035 | 1.001 | 1.032 | 1.019 | 1.009 | 0.999 | 1.027 | 1.030 | 1.024 | 1.022 | 1.021 | 1.023 | 1.026 | 1.040 |
| Nebraska             | 1.035 | 0.991 | 1.008 | 0.997 | 0.980 | 0.982 | 0.984 | 0.979 | 1.005 | 1.017 | 1.008 | 1.007 | 1.010 | 1.010 |
| Nevada               | 1.035 | 1.062 | 1.082 | 1.067 | 1.052 | 1.061 | 1.031 | 1.033 | 1.030 | 1.023 | 1.033 | 1.035 | 1.032 | 1.044 |
| New Hampshire        | 1.035 | 1.012 | 1.010 | 1.010 | 1.020 | 1.027 | 1.014 | 1.010 | 1.058 | 1.062 | 1.050 | 1.040 | 1.043 | 1.020 |
| New Jersey           | 1.035 | 1.045 | 1.026 | 1.031 | 1.033 | 1.022 | 1.024 | 1.035 | 1.036 | 1.038 | 1.039 | 1.039 | 1.039 | 1.040 |
| New Mexico           | 1.035 | 1.108 | 1.083 | 1.076 | 1.048 | 1.088 | 1.056 | 1.020 | 0.968 | 0.973 | 0.972 | 1.023 | 1.026 | 1.025 |
| New York             | 1.035 | 1.026 | 1.021 | 1.015 | 1.023 | 1.027 | 1.029 | 1.031 | 1.032 | 1.033 | 1.025 | 1.028 | 1.027 | 1.026 |
| North Carolina       | 1.035 | 1.033 | 1.024 | 1.018 | 1.012 | 1.034 | 1.032 | 1.033 | 1.031 | 1.042 | 1.037 | 1.042 | 1.036 | 1.037 |
| North Dakota         | 1.035 | 1.000 | 1.031 | 1.001 | 1.052 | 1.062 | 1.032 | 1.050 | 1.035 | 1.029 | 1.003 | 1.009 | 1.021 | 1.036 |
| Ohio                 | 1.035 | 1.033 | 1.023 | 1.024 | 1.016 | 1.044 | 1.040 | 1.038 | 1.042 | 1.042 | 1.038 | 1.036 | 1.045 | 1.043 |
| Oklahoma             | 1.035 | 1.026 | 1.032 | 0.996 | 1.002 | 1.020 | 1.021 | 1.015 | 1.008 | 1.027 | 1.030 | 1.030 | 1.031 | 1.030 |
| Oregon               | 1.035 | 1.070 | 1.045 | 1.039 | 1.046 | 1.030 | 1.023 | 1.045 | 1.031 | 1.029 | 1.025 | 1.007 | 1.009 | 1.036 |
| Pennsylvania         | 1.035 | 1.038 | 1.033 | 1.025 | 1.022 | 1.034 | 1.039 | 1.035 | 1.035 | 1.055 | 1.038 | 1.040 | 1.039 | 1.041 |
| Rhode Island         | 1.035 | 1.042 | 1.021 | 1.014 | 1.021 | 1.033 | 1.027 | 1.029 | 1.047 | 1.029 | 1.030 | 1.026 | 1.027 | 1.021 |
| South Carolina       | 1.035 | 1.042 | 1.028 | 1.023 | 1.033 | 1.028 | 1.028 | 1.027 | 1.029 | 1.038 | 1.033 | 1.037 | 1.035 | 1.038 |
| South Dakota         | 1.035 | 0.997 | 1.004 | 1.000 | 0.998 | 1.010 | 1.016 | 1.014 | 1.003 | 0.995 | 1.000 | 1.003 | 1.003 | 1.007 |
| Tennessee            | 1.035 | 1.046 | 1.022 | 1.031 | 1.016 | 1.034 | 1.035 | 1.031 | 1.037 | 1.037 | 1.032 | 1.033 | 1.033 | 1.035 |
| Texas                | 1.035 | 1.037 | 1.027 | 1.030 | 1.031 | 1.039 | 1.042 | 1.042 | 1.033 | 1.024 | 1.033 | 1.029 | 1.031 | 1.028 |
| Utah                 | 1.035 | 0.925 | 0.938 | 0.950 | 1.092 | 1.075 | 1.088 | 1.064 | 1.051 | 1.053 | 1.060 | 1.067 | 1.056 | 1.054 |
| Vermont              | --    | --    | 1.006 | 1.009 | 0.989 | 0.992 | 0.982 | 0.996 | 1.012 | 1.012 | 1.004 | 1.006 | 1.004 | 1.004 |
| Virginia             | 1.035 | 1.031 | 1.026 | 1.019 | 1.015 | 1.039 | 1.043 | 1.031 | 1.035 | 1.038 | 1.036 | 1.037 | 1.031 | 1.042 |
| Washington           | 1.035 | 1.075 | 1.055 | 1.042 | 1.052 | 1.040 | 1.030 | 1.042 | 1.042 | 1.035 | 1.030 | 1.026 | 1.028 | 1.030 |
| West Virginia        | 1.035 | 1.071 | 1.029 | 1.038 | 1.032 | 1.067 | 1.071 | 1.061 | 1.068 | 1.068 | 1.062 | 1.066 | 1.058 | 1.068 |
| Wisconsin            | 1.035 | 1.018 | 1.019 | 1.020 | 1.008 | 1.010 | 1.006 | 1.011 | 1.010 | 1.009 | 1.009 | 1.009 | 1.008 | 1.013 |
| Wyoming              | 1.035 | 0.926 | 1.023 | 0.935 | 1.061 | 1.051 | 1.099 | 1.063 | 1.046 | 1.056 | 1.044 | 1.046 | 1.045 | 1.043 |
| U.S. Average         | 1.035 | 1.032 | 1.025 | 1.022 | 1.024 | 1.032 | 1.031 | 1.030 | 1.026 | 1.026 | 1.025 | 1.029 | 1.026 | 1.028 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B5. Approximate Heat Content of Natural Gas Consumed by All Sectors Except Electric Power, 2006-2021**  
(Thousand Btu per Cubic Foot)

| State                | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Alabama              | 1.027 | 1.026 | 1.023 | 1.027 | 1.016 | 1.016 | 1.016 | 1.016 | 1.021 | 1.028 | 1.026 | 1.028 | 1.027 | 1.028 | 1.030 | 1.031 |
| Alaska               | 1.005 | 1.006 | 1.006 | 1.005 | 1.005 | 1.013 | 1.012 | 1.001 | 1.001 | 1.001 | 1.001 | 0.988 | 0.973 | 0.983 | 0.984 | 0.978 |
| Arizona              | 1.019 | 1.026 | 1.026 | 1.018 | 1.017 | 1.013 | 1.021 | 1.026 | 1.032 | 1.044 | 1.042 | 1.046 | 1.040 | 1.032 | 1.027 | 1.035 |
| Arkansas             | 1.031 | 1.009 | 1.009 | 1.012 | 1.007 | 1.015 | 1.010 | 1.019 | 1.011 | 1.013 | 1.012 | 1.015 | 1.014 | 1.014 | 1.013 | 1.014 |
| California           | 1.023 | 1.029 | 1.028 | 1.027 | 1.022 | 1.019 | 1.020 | 1.026 | 1.028 | 1.037 | 1.035 | 1.036 | 1.034 | 1.034 | 1.034 | 1.034 |
| Colorado             | 1.030 | 1.028 | 1.015 | 1.015 | 1.017 | 1.031 | 1.038 | 1.034 | 1.045 | 1.056 | 1.057 | 1.060 | 1.070 | 1.079 | 1.069 | 1.057 |
| Connecticut          | 1.026 | 1.024 | 1.020 | 1.023 | 1.025 | 1.028 | 1.031 | 1.020 | 1.028 | 1.027 | 1.028 | 1.029 | 1.030 | 1.030 | 1.029 | 1.029 |
| Delaware             | 1.037 | 1.038 | 1.033 | 1.032 | 1.025 | 1.029 | 1.028 | 1.047 | 1.055 | 1.053 | 1.052 | 1.048 | 1.044 | 1.043 | 1.041 | 1.041 |
| District of Columbia | 1.025 | 1.027 | 1.028 | 1.035 | 1.014 | 1.016 | 1.029 | 1.030 | 1.043 | 1.044 | 1.044 | 1.039 | 1.036 | 1.035 | 1.033 | 1.032 |
| Florida              | 1.032 | 1.036 | 1.032 | 1.031 | 1.024 | 1.015 | 1.019 | 1.018 | 1.030 | 1.025 | 1.027 | 1.033 | 1.028 | 1.023 | 1.027 | 1.030 |
| Georgia              | 1.030 | 1.029 | 1.023 | 1.023 | 1.022 | 1.018 | 1.015 | 1.015 | 1.017 | 1.023 | 1.028 | 1.028 | 1.027 | 1.027 | 1.027 | 1.027 |
| Hawaii               | 1.047 | 1.037 | 1.043 | 1.040 | 1.040 | 1.048 | 1.046 | 1.006 | 0.959 | 0.982 | 0.981 | 0.975 | 0.962 | 0.952 | 0.952 | 0.918 |
| Idaho                | 1.047 | 1.024 | 1.024 | 1.023 | 1.022 | 1.018 | 1.016 | 1.025 | 1.018 | 1.036 | 1.045 | 1.046 | 1.041 | 1.033 | 1.027 | 1.020 |
| Illinois             | 1.016 | 1.014 | 1.014 | 1.013 | 1.008 | 1.011 | 1.011 | 1.016 | 1.023 | 1.030 | 1.033 | 1.030 | 1.029 | 1.033 | 1.039 | 1.033 |
| Indiana              | 1.017 | 1.023 | 1.013 | 1.015 | 1.012 | 1.012 | 1.012 | 1.014 | 1.018 | 1.023 | 1.036 | 1.040 | 1.046 | 1.052 | 1.052 | 1.056 |
| Iowa                 | 1.013 | 1.010 | 1.010 | 1.007 | 1.006 | 1.009 | 1.014 | 1.029 | 1.040 | 1.053 | 1.056 | 1.055 | 1.059 | 1.063 | 1.066 | 1.068 |
| Kansas               | 1.019 | 1.018 | 1.036 | 1.020 | 1.019 | 1.020 | 1.022 | 1.018 | 1.024 | 1.035 | 1.034 | 1.034 | 1.039 | 1.043 | 1.035 | 1.035 |
| Kentucky             | 1.029 | 1.027 | 1.035 | 1.037 | 1.031 | 1.028 | 1.031 | 1.025 | 1.026 | 1.021 | 1.029 | 1.046 | 1.051 | 1.049 | 1.050 | 1.050 |
| Louisiana            | 1.038 | 1.034 | 1.036 | 1.029 | 1.024 | 1.018 | 1.014 | 1.017 | 1.026 | 1.024 | 1.022 | 1.021 | 1.021 | 1.020 | 1.020 | 1.019 |
| Maine                | 1.054 | 1.071 | 1.067 | 1.043 | 1.039 | 1.042 | 1.029 | 1.031 | 1.033 | 1.031 | 1.030 | 1.036 | 1.037 | 1.037 | 1.040 | 1.041 |
| Maryland             | 1.037 | 1.037 | 1.035 | 1.036 | 1.026 | 1.028 | 1.038 | 1.043 | 1.054 | 1.056 | 1.051 | 1.047 | 1.044 | 1.045 | 1.041 | 1.038 |
| Massachusetts        | 1.010 | 1.016 | 1.013 | 1.031 | 1.034 | 1.029 | 1.034 | 1.033 | 1.024 | 1.029 | 1.030 | 1.030 | 1.031 | 1.031 | 1.030 | 1.030 |
| Michigan             | 1.018 | 1.022 | 1.024 | 1.022 | 1.016 | 1.014 | 1.017 | 1.021 | 1.019 | 1.033 | 1.043 | 1.046 | 1.047 | 1.057 | 1.061 | 1.059 |
| Minnesota            | 1.017 | 1.020 | 1.024 | 1.030 | 1.010 | 1.010 | 1.019 | 1.023 | 1.032 | 1.038 | 1.035 | 1.031 | 1.046 | 1.050 | 1.051 | 1.054 |
| Mississippi          | 1.024 | 1.029 | 1.027 | 1.022 | 1.020 | 1.017 | 1.016 | 1.013 | 1.028 | 1.026 | 1.027 | 1.035 | 1.026 | 1.028 | 1.027 | 1.027 |
| Missouri             | 1.020 | 1.019 | 1.006 | 1.006 | 1.005 | 1.008 | 1.008 | 1.014 | 1.013 | 1.009 | 1.023 | 1.006 | 1.022 | 1.021 | 1.022 | 1.021 |
| Montana              | 1.017 | 1.017 | 1.016 | 1.011 | 1.012 | 1.016 | 1.025 | 1.034 | 1.025 | 1.033 | 1.034 | 1.041 | 1.043 | 1.050 | 1.073 | 1.058 |
| Nebraska             | 1.012 | 1.018 | 1.011 | 1.012 | 1.004 | 1.011 | 1.019 | 1.036 | 1.042 | 1.057 | 1.059 | 1.061 | 1.060 | 1.070 | 1.067 | 1.063 |
| Nevada               | 1.037 | 1.036 | 1.033 | 1.030 | 1.037 | 1.024 | 1.036 | 1.035 | 1.033 | 1.040 | 1.041 | 1.040 | 1.036 | 1.041 | 1.037 | 1.036 |
| New Hampshire        | 1.019 | 1.025 | 1.020 | 1.034 | 1.032 | 1.037 | 1.032 | 1.030 | 1.031 | 1.030 | 1.030 | 1.031 | 1.032 | 1.032 | 1.033 | 1.032 |
| New Jersey           | 1.036 | 1.035 | 1.033 | 1.029 | 1.026 | 1.026 | 1.028 | 1.048 | 1.045 | 1.048 | 1.044 | 1.041 | 1.040 | 1.041 | 1.041 | 1.040 |
| New Mexico           | 1.021 | 1.026 | 1.028 | 1.028 | 1.021 | 1.022 | 1.023 | 1.030 | 1.034 | 1.038 | 1.044 | 1.041 | 1.035 | 1.031 | 1.030 | 1.032 |
| New York             | 1.022 | 1.024 | 1.022 | 1.022 | 1.023 | 1.027 | 1.032 | 1.035 | 1.033 | 1.032 | 1.032 | 1.033 | 1.033 | 1.032 | 1.034 | 1.032 |
| North Carolina       | 1.035 | 1.033 | 1.030 | 1.026 | 1.018 | 1.014 | 1.014 | 1.014 | 1.025 | 1.035 | 1.035 | 1.036 | 1.029 | 1.031 | 1.033 | 1.034 |
| North Dakota         | 1.044 | 1.046 | 1.042 | 1.055 | 1.055 | 1.073 | 1.065 | 1.069 | 1.086 | 1.087 | 1.088 | 1.083 | 1.081 | 1.103 | 1.072 | 1.070 |
| Ohio                 | 1.039 | 1.037 | 1.040 | 1.041 | 1.034 | 1.031 | 1.034 | 1.037 | 1.060 | 1.070 | 1.075 | 1.073 | 1.067 | 1.067 | 1.071 | 1.074 |
| Oklahoma             | 1.033 | 1.029 | 1.035 | 1.033 | 1.031 | 1.029 | 1.032 | 1.035 | 1.038 | 1.046 | 1.048 | 1.043 | 1.033 | 1.032 | 1.031 | 1.028 |
| Oregon               | 1.036 | 1.033 | 1.025 | 1.026 | 1.008 | 1.022 | 1.022 | 1.009 | 1.028 | 1.053 | 1.071 | 1.070 | 1.068 | 1.053 | 1.056 | 1.058 |
| Pennsylvania         | 1.039 | 1.039 | 1.039 | 1.040 | 1.037 | 1.040 | 1.044 | 1.050 | 1.051 | 1.048 | 1.043 | 1.043 | 1.039 | 1.039 | 1.040 | 1.039 |
| Rhode Island         | 1.017 | 1.027 | 1.024 | 1.024 | 1.023 | 1.024 | 1.030 | 1.031 | 1.029 | 1.028 | 1.031 | 1.031 | 1.030 | 1.030 | 1.030 | 1.029 |
| South Carolina       | 1.038 | 1.036 | 1.033 | 1.031 | 1.023 | 1.021 | 1.020 | 1.018 | 1.023 | 1.030 | 1.032 | 1.032 | 1.026 | 1.027 | 1.031 | 1.031 |
| South Dakota         | 1.003 | 1.002 | 1.003 | 1.002 | 1.005 | 1.005 | 1.018 | 1.031 | 1.041 | 1.054 | 1.056 | 1.055 | 1.067 | 1.084 | 1.076 | 1.080 |
| Tennessee            | 1.038 | 1.038 | 1.037 | 1.028 | 1.023 | 1.015 | 1.015 | 1.019 | 1.028 | 1.036 | 1.039 | 1.040 | 1.042 | 1.042 | 1.043 | 1.041 |
| Texas                | 1.026 | 1.026 | 1.027 | 1.025 | 1.033 | 1.028 | 1.029 | 1.025 | 1.034 | 1.035 | 1.030 | 1.028 | 1.028 | 1.026 | 1.023 | 1.022 |
| Utah                 | 1.057 | 1.056 | 1.062 | 1.047 | 1.047 | 1.039 | 1.045 | 1.050 | 1.045 | 1.047 | 1.045 | 1.043 | 1.042 | 1.047 | 1.043 | 1.047 |
| Vermont              | 1.001 | 1.001 | 1.005 | 1.005 | 1.007 | 1.008 | 1.012 | 1.015 | 1.017 | 1.025 | 1.024 | 1.030 | 1.034 | 1.036 | 1.041 | 1.040 |
| Virginia             | 1.035 | 1.037 | 1.037 | 1.035 | 1.026 | 1.026 | 1.035 | 1.037 | 1.050 | 1.048 | 1.050 | 1.055 | 1.058 | 1.057 | 1.059 | 1.062 |
| Washington           | 1.030 | 1.025 | 1.030 | 1.030 | 1.033 | 1.029 | 1.029 | 1.033 | 1.044 | 1.064 | 1.079 | 1.080 | 1.087 | 1.085 | 1.085 | 1.086 |
| West Virginia        | 1.119 | 1.075 | 1.074 | 1.082 | 1.076 | 1.084 | 1.081 | 1.077 | 1.092 | 1.099 | 1.099 | 1.084 | 1.092 | 1.085 | 1.090 | 1.082 |
| Wisconsin            | 1.011 | 1.014 | 1.014 | 1.014 | 1.010 | 1.014 | 1.020 | 1.027 | 1.037 | 1.047 | 1.046 | 1.040 | 1.048 | 1.050 | 1.049 | 1.049 |
| Wyoming              | 1.041 | 1.037 | 1.031 | 1.031 | 1.031 | 1.034 | 1.034 | 1.042 | 1.040 | 1.060 | 1.074 | 1.060 | 1.062 | 1.074 | 1.075 | 1.056 |
| U.S. Average         | 1.027 | 1.027 | 1.027 | 1.025 | 1.023 | 1.022 | 1.024 | 1.027 | 1.033 | 1.038 | 1.038 | 1.038 | 1.038 | 1.039 | 1.038 | 1.037 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B6. Approximate Heat Content of Natural Gas Total Consumption, Selected Years, 1960-2005**  
(Thousand Btu per Cubic Foot)

| State                | 1960  | 1965  | 1970  | 1975  | 1980  | 1985  | 1990  | 1995  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Alabama              | 1.035 | 1.034 | 1.031 | 1.029 | 1.034 | 1.038 | 1.029 | 1.029 | 1.042 | 1.034 | 1.028 | 1.029 | 1.025 | 1.029 |
| Alaska               | 1.035 | 1.010 | 1.005 | 1.005 | 1.003 | 1.006 | 0.954 | 1.006 | 1.025 | 1.010 | 1.004 | 1.004 | 1.004 | 1.004 |
| Arizona              | 1.035 | 1.076 | 1.059 | 1.052 | 1.049 | 1.050 | 1.032 | 1.035 | 1.013 | 1.015 | 1.018 | 1.010 | 1.019 | 1.024 |
| Arkansas             | 1.035 | 1.001 | 1.004 | 0.997 | 1.001 | 1.019 | 1.009 | 1.076 | 1.019 | 1.016 | 1.023 | 1.031 | 1.013 | 1.014 |
| California           | 1.035 | 1.073 | 1.054 | 1.057 | 1.046 | 1.043 | 1.032 | 1.016 | 0.979 | 1.020 | 1.020 | 1.021 | 1.023 | 1.025 |
| Colorado             | 1.035 | 0.912 | 0.974 | 0.913 | 0.993 | 0.999 | 1.005 | 1.018 | 1.008 | 1.013 | 1.009 | 1.014 | 1.013 | 1.029 |
| Connecticut          | 1.035 | 1.022 | 1.016 | 1.005 | 1.022 | 1.030 | 1.033 | 1.028 | 1.025 | 1.021 | 1.023 | 1.021 | 1.021 | 1.020 |
| Delaware             | 1.035 | 1.043 | 1.020 | 1.020 | 1.035 | 1.025 | 1.026 | 1.034 | 1.037 | 1.034 | 1.030 | 1.039 | 1.035 | 1.037 |
| District of Columbia | 1.035 | 1.024 | 1.016 | 1.012 | 1.003 | 1.015 | 1.008 | 1.006 | 1.027 | 1.026 | 1.024 | 1.027 | 1.027 | 1.052 |
| Florida              | 1.035 | 1.037 | 1.041 | 1.043 | 1.041 | 1.053 | 1.043 | 1.033 | 1.060 | 1.049 | 1.028 | 1.036 | 1.032 | 1.035 |
| Georgia              | 1.035 | 1.040 | 1.031 | 1.027 | 1.032 | 1.028 | 1.027 | 1.026 | 1.018 | 1.033 | 1.025 | 1.029 | 1.029 | 1.037 |
| Hawaii               | 1.035 | --    | 0.962 | 0.947 | 0.963 | 1.082 | 1.070 | 1.048 | 1.047 | 1.036 | 1.060 | 1.047 | 1.048 | 1.037 |
| Idaho                | 1.035 | 1.065 | 1.061 | 1.055 | 1.053 | 1.049 | 1.028 | 1.030 | 1.025 | 1.019 | 1.028 | 1.027 | 1.039 | 1.048 |
| Illinois             | 1.035 | 1.029 | 1.025 | 1.026 | 1.022 | 1.040 | 1.022 | 1.020 | 1.022 | 1.020 | 1.013 | 1.015 | 1.014 | 1.015 |
| Indiana              | 1.035 | 0.999 | 1.006 | 0.990 | 0.989 | 1.008 | 1.018 | 1.012 | 1.025 | 1.024 | 1.008 | 1.087 | 1.009 | 1.018 |
| Iowa                 | 1.035 | 1.010 | 1.009 | 1.008 | 1.003 | 1.011 | 1.007 | 1.005 | 1.004 | 1.004 | 1.003 | 1.003 | 1.003 | 1.006 |
| Kansas               | 1.035 | 0.995 | 0.998 | 0.984 | 0.987 | 0.998 | 0.999 | 1.002 | 1.008 | 1.005 | 1.008 | 1.012 | 1.013 | 1.014 |
| Kentucky             | 1.035 | 1.028 | 1.017 | 1.008 | 1.009 | 1.030 | 1.040 | 1.096 | 1.040 | 1.037 | 1.036 | 1.037 | 1.035 | 1.029 |
| Louisiana            | 1.035 | 1.042 | 1.029 | 1.037 | 1.038 | 1.040 | 1.042 | 1.035 | 1.058 | 1.027 | 1.031 | 1.032 | 1.032 | 1.041 |
| Maine                | 1.035 | --    | 1.012 | 1.024 | 1.024 | 1.035 | 1.005 | 1.016 | 1.073 | 1.057 | 1.039 | 1.038 | 1.040 | 1.051 |
| Maryland             | 1.035 | 1.025 | 1.022 | 1.013 | 1.020 | 1.034 | 1.028 | 1.026 | 1.034 | 1.037 | 1.037 | 1.038 | 1.037 | 1.048 |
| Massachusetts        | 1.035 | 1.013 | 1.012 | 1.004 | 1.016 | 1.027 | 1.038 | 1.026 | 1.042 | 1.043 | 1.029 | 1.028 | 1.030 | 1.022 |
| Michigan             | 1.035 | 1.014 | 1.015 | 1.012 | 1.011 | 1.015 | 1.022 | 1.017 | 1.022 | 1.025 | 1.019 | 1.028 | 1.024 | 1.015 |
| Minnesota            | 1.035 | 0.998 | 1.002 | 1.001 | 0.997 | 1.004 | 1.004 | 1.013 | 1.015 | 1.012 | 1.007 | 1.008 | 1.007 | 1.012 |
| Mississippi          | 1.035 | 1.029 | 1.025 | 1.023 | 1.028 | 1.028 | 1.033 | 1.026 | 1.038 | 1.025 | 1.031 | 1.035 | 1.030 | 1.030 |
| Missouri             | 1.035 | 1.020 | 1.007 | 1.006 | 1.014 | 1.017 | 1.011 | 1.007 | 1.015 | 1.017 | 1.012 | 1.014 | 1.020 | 1.020 |
| Montana              | 1.035 | 1.001 | 1.032 | 1.021 | 1.012 | 1.001 | 1.028 | 1.030 | 1.024 | 1.022 | 1.021 | 1.023 | 1.026 | 1.040 |
| Nebraska             | 1.035 | 0.991 | 1.008 | 0.994 | 0.978 | 0.982 | 0.983 | 0.980 | 1.005 | 1.017 | 1.007 | 1.007 | 1.009 | 1.009 |
| Nevada               | 1.035 | 1.062 | 1.082 | 1.067 | 1.061 | 1.062 | 1.031 | 1.033 | 1.026 | 1.025 | 1.025 | 1.028 | 1.031 | 1.039 |
| New Hampshire        | 1.035 | 1.012 | 1.010 | 1.010 | 1.020 | 1.027 | 1.014 | 1.011 | 1.058 | 1.062 | 1.050 | 1.043 | 1.045 | 1.036 |
| New Jersey           | 1.035 | 1.045 | 1.026 | 1.031 | 1.033 | 1.026 | 1.026 | 1.034 | 1.035 | 1.037 | 1.037 | 1.038 | 1.039 | 1.039 |
| New Mexico           | 1.035 | 1.108 | 1.083 | 1.064 | 1.043 | 1.074 | 1.054 | 1.020 | 0.972 | 0.975 | 0.977 | 1.019 | 1.025 | 1.021 |
| New York             | 1.035 | 1.026 | 1.021 | 1.015 | 1.025 | 1.029 | 1.030 | 1.028 | 1.028 | 1.029 | 1.023 | 1.027 | 1.026 | 1.025 |
| North Carolina       | 1.035 | 1.033 | 1.024 | 1.018 | 1.012 | 1.034 | 1.032 | 1.033 | 1.030 | 1.041 | 1.033 | 1.040 | 1.033 | 1.034 |
| North Dakota         | 1.035 | 1.000 | 1.031 | 1.001 | 1.052 | 1.062 | 1.032 | 1.050 | 1.035 | 1.029 | 1.003 | 1.009 | 1.021 | 1.036 |
| Ohio                 | 1.035 | 1.033 | 1.023 | 1.023 | 1.016 | 1.044 | 1.040 | 1.038 | 1.042 | 1.042 | 1.038 | 1.036 | 1.045 | 1.043 |
| Oklahoma             | 1.035 | 1.026 | 1.032 | 1.015 | 1.023 | 1.028 | 1.027 | 1.020 | 1.015 | 1.028 | 1.028 | 1.030 | 1.031 | 1.030 |
| Oregon               | 1.035 | 1.070 | 1.045 | 1.039 | 1.046 | 1.030 | 1.023 | 1.040 | 1.027 | 1.026 | 1.023 | 1.012 | 1.013 | 1.030 |
| Pennsylvania         | 1.035 | 1.038 | 1.033 | 1.025 | 1.022 | 1.034 | 1.037 | 1.035 | 1.035 | 1.054 | 1.037 | 1.040 | 1.039 | 1.040 |
| Rhode Island         | 1.035 | 1.042 | 1.021 | 1.014 | 1.021 | 1.033 | 1.028 | 1.026 | 1.038 | 1.031 | 1.023 | 1.024 | 1.024 | 1.021 |
| South Carolina       | 1.035 | 1.042 | 1.028 | 1.024 | 1.033 | 1.028 | 1.028 | 1.027 | 1.029 | 1.038 | 1.032 | 1.036 | 1.035 | 1.037 |
| South Dakota         | 1.035 | 0.997 | 1.004 | 1.000 | 0.998 | 1.010 | 1.016 | 1.014 | 1.005 | 0.999 | 0.999 | 1.001 | 1.002 | 1.007 |
| Tennessee            | 1.035 | 1.046 | 1.022 | 1.031 | 1.016 | 1.034 | 1.035 | 1.031 | 1.037 | 1.037 | 1.032 | 1.033 | 1.033 | 1.035 |
| Texas                | 1.035 | 1.037 | 1.027 | 1.026 | 1.033 | 1.038 | 1.040 | 1.037 | 1.029 | 1.026 | 1.028 | 1.026 | 1.028 | 1.028 |
| Utah                 | 1.035 | 0.925 | 0.938 | 0.950 | 1.086 | 1.075 | 1.088 | 1.063 | 1.051 | 1.052 | 1.055 | 1.061 | 1.053 | 1.053 |
| Vermont              | 1.035 | --    | 1.006 | 1.008 | 0.990 | 0.992 | 0.987 | 0.996 | 1.012 | 1.012 | 1.004 | 1.006 | 1.004 | 1.004 |
| Virginia             | 1.035 | 1.031 | 1.026 | 1.019 | 1.016 | 1.039 | 1.042 | 1.031 | 1.035 | 1.037 | 1.034 | 1.036 | 1.030 | 1.040 |
| Washington           | 1.035 | 1.075 | 1.055 | 1.042 | 1.052 | 1.040 | 1.030 | 1.040 | 1.038 | 1.033 | 1.029 | 1.025 | 1.027 | 1.028 |
| West Virginia        | 1.035 | 1.071 | 1.029 | 1.037 | 1.032 | 1.067 | 1.071 | 1.061 | 1.068 | 1.067 | 1.062 | 1.066 | 1.058 | 1.067 |
| Wisconsin            | 1.035 | 1.018 | 1.019 | 1.020 | 1.008 | 1.010 | 1.006 | 1.011 | 1.010 | 1.009 | 1.007 | 1.008 | 1.007 | 1.013 |
| Wyoming              | 1.035 | 0.926 | 1.023 | 0.934 | 1.060 | 1.051 | 1.099 | 1.063 | 1.046 | 1.055 | 1.040 | 1.044 | 1.045 | 1.042 |
| U.S. Average         | 1.035 | 1.033 | 1.026 | 1.022 | 1.025 | 1.033 | 1.030 | 1.028 | 1.025 | 1.027 | 1.024 | 1.028 | 1.026 | 1.028 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B7. Approximate Heat Content of Natural Gas Total Consumption, 2006-2021**  
(Thousand Btu per Cubic Foot)

| State                | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Alabama              | 1.028 | 1.029 | 1.025 | 1.026 | 1.018 | 1.018 | 1.016 | 1.017 | 1.024 | 1.030 | 1.029 | 1.030 | 1.028 | 1.028 | 1.031 | 1.031 |
| Alaska               | 1.005 | 1.006 | 1.006 | 1.005 | 1.005 | 1.013 | 1.012 | 1.001 | 1.001 | 1.001 | 1.001 | 0.989 | 0.975 | 0.984 | 0.985 | 0.979 |
| Arizona              | 1.020 | 1.023 | 1.027 | 1.021 | 1.016 | 1.015 | 1.021 | 1.025 | 1.030 | 1.040 | 1.037 | 1.041 | 1.041 | 1.032 | 1.028 | 1.033 |
| Arkansas             | 1.030 | 1.014 | 1.015 | 1.016 | 1.012 | 1.017 | 1.015 | 1.021 | 1.017 | 1.020 | 1.019 | 1.019 | 1.017 | 1.018 | 1.018 | 1.020 |
| California           | 1.026 | 1.030 | 1.028 | 1.027 | 1.023 | 1.020 | 1.022 | 1.027 | 1.030 | 1.036 | 1.035 | 1.035 | 1.033 | 1.034 | 1.033 | 1.034 |
| Colorado             | 1.032 | 1.030 | 1.020 | 1.019 | 1.019 | 1.032 | 1.039 | 1.037 | 1.047 | 1.060 | 1.063 | 1.065 | 1.078 | 1.089 | 1.077 | 1.064 |
| Connecticut          | 1.019 | 1.019 | 1.018 | 1.019 | 1.022 | 1.026 | 1.031 | 1.024 | 1.027 | 1.027 | 1.027 | 1.028 | 1.029 | 1.030 | 1.030 | 1.029 |
| Delaware             | 1.037 | 1.037 | 1.033 | 1.030 | 1.023 | 1.025 | 1.027 | 1.049 | 1.056 | 1.050 | 1.046 | 1.042 | 1.041 | 1.041 | 1.039 | 1.039 |
| District of Columbia | 1.025 | 1.027 | 1.028 | 1.035 | 1.014 | 1.016 | 1.029 | 1.030 | 1.043 | 1.044 | 1.044 | 1.039 | 1.036 | 1.035 | 1.033 | 1.032 |
| Florida              | 1.029 | 1.029 | 1.029 | 1.025 | 1.019 | 1.015 | 1.015 | 1.016 | 1.022 | 1.024 | 1.023 | 1.024 | 1.023 | 1.023 | 1.026 | 1.026 |
| Georgia              | 1.032 | 1.032 | 1.026 | 1.027 | 1.022 | 1.018 | 1.015 | 1.016 | 1.020 | 1.027 | 1.030 | 1.030 | 1.028 | 1.026 | 1.029 | 1.028 |
| Hawaii               | 1.047 | 1.037 | 1.043 | 1.040 | 1.040 | 1.048 | 1.046 | 1.006 | 0.959 | 0.982 | 0.981 | 0.975 | 0.962 | 0.952 | 0.952 | 0.918 |
| Idaho                | 1.044 | 1.024 | 1.023 | 1.022 | 1.021 | 1.017 | 1.015 | 1.022 | 1.017 | 1.030 | 1.038 | 1.041 | 1.037 | 1.030 | 1.025 | 1.019 |
| Illinois             | 1.016 | 1.015 | 1.014 | 1.013 | 1.008 | 1.011 | 1.011 | 1.016 | 1.023 | 1.029 | 1.031 | 1.029 | 1.029 | 1.033 | 1.036 | 1.034 |
| Indiana              | 1.017 | 1.022 | 1.013 | 1.015 | 1.012 | 1.012 | 1.012 | 1.015 | 1.019 | 1.027 | 1.038 | 1.043 | 1.047 | 1.052 | 1.053 | 1.056 |
| Iowa                 | 1.012 | 1.010 | 1.010 | 1.007 | 1.006 | 1.009 | 1.014 | 1.029 | 1.040 | 1.053 | 1.056 | 1.056 | 1.061 | 1.066 | 1.069 | 1.070 |
| Kansas               | 1.019 | 1.018 | 1.034 | 1.019 | 1.019 | 1.020 | 1.022 | 1.018 | 1.024 | 1.035 | 1.034 | 1.034 | 1.038 | 1.041 | 1.033 | 1.034 |
| Kentucky             | 1.029 | 1.027 | 1.035 | 1.036 | 1.030 | 1.027 | 1.030 | 1.025 | 1.027 | 1.022 | 1.030 | 1.046 | 1.049 | 1.049 | 1.049 | 1.048 |
| Louisiana            | 1.038 | 1.034 | 1.035 | 1.029 | 1.024 | 1.019 | 1.015 | 1.018 | 1.027 | 1.025 | 1.024 | 1.022 | 1.022 | 1.022 | 1.021 | 1.020 |
| Maine                | 1.055 | 1.064 | 1.062 | 1.046 | 1.044 | 1.047 | 1.032 | 1.028 | 1.029 | 1.027 | 1.026 | 1.030 | 1.041 | 1.038 | 1.039 | 1.041 |
| Maryland             | 1.038 | 1.038 | 1.035 | 1.037 | 1.027 | 1.027 | 1.037 | 1.045 | 1.053 | 1.055 | 1.051 | 1.047 | 1.042 | 1.044 | 1.040 | 1.039 |
| Massachusetts        | 1.020 | 1.025 | 1.021 | 1.032 | 1.035 | 1.033 | 1.035 | 1.034 | 1.026 | 1.029 | 1.030 | 1.030 | 1.031 | 1.031 | 1.030 | 1.030 |
| Michigan             | 1.017 | 1.021 | 1.023 | 1.021 | 1.016 | 1.014 | 1.017 | 1.021 | 1.019 | 1.032 | 1.041 | 1.043 | 1.047 | 1.057 | 1.059 | 1.057 |
| Minnesota            | 1.016 | 1.019 | 1.023 | 1.029 | 1.010 | 1.010 | 1.019 | 1.023 | 1.033 | 1.040 | 1.037 | 1.033 | 1.049 | 1.056 | 1.058 | 1.058 |
| Mississippi          | 1.028 | 1.030 | 1.026 | 1.019 | 1.014 | 1.010 | 1.012 | 1.015 | 1.028 | 1.030 | 1.031 | 1.032 | 1.026 | 1.029 | 1.029 | 1.029 |
| Missouri             | 1.021 | 1.020 | 1.008 | 1.007 | 1.007 | 1.010 | 1.012 | 1.016 | 1.015 | 1.012 | 1.024 | 1.010 | 1.024 | 1.024 | 1.023 | 1.022 |
| Montana              | 1.017 | 1.017 | 1.016 | 1.011 | 1.012 | 1.016 | 1.025 | 1.033 | 1.025 | 1.032 | 1.034 | 1.041 | 1.043 | 1.049 | 1.072 | 1.057 |
| Nebraska             | 1.012 | 1.018 | 1.011 | 1.012 | 1.004 | 1.011 | 1.019 | 1.036 | 1.042 | 1.057 | 1.059 | 1.061 | 1.060 | 1.070 | 1.067 | 1.063 |
| Nevada               | 1.032 | 1.032 | 1.039 | 1.031 | 1.033 | 1.024 | 1.029 | 1.034 | 1.034 | 1.042 | 1.041 | 1.039 | 1.037 | 1.043 | 1.038 | 1.039 |
| New Hampshire        | 1.035 | 1.044 | 1.040 | 1.035 | 1.037 | 1.040 | 1.032 | 1.030 | 1.031 | 1.030 | 1.029 | 1.030 | 1.031 | 1.032 | 1.032 | 1.032 |
| New Jersey           | 1.036 | 1.035 | 1.033 | 1.029 | 1.026 | 1.026 | 1.029 | 1.044 | 1.042 | 1.045 | 1.041 | 1.039 | 1.038 | 1.039 | 1.039 | 1.038 |
| New Mexico           | 1.018 | 1.024 | 1.025 | 1.028 | 1.021 | 1.022 | 1.024 | 1.030 | 1.034 | 1.038 | 1.046 | 1.042 | 1.036 | 1.031 | 1.028 | 1.031 |
| New York             | 1.021 | 1.023 | 1.021 | 1.021 | 1.022 | 1.025 | 1.031 | 1.033 | 1.032 | 1.032 | 1.031 | 1.032 | 1.032 | 1.032 | 1.033 | 1.032 |
| North Carolina       | 1.032 | 1.030 | 1.027 | 1.023 | 1.015 | 1.011 | 1.011 | 1.011 | 1.021 | 1.035 | 1.035 | 1.036 | 1.029 | 1.031 | 1.033 | 1.034 |
| North Dakota         | 1.044 | 1.046 | 1.042 | 1.055 | 1.055 | 1.073 | 1.065 | 1.069 | 1.086 | 1.086 | 1.083 | 1.080 | 1.080 | 1.099 | 1.069 | 1.069 |
| Ohio                 | 1.039 | 1.037 | 1.040 | 1.041 | 1.034 | 1.031 | 1.032 | 1.037 | 1.057 | 1.068 | 1.071 | 1.070 | 1.064 | 1.065 | 1.068 | 1.070 |
| Oklahoma             | 1.032 | 1.029 | 1.034 | 1.033 | 1.032 | 1.032 | 1.030 | 1.036 | 1.039 | 1.047 | 1.049 | 1.042 | 1.032 | 1.033 | 1.031 | 1.029 |
| Oregon               | 1.032 | 1.033 | 1.023 | 1.024 | 1.015 | 1.021 | 1.022 | 1.016 | 1.029 | 1.048 | 1.059 | 1.062 | 1.061 | 1.053 | 1.053 | 1.055 |
| Pennsylvania         | 1.038 | 1.037 | 1.038 | 1.037 | 1.034 | 1.036 | 1.040 | 1.048 | 1.048 | 1.046 | 1.041 | 1.040 | 1.038 | 1.038 | 1.038 | 1.037 |
| Rhode Island         | 1.017 | 1.026 | 1.022 | 1.023 | 1.017 | 1.020 | 1.031 | 1.032 | 1.028 | 1.028 | 1.029 | 1.029 | 1.029 | 1.029 | 1.029 | 1.029 |
| South Carolina       | 1.041 | 1.037 | 1.034 | 1.034 | 1.026 | 1.026 | 1.023 | 1.020 | 1.024 | 1.030 | 1.030 | 1.031 | 1.026 | 1.027 | 1.031 | 1.031 |
| South Dakota         | 1.003 | 1.003 | 1.003 | 1.002 | 1.005 | 1.005 | 1.018 | 1.031 | 1.041 | 1.054 | 1.056 | 1.055 | 1.068 | 1.084 | 1.078 | 1.080 |
| Tennessee            | 1.038 | 1.038 | 1.037 | 1.028 | 1.023 | 1.014 | 1.014 | 1.019 | 1.027 | 1.029 | 1.030 | 1.031 | 1.031 | 1.030 | 1.031 | 1.031 |
| Texas                | 1.026 | 1.025 | 1.025 | 1.023 | 1.028 | 1.025 | 1.026 | 1.024 | 1.031 | 1.034 | 1.030 | 1.029 | 1.028 | 1.025 | 1.022 | 1.022 |
| Utah                 | 1.056 | 1.052 | 1.059 | 1.044 | 1.045 | 1.038 | 1.043 | 1.046 | 1.041 | 1.044 | 1.042 | 1.042 | 1.040 | 1.046 | 1.042 | 1.046 |
| Vermont              | 1.001 | 1.001 | 1.005 | 1.005 | 1.007 | 1.008 | 1.012 | 1.015 | 1.017 | 1.025 | 1.024 | 1.030 | 1.034 | 1.036 | 1.041 | 1.040 |
| Virginia             | 1.034 | 1.035 | 1.038 | 1.036 | 1.028 | 1.027 | 1.034 | 1.036 | 1.046 | 1.052 | 1.053 | 1.052 | 1.052 | 1.051 | 1.049 | 1.051 |
| Washington           | 1.029 | 1.025 | 1.030 | 1.030 | 1.032 | 1.029 | 1.028 | 1.030 | 1.044 | 1.065 | 1.078 | 1.080 | 1.087 | 1.086 | 1.085 | 1.086 |
| West Virginia        | 1.117 | 1.074 | 1.073 | 1.082 | 1.076 | 1.083 | 1.080 | 1.076 | 1.090 | 1.097 | 1.097 | 1.083 | 1.091 | 1.084 | 1.087 | 1.081 |
| Wisconsin            | 1.011 | 1.014 | 1.014 | 1.014 | 1.010 | 1.014 | 1.019 | 1.026 | 1.035 | 1.042 | 1.039 | 1.035 | 1.041 | 1.042 | 1.044 | 1.045 |
| Wyoming              | 1.041 | 1.036 | 1.031 | 1.031 | 1.031 | 1.034 | 1.034 | 1.042 | 1.040 | 1.060 | 1.074 | 1.060 | 1.062 | 1.074 | 1.074 | 1.056 |
| U.S. Average         | 1.027 | 1.027 | 1.027 | 1.025 | 1.023 | 1.022 | 1.023 | 1.026 | 1.032 | 1.037 | 1.037 | 1.036 | 1.036 | 1.037 | 1.037 | 1.036 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B8. Approximate Heat Content of Coal Consumed by the Residential and Commercial Sectors, Selected Years, 1960-2005**  
(Million Btu per Short Ton)

| State                | 1960   | 1965   | 1970   | 1975   | 1980   | 1985   | 1990   | 1995   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Alabama              | 24.910 | 24.779 | 23.933 | 23.520 | 24.042 | 24.407 | 24.629 | 24.646 | 25.450 | 18.845 | 24.232 | 24.224 | 24.224 | 25.130 |
| Alaska               | 18.906 | 18.807 | 18.165 | 17.683 | --     | 15.800 | 15.800 | 15.800 | 15.600 | 15.600 | 15.600 | 15.600 | 15.600 | 15.600 |
| Arizona              | --     | --     | --     | --     | --     | 19.788 | 18.698 | 21.962 | 21.956 | 18.819 | 18.963 | 18.657 | 18.780 | 18.959 |
| Arkansas             | --     | --     | --     | --     | 23.900 | 22.990 | 24.834 | --     | --     | --     | 25.202 | --     | 25.202 | --     |
| California           | 23.013 | 22.892 | 22.111 | --     | 23.109 | 23.555 | 23.184 | 23.296 | 23.790 | 23.546 | 25.202 | 24.578 | 22.400 | 22.690 |
| Colorado             | 22.953 | 22.833 | 22.053 | 20.826 | 21.461 | 21.217 | 21.435 | 22.169 | 21.706 | 22.429 | 22.401 | 22.500 | 22.460 | 22.383 |
| Connecticut          | 24.868 | 24.402 | 23.476 | 22.272 | 22.719 | 23.031 | 25.199 | 23.804 | 24.842 | 25.190 | 25.202 | 25.174 | 25.202 | 25.202 |
| Delaware             | 24.721 | 24.316 | 23.476 | 22.272 | 23.143 | 24.117 | 24.856 | 24.696 | 26.118 | 25.202 | --     | --     | --     | --     |
| District of Columbia | 25.109 | 24.977 | 24.124 | 23.241 | 24.541 | 24.888 | 24.961 | 25.178 | 25.300 | 24.694 | 24.694 | 24.694 | 24.694 | 24.694 |
| Florida              | --     | --     | --     | --     | 24.283 | 24.882 | 24.861 | 24.644 | 25.750 | 23.495 | 24.355 | 24.704 | --     | 25.202 |
| Georgia              | 24.742 | 24.613 | 23.772 | 23.494 | 24.321 | 24.832 | 25.143 | 24.980 | 25.642 | 25.716 | 25.716 | --     | 25.714 | 24.872 |
| Hawaii               | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Idaho                | 24.831 | 24.701 | 23.858 | 22.663 | 22.292 | 22.832 | 22.478 | 21.717 | 22.060 | 22.348 | 22.074 | 21.644 | 18.444 | 21.283 |
| Illinois             | 24.042 | 23.915 | 23.099 | 22.523 | 22.069 | 22.269 | 22.452 | 22.516 | 21.955 | 23.096 | 23.073 | 22.944 | 22.887 | 22.904 |
| Indiana              | 24.065 | 23.938 | 23.121 | 22.132 | 21.881 | 22.259 | 22.461 | 22.290 | 23.519 | 22.303 | 22.272 | 22.389 | 22.343 | 22.455 |
| Iowa                 | 21.321 | 21.210 | 20.485 | 18.277 | 20.223 | 21.402 | 23.960 | 24.361 | 26.101 | 23.868 | 24.179 | 24.055 | 23.393 | 23.535 |
| Kansas               | 21.788 | 21.674 | 20.934 | --     | 21.182 | 21.146 | 24.280 | 23.945 | 24.156 | 24.172 | 24.025 | 23.546 | --     | --     |
| Kentucky             | 24.431 | 24.284 | 23.454 | 23.178 | 23.837 | 24.344 | 24.450 | 24.928 | 26.408 | 24.901 | 24.704 | 24.378 | 24.093 | 24.067 |
| Louisiana            | --     | --     | --     | --     | 21.365 | --     | --     | 25.078 | --     | --     | --     | --     | --     | --     |
| Maine                | 24.964 | 24.702 | 23.612 | 22.519 | 23.546 | 24.278 | 24.937 | 24.696 | 25.922 | 25.198 | 25.196 | 25.202 | 25.202 | 25.202 |
| Maryland             | 25.033 | 24.875 | 23.944 | 22.938 | 24.043 | 24.749 | 25.067 | 24.838 | 25.072 | 24.922 | 24.616 | 24.796 | 24.700 | 24.709 |
| Massachusetts        | 24.894 | 24.493 | 23.557 | 22.430 | 23.417 | 23.778 | 25.070 | 24.834 | 27.070 | 25.395 | 24.648 | 24.997 | 24.469 | 24.969 |
| Michigan             | 24.759 | 24.628 | 23.787 | 23.466 | 24.353 | 24.460 | 24.812 | 24.662 | 25.100 | 24.087 | 23.595 | 23.703 | 24.503 | 24.357 |
| Minnesota            | 21.971 | 21.856 | 21.109 | 19.257 | 20.829 | 19.142 | 17.892 | 20.258 | 19.294 | 24.331 | 17.382 | 18.744 | 20.360 | 19.429 |
| Mississippi          | --     | --     | --     | --     | 22.993 | --     | 24.541 | 24.852 | --     | --     | --     | --     | --     | --     |
| Missouri             | 22.942 | 22.821 | 22.042 | 21.404 | 21.807 | 22.802 | 21.936 | 22.634 | 22.014 | 22.981 | 23.147 | 23.251 | 23.195 | 23.216 |
| Montana              | 21.336 | 21.224 | 20.499 | 20.389 | 22.042 | 17.680 | 18.781 | 21.228 | 16.016 | 18.223 | 18.514 | 18.413 | 18.118 | 18.121 |
| Nebraska             | 20.913 | 20.804 | 20.093 | 18.406 | 18.038 | 21.526 | 21.374 | 20.321 | --     | 22.347 | 22.394 | 22.439 | 22.396 | 22.370 |
| Nevada               | 25.114 | 25.049 | 24.211 | 23.327 | 22.430 | 23.562 | 24.010 | 23.443 | 23.108 | 19.617 | 18.118 | 18.118 | 18.118 | 18.118 |
| New Hampshire        | 24.721 | 24.316 | 23.476 | 22.272 | 22.719 | 23.031 | 25.171 | 24.868 | 25.922 | 25.202 | 25.202 | 25.202 | 25.202 | 25.202 |
| New Jersey           | 24.724 | 24.354 | 23.481 | 22.263 | 22.719 | 23.218 | 25.173 | 24.696 | 25.500 | 25.202 | 25.202 | 25.202 | 25.202 | 25.202 |
| New Mexico           | 22.993 | 22.873 | 22.091 | --     | 19.786 | 19.817 | 18.698 | 19.232 | 25.212 | 18.819 | 18.785 | 19.009 | 19.246 | 18.813 |
| New York             | 24.700 | 24.360 | 23.496 | 22.574 | 23.337 | 23.819 | 24.856 | 24.958 | 25.311 | 24.846 | 25.094 | 25.202 | 24.992 | 25.010 |
| North Carolina       | 24.762 | 24.632 | 23.791 | 23.493 | 24.422 | 24.859 | 25.187 | 25.164 | 27.000 | 25.080 | 24.825 | 25.329 | 24.772 | 25.373 |
| North Dakota         | 15.550 | 15.469 | 14.940 | 13.757 | 13.243 | 13.138 | 13.910 | 15.535 | 14.228 | 16.003 | 16.228 | 16.379 | 16.982 | 18.098 |
| Ohio                 | 23.862 | 23.732 | 22.921 | 22.325 | 23.207 | 23.837 | 24.144 | 24.439 | 24.013 | 24.111 | 24.202 | 24.149 | 21.335 | 23.981 |
| Oklahoma             | 22.727 | 22.608 | 21.836 | 20.673 | 23.291 | 23.394 | 24.834 | 25.894 | --     | 24.215 | 24.215 | 24.215 | --     | 24.276 |
| Oregon               | 24.605 | 24.476 | 23.640 | 22.383 | 22.722 | 22.607 | 23.184 | 23.296 | 23.309 | --     | --     | --     | --     | --     |
| Pennsylvania         | 24.731 | 24.365 | 23.542 | 22.487 | 23.150 | 23.724 | 25.118 | 24.830 | 26.386 | 25.137 | 25.110 | 25.124 | 25.105 | 25.132 |
| Rhode Island         | 24.721 | 24.316 | 23.476 | 22.272 | 22.719 | 23.031 | 25.199 | 24.696 | 25.922 | 25.202 | 25.202 | 25.202 | 25.202 | 25.202 |
| South Carolina       | 24.762 | 24.632 | 23.791 | 23.493 | 24.414 | 24.854 | 24.875 | 25.503 | --     | --     | 25.202 | --     | --     | --     |
| South Dakota         | 19.412 | 19.310 | 18.650 | 16.860 | 18.426 | 19.369 | 18.375 | 20.868 | 23.506 | 17.381 | 19.072 | 17.381 | 17.381 | 17.381 |
| Tennessee            | 24.715 | 24.584 | 23.745 | 23.480 | 23.970 | 24.389 | 24.741 | 25.276 | 26.045 | 24.457 | 24.553 | 23.831 | 23.497 | 24.704 |
| Texas                | 14.952 | 14.873 | 14.366 | --     | 15.200 | 22.511 | 25.896 | --     | 16.280 | 25.623 | 18.685 | 19.228 | 25.683 | 25.716 |
| Utah                 | 25.892 | 25.756 | 24.877 | 23.740 | 23.179 | 23.562 | 23.150 | 23.296 | 23.210 | 23.544 | 23.546 | 23.547 | 23.547 | 23.551 |
| Vermont              | 24.721 | 24.316 | 23.476 | 22.272 | 22.719 | 24.399 | 25.199 | 24.696 | 25.922 | 25.202 | 25.202 | 25.202 | 25.202 | 25.202 |
| Virginia             | 24.785 | 24.652 | 23.810 | 23.462 | 24.414 | 24.864 | 25.087 | 24.997 | 26.174 | 25.042 | 25.045 | 24.925 | 25.004 | 24.859 |
| Washington           | 22.909 | 22.789 | 22.011 | 19.968 | 22.771 | 23.452 | 21.737 | 22.634 | 25.961 | 23.488 | 23.506 | 23.519 | 23.510 | --     |
| West Virginia        | 24.997 | 24.866 | 24.017 | 23.709 | 24.059 | 24.860 | 25.017 | 24.822 | 25.742 | 24.765 | 24.746 | 24.765 | 24.712 | 24.697 |
| Wisconsin            | 21.923 | 21.806 | 21.061 | 18.980 | 24.265 | 24.568 | 24.978 | 25.078 | 27.659 | 24.448 | 24.309 | 24.717 | 24.326 | 18.945 |
| Wyoming              | 20.625 | 20.517 | 19.817 | 18.572 | 17.809 | 17.262 | 19.935 | 18.241 | 20.116 | 17.746 | 17.837 | 17.860 | 17.879 | 17.869 |
| U.S. Average         | 23.943 | 23.776 | 22.990 | 22.120 | 22.892 | 22.682 | 23.021 | 23.027 | 23.364 | 22.706 | 22.449 | 22.488 | 22.314 | 22.053 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.



**Table B9. Approximate Heat Content of Coal Consumed by the Residential and Commercial Sectors, 2006-2021**  
(Million Btu per Short Ton)

| State                | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Alabama              | 24.295 | 25.195 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Alaska               | 15.600 | 15.600 | 15.280 | 15.356 | 15.302 | 15.184 | 15.268 | 15.272 | 15.278 | 15.186 | 15.118 | 14.995 | 15.126 | 15.083 | 15.029 | 14.976 |
| Arizona              | 18.914 | 19.703 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Arkansas             | 25.202 | 22.932 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| California           | 23.546 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Colorado             | 22.324 | 22.419 | 24.195 | 22.928 | 22.968 | 22.898 | 23.679 | 22.752 | 23.219 | 23.104 | 23.848 | 23.565 | --     | --     | 22.906 | 23.090 |
| Connecticut          | 25.202 | 25.202 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Delaware             | 25.202 | 25.202 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| District of Columbia | --     | 24.694 | 27.395 | 28.028 | 27.658 | 27.658 | 27.273 | 26.598 | 27.102 | 26.146 | 26.520 | 26.312 | 26.445 | 27.096 | --     | --     |
| Florida              | 25.202 | 25.202 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Georgia              | --     | 24.331 | 28.000 | 28.000 | 28.000 | 28.000 | 28.000 | 28.000 | 28.000 | 26.184 | --     | --     | --     | --     | --     | --     |
| Hawaii               | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Idaho                | 21.546 | 23.007 | 23.491 | 23.088 | 23.088 | 23.131 | 22.871 | 23.377 | 23.161 | --     | --     | --     | --     | --     | --     | --     |
| Illinois             | 22.934 | 22.915 | 22.227 | 22.245 | 22.292 | 22.211 | 22.352 | 22.454 | 22.356 | 22.212 | 22.432 | 22.685 | 22.785 | 22.959 | 22.665 | 22.300 |
| Indiana              | 22.372 | 22.352 | 23.073 | 23.152 | 23.132 | 22.932 | 22.390 | 22.544 | 22.558 | 22.339 | 22.717 | 22.662 | 22.573 | 22.737 | 22.501 | 22.407 |
| Iowa                 | 23.407 | 23.408 | 23.154 | 23.082 | 23.070 | 23.059 | 23.039 | 22.872 | 22.832 | 22.740 | 22.894 | 22.891 | 23.050 | 22.703 | 22.360 | 22.613 |
| Kansas               | 23.546 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Kentucky             | 23.668 | 23.698 | 27.274 | 27.316 | 27.393 | 27.315 | 27.357 | 27.090 | 25.959 | 26.409 | 26.410 | 26.217 | 27.133 | 25.981 | 26.150 | 26.082 |
| Louisiana            | --     | 24.355 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Maine                | 25.202 | 25.202 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Maryland             | 24.733 | 24.745 | 26.138 | 26.569 | 26.113 | 26.650 | 27.000 | 27.000 | 27.000 | 22.069 | --     | --     | --     | --     | --     | --     |
| Massachusetts        | 24.773 | 24.637 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Michigan             | 24.375 | 24.469 | 25.594 | 26.016 | 25.863 | 24.926 | 23.625 | 23.526 | 23.299 | 24.748 | 24.540 | --     | --     | --     | --     | --     |
| Minnesota            | 17.782 | 19.324 | 18.049 | 17.967 | 18.077 | 17.888 | 18.871 | 19.508 | 18.377 | 17.934 | 17.962 | 17.826 | 18.482 | 18.218 | 18.112 | 18.907 |
| Mississippi          | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Missouri             | 23.195 | 23.080 | 22.716 | 22.954 | 22.924 | 22.878 | 22.789 | 22.916 | 22.727 | 22.700 | 22.666 | 22.814 | 22.653 | 22.751 | 22.853 | 22.956 |
| Montana              | 18.118 | 18.118 | 25.046 | 24.274 | 24.730 | 25.239 | 25.487 | 17.129 | 17.299 | 21.600 | 22.385 | 20.960 | 22.042 | 21.180 | 22.194 | 20.968 |
| Nebraska             | 22.295 | 22.349 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Nevada               | 18.118 | 22.349 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| New Hampshire        | 25.202 | 25.202 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| New Jersey           | 25.202 | 25.202 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| New Mexico           | 18.929 | 18.581 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| New York             | 24.860 | 24.918 | 25.253 | 25.363 | 25.374 | 24.600 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| North Carolina       | 25.113 | 25.318 | 26.738 | 26.803 | 26.520 | 26.696 | 26.741 | 26.657 | 26.350 | 26.651 | 26.400 | 26.144 | 25.758 | 25.759 | 26.028 | 25.277 |
| North Dakota         | 17.847 | 15.916 | 17.123 | 17.231 | 17.475 | 17.103 | 17.294 | 17.184 | 17.230 | 17.188 | 17.137 | 17.343 | 17.245 | 17.598 | 18.041 | 18.317 |
| Ohio                 | 24.194 | 24.122 | 26.652 | 26.850 | 26.677 | 26.636 | 26.710 | 26.614 | 26.643 | 26.822 | 27.014 | 24.572 | --     | --     | --     | --     |
| Oklahoma             | 24.557 | 24.694 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Oregon               | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Pennsylvania         | 25.125 | 25.126 | 25.729 | 25.958 | 25.713 | 25.507 | 25.065 | 25.791 | 26.246 | 26.273 | 26.139 | 26.221 | 25.779 | 26.078 | 25.673 | 25.214 |
| Rhode Island         | 25.202 | 25.202 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| South Carolina       | 24.331 | 25.202 | 27.542 | 27.512 | 27.020 | --     | 26.560 | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| South Dakota         | 17.381 | 17.381 | 25.893 | 24.900 | 24.900 | --     | 16.574 | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Tennessee            | 24.386 | 24.540 | 25.613 | 25.660 | 25.827 | 25.400 | 25.597 | 25.283 | 25.362 | 25.756 | --     | --     | --     | --     | --     | --     |
| Texas                | 25.202 | 25.202 | 27.483 | 27.250 | 27.250 | 26.846 | 26.757 | 26.559 | 27.044 | 26.616 | --     | --     | --     | --     | --     | --     |
| Utah                 | 23.542 | 23.539 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Vermont              | 25.202 | 25.363 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Virginia             | 24.745 | 24.777 | 26.520 | 26.007 | 26.727 | 26.468 | 26.388 | 26.196 | 26.432 | 26.444 | 26.229 | 25.741 | 26.445 | 27.096 | 26.898 | 27.998 |
| Washington           | 17.381 | 17.381 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| West Virginia        | 24.716 | 24.704 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Wisconsin            | 24.354 | 24.335 | 26.890 | 26.865 | 27.012 | 26.990 | 26.771 | 26.851 | 26.671 | 26.782 | 26.750 | 26.750 | 26.750 | 26.750 | 26.750 | --     |
| Wyoming              | 17.895 | 17.907 | 21.850 | 21.271 | 19.878 | 19.415 | 19.109 | 17.761 | 20.397 | 21.173 | 20.994 | 23.075 | 23.189 | 22.901 | 22.491 | 23.084 |
| U.S. Average         | 21.915 | 22.179 | 22.941 | 22.820 | 22.590 | 22.105 | 21.350 | 21.259 | 21.442 | 20.667 | 20.316 | 19.608 | 19.321 | 19.082 | 18.258 | 18.067 |

-- = Not applicable.  
Where shown, R = Revised data.  
Note: Beginning in 2008, commercial sector only.  
Data Source: See source listing at the end of this appendix.

**Table B10. Approximate Heat Content of Coal Consumed by Other Industrial Users, Selected Years, 1960-2005**  
(Million Btu per Short Ton)

| State                | 1960   | 1965   | 1970   | 1975   | 1980   | 1985   | 1990   | 1995   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Alabama              | 25.178 | 24.960 | 23.542 | 22.990 | 24.106 | 24.383 | 24.679 | 24.848 | 25.450 | 25.563 | 25.611 | 25.605 | 25.336 | 24.568 |
| Alaska               | 19.428 | 19.257 | 18.140 | 17.684 | --     | --     | --     | --     | 15.710 | 15.600 | 15.600 | 15.600 | 15.600 | 15.600 |
| Arizona              | 21.614 | 21.424 | 20.181 | 19.778 | 20.373 | 20.257 | 20.071 | 19.962 | 22.164 | 21.907 | 22.345 | 22.407 | 21.938 | 22.163 |
| Arkansas             | 25.428 | 25.204 | --     | 21.336 | 21.406 | 21.310 | 22.808 | 23.957 | 25.154 | 24.929 | 24.797 | 24.305 | 24.404 | 25.230 |
| California           | 26.052 | 25.823 | 24.325 | 22.985 | 22.173 | 23.299 | 22.522 | 23.296 | 23.790 | 24.128 | 23.883 | 24.164 | 24.130 | 23.658 |
| Colorado             | 23.558 | 23.351 | 21.996 | 21.392 | 21.818 | 21.568 | 21.105 | 21.702 | 21.706 | 21.768 | 23.371 | 23.218 | 22.776 | 23.140 |
| Connecticut          | 25.780 | 25.553 | 24.071 | 23.627 | --     | 24.419 | 25.199 | --     | --     | --     | --     | --     | --     | 24.694 |
| Delaware             | 25.359 | 25.129 | 23.743 | 23.441 | 24.472 | 24.720 | 24.938 | 25.192 | 26.151 | 26.089 | 25.917 | 25.689 | 26.082 | 26.369 |
| District of Columbia | 25.884 | 25.655 | 24.167 | 23.786 | 24.357 | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Florida              | --     | --     | --     | 23.541 | 22.892 | 24.778 | 25.005 | 25.107 | 25.750 | 25.729 | 25.618 | 25.503 | 25.850 | 25.824 |
| Georgia              | 25.423 | 25.199 | 23.737 | 23.508 | 24.331 | 24.818 | 25.148 | 25.198 | 25.642 | 25.719 | 25.891 | 25.861 | 25.665 | 25.582 |
| Hawaii               | --     | --     | --     | --     | --     | 24.688 | 24.810 | 21.500 | 19.518 | 18.140 | 13.214 | 26.400 | 23.760 | 23.876 |
| Idaho                | 22.544 | 22.345 | 21.049 | 19.935 | 17.684 | 17.762 | 17.858 | 19.035 | 22.060 | 20.562 | 20.873 | 20.277 | 20.349 | 20.574 |
| Illinois             | 23.848 | 23.631 | 22.267 | 21.694 | 22.357 | 22.799 | 22.556 | 22.837 | 22.552 | 22.275 | 22.001 | 21.637 | 21.350 | 21.606 |
| Indiana              | 24.011 | 23.799 | 22.419 | 21.824 | 22.253 | 22.431 | 22.712 | 23.055 | 23.866 | 24.728 | 24.566 | 24.093 | 24.364 | 23.449 |
| Iowa                 | 23.565 | 23.335 | 21.983 | 21.320 | 21.517 | 22.611 | 22.586 | 20.978 | 20.980 | 20.990 | 20.467 | 20.790 | 20.237 | 20.183 |
| Kansas               | 22.671 | 22.471 | 21.168 | 20.480 | 21.568 | 21.506 | 24.224 | 24.241 | 24.156 | 23.384 | 24.013 | 24.286 | 24.855 | 24.511 |
| Kentucky             | 24.734 | 24.497 | 23.119 | 22.904 | 24.059 | 24.518 | 24.633 | 24.847 | 26.408 | 26.080 | 26.732 | 26.189 | 26.299 | 26.090 |
| Louisiana            | --     | --     | --     | --     | 22.153 | 24.054 | 19.979 | 18.136 | 24.502 | 24.796 | 24.387 | 24.232 | 24.621 | 24.268 |
| Maine                | 25.889 | 25.626 | 24.134 | 23.975 | 24.439 | 24.861 | 24.924 | 25.102 | 25.922 | 25.871 | 25.855 | 26.136 | 25.577 | 25.270 |
| Maryland             | 25.904 | 25.676 | 24.190 | 23.658 | 24.485 | 24.728 | 25.118 | 25.324 | 25.072 | 26.150 | 25.736 | 25.395 | 25.122 | 24.441 |
| Massachusetts        | 26.150 | 25.906 | 24.402 | 23.798 | 24.602 | 24.850 | 24.877 | 25.176 | 27.070 | 26.975 | 27.055 | 27.054 | 27.232 | 27.447 |
| Michigan             | 24.831 | 24.610 | 23.187 | 22.892 | 24.044 | 24.741 | 24.451 | 24.026 | 24.912 | 25.098 | 25.518 | 25.637 | 25.187 | 25.025 |
| Minnesota            | 19.521 | 19.349 | 18.227 | 18.917 | 17.084 | 20.690 | 18.563 | 19.078 | 19.294 | 19.465 | 19.335 | 18.938 | 18.999 | 18.990 |
| Mississippi          | 25.681 | 25.455 | 23.978 | 23.213 | 23.442 | 23.399 | 23.254 | 24.073 | 23.922 | 24.178 | 24.369 | 24.143 | 23.326 | 23.650 |
| Missouri             | 23.601 | 23.392 | 22.036 | 21.430 | 22.003 | 22.329 | 22.988 | 23.175 | 23.128 | 22.979 | 23.155 | 23.061 | 23.001 | 22.796 |
| Montana              | 22.827 | 22.626 | 21.313 | 20.879 | 19.035 | 18.068 | 18.376 | 18.100 | 16.016 | 16.457 | 14.694 | 14.624 | 14.878 | 14.694 |
| Nebraska             | 21.975 | 21.781 | 20.517 | 19.285 | 19.194 | 18.597 | 19.259 | 19.359 | 20.508 | 19.559 | 20.501 | 20.268 | 20.106 | 19.898 |
| Nevada               | 26.496 | 26.144 | 24.783 | 23.422 | 23.161 | 23.562 | 23.184 | 22.668 | 23.280 | 23.380 | 23.055 | 23.276 | 23.025 | 22.615 |
| New Hampshire        | 24.450 | 24.233 | 22.945 | 23.364 | 24.112 | 24.624 | 24.939 | 25.216 | --     | --     | --     | --     | --     | --     |
| New Jersey           | 25.388 | 25.156 | 23.712 | 23.377 | 23.526 | 24.453 | 25.236 | 23.983 | 25.500 | 24.800 | 25.200 | 25.244 | 25.233 | 25.202 |
| New Mexico           | 23.038 | 22.834 | 21.510 | --     | 21.867 | 21.625 | 21.388 | 22.008 | 25.212 | 25.066 | 24.751 | 25.195 | 24.675 | 24.588 |
| New York             | 25.719 | 25.486 | 24.054 | 23.635 | 24.454 | 24.858 | 25.108 | 25.117 | 26.294 | 25.536 | 25.970 | 26.079 | 26.150 | 26.377 |
| North Carolina       | 25.446 | 25.222 | 23.759 | 23.490 | 24.419 | 24.880 | 24.938 | 25.269 | 26.492 | 26.750 | 26.397 | 26.461 | 26.329 | 26.211 |
| North Dakota         | 14.812 | 14.681 | 13.830 | 13.039 | 13.120 | 13.160 | 13.489 | 13.353 | 14.228 | 14.177 | 13.984 | 14.310 | 14.344 | 14.278 |
| Ohio                 | 24.789 | 24.568 | 23.149 | 22.676 | 23.339 | 24.178 | 24.304 | 24.512 | 24.816 | 25.040 | 25.142 | 25.086 | 25.230 | 25.105 |
| Oklahoma             | 25.383 | 25.160 | --     | 23.439 | 21.212 | 21.434 | 22.802 | 22.675 | 19.882 | 19.973 | 20.142 | 20.433 | 21.175 | 21.156 |
| Oregon               | 22.677 | 22.477 | 21.173 | 20.348 | 17.693 | 17.868 | 17.352 | 19.026 | --     | --     | 22.269 | 23.089 | 21.855 | 23.532 |
| Pennsylvania         | 25.479 | 25.249 | 23.889 | 23.430 | 24.110 | 24.678 | 24.920 | 25.135 | 24.476 | 24.318 | 24.116 | 24.043 | 23.716 | 23.085 |
| Rhode Island         | 24.721 | 24.316 | 23.476 | 22.963 | 24.099 | 24.419 | 25.199 | --     | --     | --     | --     | --     | --     | --     |
| South Carolina       | 25.421 | 25.194 | 23.756 | 23.473 | 24.399 | 24.861 | 25.118 | 25.193 | 26.270 | 26.078 | 26.334 | 26.196 | 25.986 | 25.827 |
| South Dakota         | 19.909 | 19.734 | 18.589 | 18.765 | 19.220 | 17.262 | 17.338 | 17.258 | 20.868 | 16.861 | 16.855 | 16.763 | 16.615 | 16.630 |
| Tennessee            | 25.056 | 24.833 | 23.413 | 23.129 | 24.145 | 24.579 | 25.133 | 25.135 | 26.088 | 25.742 | 26.037 | 26.002 | 25.991 | 25.909 |
| Texas                | 16.854 | 16.902 | 17.885 | 18.825 | 16.296 | 15.577 | 14.790 | 14.965 | 16.280 | 17.000 | 17.701 | 17.545 | 17.100 | 17.166 |
| Utah                 | 26.198 | 25.967 | 24.461 | 23.644 | 22.331 | 22.274 | 23.189 | 23.003 | 23.210 | 23.453 | 23.017 | 23.158 | 21.029 | 23.055 |
| Vermont              | 26.525 | 26.291 | 24.766 | 24.056 | 24.888 | 24.265 | 25.079 | --     | --     | --     | --     | --     | --     | --     |
| Virginia             | 25.461 | 25.237 | 23.777 | 23.473 | 24.448 | 24.900 | 25.070 | 25.085 | 26.386 | 26.218 | 25.654 | 26.316 | 26.259 | 26.113 |
| Washington           | 25.955 | 25.726 | 24.234 | 23.546 | 21.363 | 21.634 | 22.707 | 19.006 | 22.332 | 22.658 | 22.070 | 23.180 | 21.867 | 20.752 |
| West Virginia        | 25.516 | 25.293 | 23.830 | 23.522 | 24.347 | 24.849 | 24.888 | 24.975 | 25.742 | 25.532 | 25.445 | 25.177 | 24.563 | 24.807 |
| Wisconsin            | 24.597 | 24.380 | 22.966 | 21.957 | 22.735 | 23.323 | 24.150 | 24.219 | 23.698 | 23.545 | 23.451 | 23.185 | 23.152 | 23.100 |
| Wyoming              | 20.539 | 20.357 | 19.177 | 18.356 | 17.955 | 17.555 | 22.178 | 21.941 | 20.116 | 19.987 | 20.148 | 19.848 | 19.914 | 19.753 |
| U.S. Average         | 24.657 | 24.460 | 23.064 | 22.290 | 22.696 | 22.249 | 22.430 | 22.112 | 22.476 | 22.652 | 22.575 | 22.511 | 22.464 | 22.174 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B11. Approximate Heat Content of Coal Consumed by Other Industrial Users, 2006-2021**  
(Million Btu per Short Ton)

| State                | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Alabama              | 24.709 | 24.934 | 25.218 | 25.353 | 25.006 | 25.388 | 25.483 | 25.253 | 25.370 | 25.796 | 25.642 | 26.466 | 26.019 | 25.495 | 26.296 | 25.750 |
| Alaska               | 15.600 | 15.600 | 15.600 | 15.600 | 15.600 | 15.600 | 15.268 | 15.272 | 15.278 | 15.186 | 15.118 | 14.995 | 15.126 | 15.083 | 15.029 | 14.976 |
| Arizona              | 22.048 | 21.488 | 20.597 | 20.257 | 20.098 | 19.937 | 20.835 | 23.893 | 23.457 | 23.148 | 23.292 | 23.284 | 23.308 | 23.247 | 23.502 | 23.241 |
| Arkansas             | 24.904 | 24.609 | 24.636 | 24.921 | 25.247 | 23.894 | 23.741 | 23.613 | 24.090 | 23.748 | 24.077 | 23.692 | 23.266 | 23.461 | 22.842 | 23.033 |
| California           | 24.092 | 23.728 | 23.353 | 23.549 | 23.401 | 23.164 | 23.186 | 23.090 | 23.315 | 23.207 | 23.099 | 22.995 | 23.121 | 23.348 | 23.141 | 23.101 |
| Colorado             | 22.748 | 22.947 | 23.171 | 22.999 | 21.910 | 22.172 | 22.275 | 22.159 | 22.492 | 22.703 | 23.029 | 21.711 | 21.461 | 22.854 | 24.172 | 24.125 |
| Connecticut          | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Delaware             | 26.410 | 26.374 | 25.788 | 25.527 | --     | --     | --     | --     | --     | --     | 22.968 | --     | --     | --     | --     | --     |
| District of Columbia | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Florida              | 25.410 | 25.431 | 25.432 | 25.780 | 25.677 | 25.803 | 25.451 | 26.081 | 25.897 | 26.017 | 26.176 | 25.207 | 25.151 | 24.735 | 24.856 | 25.236 |
| Georgia              | 25.677 | 25.724 | 25.257 | 25.440 | 25.490 | 25.209 | 25.451 | 25.512 | 25.880 | 26.184 | 25.718 | 24.995 | 25.093 | 25.136 | 25.079 | 25.235 |
| Hawaii               | 27.965 | 24.964 | 23.356 | 23.117 | 23.303 | 22.325 | 22.886 | 22.330 | 22.378 | 22.580 | 22.580 | --     | --     | --     | --     | --     |
| Idaho                | 20.358 | 20.116 | 19.827 | 19.968 | 20.044 | 20.099 | 20.420 | 21.894 | 21.196 | 22.106 | 22.676 | 22.908 | 23.187 | 23.348 | 24.592 | 24.396 |
| Illinois             | 21.657 | 21.591 | 21.349 | 20.916 | 20.623 | 20.675 | 21.376 | 21.209 | 21.270 | 21.078 | 20.798 | 20.723 | 20.615 | 20.403 | 20.374 | 20.982 |
| Indiana              | 23.483 | 23.723 | 24.152 | 23.686 | 24.007 | 25.432 | 25.846 | 26.270 | 25.504 | 25.225 | 26.366 | 26.512 | 26.442 | 25.836 | 26.308 | 26.414 |
| Iowa                 | 19.832 | 20.216 | 19.793 | 19.614 | 19.717 | 19.855 | 19.009 | 18.736 | 18.968 | 18.439 | 18.274 | 18.505 | 18.306 | 18.401 | 18.215 | 18.181 |
| Kansas               | 24.002 | 23.955 | 24.705 | 23.495 | 23.815 | 23.971 | 22.741 | 23.890 | 24.371 | 24.006 | 22.017 | 21.816 | 21.584 | 22.829 | 21.683 | 21.348 |
| Kentucky             | 26.103 | 25.463 | 25.915 | 25.669 | 25.707 | 26.111 | 25.994 | 25.914 | 25.840 | 26.472 | 26.153 | 26.510 | 25.898 | 26.134 | 26.106 | 25.548 |
| Louisiana            | 24.094 | 24.343 | 24.254 | 23.563 | 23.855 | 16.485 | 15.555 | 15.723 | 15.538 | 15.554 | 15.289 | 15.710 | 16.166 | 15.661 | 15.281 | 14.978 |
| Maine                | 25.438 | 26.226 | 26.241 | 26.022 | 25.489 | 25.259 | 25.343 | 25.259 | 25.063 | 24.999 | 25.238 | 25.369 | 25.496 | 24.636 | 24.672 | --     |
| Maryland             | 24.174 | 24.465 | 24.303 | 24.374 | 23.956 | 22.772 | 22.530 | 21.799 | 22.170 | 22.069 | 21.851 | 21.858 | 22.069 | 21.562 | 23.011 | 23.502 |
| Massachusetts        | 26.267 | 26.115 | 26.539 | 26.451 | 26.651 | 26.519 | 27.104 | 27.131 | 27.003 | 27.002 | 25.097 | 24.716 | 24.581 | 24.856 | --     | --     |
| Michigan             | 24.878 | 25.233 | 24.942 | 24.185 | 24.369 | 23.518 | 23.166 | 23.497 | 24.070 | 24.296 | 24.540 | 25.314 | 25.006 | 24.900 | 22.781 | 23.605 |
| Minnesota            | 18.932 | 19.049 | 19.223 | 19.193 | 19.100 | 19.098 | 18.907 | 18.939 | 18.766 | 18.261 | 18.571 | 18.259 | 18.226 | 18.520 | 18.636 | 18.657 |
| Mississippi          | 24.160 | 23.873 | 23.364 | 23.504 | 23.042 | 23.027 | 22.987 | 22.856 | 22.932 | 23.130 | --     | --     | --     | 29.698 | 29.688 | 29.561 |
| Missouri             | 22.735 | 22.464 | 22.508 | 22.536 | 22.662 | 22.448 | 22.471 | 22.228 | 22.154 | 22.257 | 22.529 | 22.581 | 22.450 | 22.343 | 22.486 | 22.494 |
| Montana              | 14.470 | 14.787 | 15.339 | 14.815 | 14.955 | 14.995 | 17.594 | 17.129 | 17.299 | 17.838 | 17.883 | 17.982 | 18.219 | 17.883 | 17.750 | 18.039 |
| Nebraska             | 19.428 | 18.919 | 18.789 | 18.547 | 18.263 | 18.330 | 18.232 | 18.054 | 18.057 | 18.028 | 17.977 | 17.924 | 17.864 | 17.406 | 17.430 | 17.421 |
| Nevada               | 22.656 | 22.868 | 21.829 | 22.115 | 21.856 | 22.684 | 23.177 | 22.698 | 22.104 | 22.672 | 22.579 | 22.449 | 23.192 | 23.371 | 23.692 | 23.360 |
| New Hampshire        | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| New Jersey           | 25.064 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| New Mexico           | 24.569 | 24.649 | 24.445 | 24.661 | 24.922 | 24.804 | 24.445 | 24.248 | 24.317 | 24.657 | 24.616 | 24.522 | 24.461 | 24.449 | 24.457 | 24.528 |
| New York             | 25.928 | 26.254 | 26.176 | 25.990 | 25.890 | 25.504 | 25.765 | 25.653 | 25.515 | 26.059 | 26.302 | 26.069 | 26.048 | 25.480 | 25.519 | 25.413 |
| North Carolina       | 26.254 | 26.223 | 26.125 | 26.201 | 26.102 | 25.890 | 25.983 | 27.001 | 26.616 | 25.957 | 26.455 | 27.291 | 27.065 | 26.980 | 26.932 | 27.052 |
| North Dakota         | 14.293 | 14.290 | 14.377 | 14.456 | 14.388 | 14.386 | 14.352 | 14.368 | 14.465 | 14.453 | 14.456 | 14.462 | 14.407 | 14.436 | 14.444 | 14.416 |
| Ohio                 | 25.037 | 25.195 | 25.020 | 24.797 | 24.976 | 24.987 | 24.932 | 24.922 | 24.695 | 24.619 | 24.419 | 24.572 | 24.796 | 25.471 | 25.454 | 25.610 |
| Oklahoma             | 20.513 | 20.643 | 20.469 | 19.145 | 19.085 | 18.887 | 19.041 | 19.218 | 19.256 | 19.149 | 18.974 | 18.665 | 19.735 | 20.449 | 23.639 | 23.988 |
| Oregon               | 24.541 | 24.536 | 24.351 | 24.481 | 24.183 | 23.974 | 23.368 | 23.211 | 23.150 | 23.521 | --     | 23.299 | 23.374 | 22.792 | 23.796 | 22.745 |
| Pennsylvania         | 22.686 | 22.341 | 22.142 | 22.155 | 22.184 | 22.468 | 22.989 | 23.261 | 23.331 | 23.620 | 23.378 | 22.312 | 23.479 | 24.241 | 25.170 | 24.851 |
| Rhode Island         | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| South Carolina       | 25.742 | 25.915 | 25.862 | 25.858 | 25.842 | 25.479 | 25.472 | 26.343 | 26.185 | 25.762 | 26.038 | 26.865 | 26.630 | 26.549 | 25.968 | 26.066 |
| South Dakota         | 16.648 | 16.916 | 16.810 | 16.613 | 16.520 | 16.544 | 16.574 | 16.529 | 16.427 | 17.024 | 16.377 | 16.751 | 16.713 | 16.822 | 16.881 | 16.498 |
| Tennessee            | 25.925 | 25.936 | 26.067 | 26.160 | 26.139 | 25.950 | 26.054 | 25.982 | 26.181 | 26.191 | 26.410 | 26.396 | 26.056 | 26.288 | 26.199 | 26.017 |
| Texas                | 17.290 | 21.648 | 21.587 | 20.482 | 14.524 | 20.339 | 20.950 | 21.565 | 21.205 | 21.465 | 20.514 | 19.871 | 20.297 | 19.658 | 20.681 | 23.128 |
| Utah                 | 23.160 | 22.799 | 22.717 | 22.427 | 23.059 | 23.035 | 23.031 | 22.825 | 22.660 | 22.852 | 22.853 | 22.923 | 23.025 | 22.792 | 23.183 | 23.070 |
| Vermont              | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Virginia             | 26.054 | 26.077 | 25.892 | 25.723 | 25.733 | 25.669 | 25.917 | 25.701 | 25.784 | 26.166 | 26.173 | 26.507 | 26.250 | 26.068 | 26.140 | 26.016 |
| Washington           | 21.288 | 23.389 | 19.961 | 20.691 | 19.306 | 18.797 | 19.167 | 19.011 | 19.155 | 18.815 | 18.781 | 18.772 | 18.791 | 18.808 | 18.891 | 18.760 |
| West Virginia        | 24.952 | 24.970 | 24.981 | 25.360 | 25.216 | 25.010 | 25.324 | 25.145 | 25.225 | 25.639 | 27.214 | 27.886 | 27.614 | 27.687 | 27.607 | 26.098 |
| Wisconsin            | 22.717 | 22.779 | 22.794 | 22.493 | 22.323 | 22.171 | 22.507 | 22.411 | 22.244 | 22.284 | 21.312 | 21.583 | 21.758 | 21.299 | 21.383 | 21.579 |
| Wyoming              | 19.828 | 19.847 | 19.643 | 19.614 | 19.666 | 19.432 | 19.647 | 19.777 | 19.567 | 19.610 | 19.878 | 19.551 | 19.789 | 19.767 | 19.758 | 20.257 |
| U.S. Average         | 22.035 | 22.371 | 22.275 | 21.867 | 21.722 | 21.686 | 21.518 | 21.611 | 21.489 | 21.260 | 21.086 | 20.856 | 20.698 | 20.698 | 20.486 | 20.605 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B12. Approximate Heat Content of Coal Consumed by the Electric Power Sector, Selected Years, 1960-2005**  
(Million Btu per Short Ton)

| State                | 1960   | 1965   | 1970   | 1975   | 1980   | 1985   | 1990   | 1995   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Alabama              | 24.126 | 23.704 | 23.314 | 23.164 | 23.912 | 24.111 | 24.299 | 23.718 | 22.062 | 21.892 | 22.452 | 21.793 | 21.475 | 21.613 |
| Alaska               | 17.729 | 17.858 | 17.080 | 17.400 | 15.800 | 15.800 | 15.800 | 15.800 | 16.571 | 16.534 | 16.135 | 16.264 | 16.041 | 15.277 |
| Arizona              | --     | 20.850 | 21.238 | 21.090 | 21.243 | 20.986 | 20.951 | 20.578 | 20.426 | 20.305 | 20.306 | 20.192 | 20.399 | 20.287 |
| Arkansas             | --     | --     | --     | --     | 17.009 | 17.207 | 17.478 | 17.370 | 17.352 | 17.411 | 17.281 | 17.018 | 16.979 | 16.955 |
| California           | --     | --     | --     | --     | --     | --     | 20.703 | 22.066 | 23.506 | 23.533 | 23.597 | 24.409 | 24.378 | 23.715 |
| Colorado             | 20.546 | 21.322 | 21.530 | 19.808 | 19.992 | 19.497 | 19.660 | 19.778 | 19.685 | 19.566 | 19.574 | 19.465 | 19.663 | 19.817 |
| Connecticut          | 26.548 | 25.908 | 23.548 | 23.904 | --     | 26.317 | 25.808 | 25.612 | 24.542 | 24.573 | 22.618 | 20.358 | 20.585 | 20.229 |
| Delaware             | 25.982 | 26.392 | 24.186 | 24.534 | 24.922 | 25.924 | 26.063 | 26.173 | 25.900 | 22.854 | 24.640 | 24.862 | 24.572 | 24.289 |
| District of Columbia | 27.460 | 26.948 | 25.920 | 25.619 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Florida              | 24.606 | 23.762 | 22.748 | 23.093 | 23.686 | 24.450 | 24.818 | 24.301 | 24.397 | 24.197 | 24.478 | 24.542 | 24.310 | 24.235 |
| Georgia              | 25.042 | 24.932 | 23.756 | 23.751 | 23.805 | 24.241 | 23.638 | 22.993 | 23.176 | 23.323 | 23.276 | 23.193 | 21.870 | 21.879 |
| Hawaii               | --     | --     | --     | --     | --     | --     | 17.568 | 22.462 | 21.963 | 21.959 | 22.856 | 22.780 | 22.382 | 22.184 |
| Idaho                | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Illinois             | 21.694 | 21.448 | 21.002 | 20.259 | 20.593 | 20.969 | 21.587 | 20.232 | 19.008 | 18.963 | 17.986 | 18.052 | 17.941 | 17.681 |
| Indiana              | 22.640 | 22.466 | 22.030 | 21.229 | 21.632 | 21.314 | 21.125 | 20.725 | 21.188 | 21.074 | 20.637 | 20.779 | 20.930 | 21.191 |
| Iowa                 | 20.768 | 21.218 | 20.888 | 20.385 | 18.633 | 18.197 | 17.826 | 17.464 | 17.742 | 17.752 | 17.459 | 17.407 | 17.368 | 17.283 |
| Kansas               | 23.754 | 24.192 | 24.100 | 19.957 | 18.370 | 17.537 | 17.841 | 17.465 | 17.358 | 17.408 | 17.096 | 17.078 | 17.185 | 17.001 |
| Kentucky             | 22.972 | 22.892 | 21.852 | 21.481 | 22.917 | 22.769 | 23.091 | 23.299 | 23.220 | 22.856 | 23.026 | 22.910 | 22.742 | 22.820 |
| Louisiana            | --     | 16.038 | --     | --     | --     | 16.907 | 16.420 | 16.167 | 16.064 | 16.023 | 15.784 | 15.941 | 15.955 | 15.955 |
| Maine                | 28.580 | --     | --     | --     | --     | --     | 28.000 | 25.500 | 25.502 | 25.509 | 25.675 | 26.343 | 25.706 | 25.853 |
| Maryland             | 26.616 | 26.372 | 24.612 | 24.323 | 24.757 | 25.326 | 25.479 | 25.928 | 25.581 | 25.394 | 25.942 | 25.265 | 25.166 | 25.239 |
| Massachusetts        | 26.352 | 26.072 | 23.260 | 24.347 | 26.751 | 26.561 | 26.122 | 25.400 | 25.136 | 24.581 | 24.983 | 24.272 | 23.582 | 23.163 |
| Michigan             | 24.884 | 24.804 | 24.202 | 23.662 | 24.025 | 23.393 | 22.243 | 21.377 | 20.876 | 20.353 | 19.803 | 19.723 | 19.574 | 19.801 |
| Minnesota            | 22.390 | 22.176 | 20.274 | 17.940 | 17.557 | 17.451 | 17.644 | 17.700 | 17.883 | 17.847 | 17.529 | 17.688 | 17.630 | 17.644 |
| Mississippi          | 24.858 | 24.890 | 24.098 | 23.164 | 23.994 | 24.252 | 25.115 | 22.432 | 23.072 | 23.344 | 19.152 | 18.378 | 18.217 | 17.767 |
| Missouri             | 21.904 | 21.550 | 21.518 | 21.494 | 21.306 | 21.289 | 20.758 | 18.509 | 17.838 | 17.835 | 17.589 | 17.522 | 17.543 | 17.626 |
| Montana              | 13.500 | 13.140 | 15.474 | 15.959 | 17.003 | 17.307 | 17.105 | 16.995 | 16.762 | 16.768 | 16.921 | 17.004 | 16.984 | 16.876 |
| Nebraska             | 24.782 | 24.568 | 23.914 | 20.954 | 18.809 | 17.299 | 17.125 | 17.191 | 17.264 | 17.169 | 17.186 | 17.239 | 17.084 | 17.132 |
| Nevada               | --     | 25.488 | 25.654 | 22.388 | 22.078 | 22.768 | 22.191 | 22.120 | 22.465 | 22.428 | 20.354 | 22.531 | 22.199 | 22.407 |
| New Hampshire        | 25.448 | 27.904 | 27.432 | 26.701 | 26.816 | 26.905 | 26.645 | 26.269 | 26.264 | 26.103 | 26.034 | 26.067 | 26.148 | 25.584 |
| New Jersey           | 26.768 | 26.458 | 24.944 | 25.401 | 26.182 | 26.475 | 26.831 | 26.513 | 26.106 | 26.006 | 25.706 | 25.498 | 25.385 | 25.046 |
| New Mexico           | 25.000 | 18.004 | 17.966 | 17.849 | 17.695 | 18.376 | 18.234 | 18.061 | 18.388 | 18.503 | 18.572 | 18.352 | 18.448 | 18.546 |
| New York             | 26.505 | 26.678 | 24.664 | 24.050 | 24.635 | 25.200 | 25.718 | 25.912 | 26.096 | 26.039 | 25.592 | 25.100 | 24.074 | 23.489 |
| North Carolina       | 26.242 | 25.814 | 24.114 | 23.788 | 24.538 | 24.975 | 25.191 | 25.056 | 24.966 | 24.696 | 24.611 | 24.699 | 24.592 | 24.638 |
| North Dakota         | 13.836 | 13.918 | 13.666 | 13.344 | 13.234 | 13.150 | 13.268 | 13.166 | 13.057 | 13.082 | 13.002 | 12.840 | 12.933 | 13.196 |
| Ohio                 | 23.770 | 23.564 | 22.500 | 21.919 | 22.880 | 23.625 | 23.775 | 24.243 | 23.549 | 23.094 | 23.278 | 23.483 | 23.419 | 23.034 |
| Oklahoma             | 25.942 | 24.000 | 25.076 | 25.076 | 17.393 | 17.168 | 17.792 | 17.463 | 17.717 | 17.641 | 17.635 | 17.582 | 17.590 | 17.401 |
| Oregon               | --     | --     | --     | --     | 16.393 | 16.584 | 16.696 | 17.765 | 17.273 | 17.412 | 17.000 | 17.127 | 16.880 | 16.839 |
| Pennsylvania         | 23.436 | 24.095 | 23.341 | 23.498 | 24.176 | 24.445 | 23.352 | 22.654 | 23.163 | 22.445 | 23.565 | 22.983 | 22.900 | 22.490 |
| Rhode Island         | 28.152 | 27.468 | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| South Carolina       | 26.734 | 25.822 | 24.274 | 24.161 | 24.843 | 25.132 | 25.303 | 25.706 | 25.407 | 25.122 | 24.673 | 24.992 | 24.892 | 24.838 |
| South Dakota         | 17.168 | 17.904 | 16.572 | 12.616 | 12.599 | 12.210 | 13.203 | 14.276 | 17.189 | 17.082 | 16.955 | 16.942 | 16.956 | 17.196 |
| Tennessee            | 24.040 | 23.590 | 22.594 | 21.983 | 23.254 | 23.657 | 23.944 | 24.297 | 24.203 | 24.172 | 23.036 | 22.899 | 22.645 | 22.027 |
| Texas                | --     | --     | --     | 13.103 | 14.791 | 14.807 | 14.578 | 14.726 | 15.193 | 15.330 | 15.443 | 15.247 | 15.279 | 15.385 |
| Utah                 | 24.940 | 25.184 | 24.812 | 23.650 | 22.900 | 23.607 | 23.002 | 22.789 | 22.926 | 22.748 | 22.518 | 22.303 | 22.082 | 21.702 |
| Vermont              | 27.760 | 27.340 | 24.870 | 25.744 | 25.926 | 25.628 | --     | --     | --     | --     | --     | --     | --     | --     |
| Virginia             | 26.726 | 26.474 | 24.782 | 23.930 | 25.013 | 25.628 | 25.461 | 25.539 | 25.674 | 25.372 | 25.420 | 24.397 | 24.470 | 24.703 |
| Washington           | --     | --     | --     | 16.200 | 16.200 | --     | --     | --     | 16.193 | 16.002 | 16.000 | 15.799 | 16.014 | 15.839 |
| West Virginia        | 23.908 | 23.736 | 23.318 | 23.221 | 24.269 | 24.827 | 24.931 | 24.482 | 24.333 | 24.147 | 24.206 | 24.184 | 24.056 | 23.710 |
| Wisconsin            | 24.208 | 24.036 | 22.446 | 21.236 | 20.523 | 19.547 | 19.111 | 18.563 | 18.886 | 18.710 | 19.230 | 18.276 | 18.348 | 19.316 |
| Wyoming              | 14.846 | 15.990 | 16.534 | 16.626 | 17.590 | 17.510 | 17.682 | 17.542 | 17.633 | 17.727 | 17.439 | 17.790 | 17.645 | 17.563 |
| U.S. Average         | 23.922 | 23.781 | 22.575 | 21.650 | 21.357 | 21.023 | 20.777 | 20.542 | 20.511 | 20.337 | 20.238 | 20.082 | 19.980 | 19.988 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B13. Approximate Heat Content of Coal Consumed by the Electric Power Sector, 2006-2021**  
(Million Btu per Short Ton)

| State                | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   | 2019   | 2020   | 2021   |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Alabama              | 21.541 | 21.674 | 21.261 | 20.714 | 20.974 | 20.818 | 20.593 | 20.025 | 20.444 | 20.206 | 19.806 | 19.472 | 19.540 | 18.842 | 18.490 | 18.529 |
| Alaska               | 15.306 | 15.085 | 14.457 | 14.546 | 14.538 | 14.599 | 14.748 | 14.674 | 15.109 | 15.080 | 14.963 | 14.792 | 14.793 | 14.805 | 14.671 | 14.863 |
| Arizona              | 20.270 | 19.972 | 19.676 | 19.484 | 19.370 | 19.378 | 19.191 | 19.339 | 19.321 | 19.200 | 19.220 | 19.448 | 19.327 | 19.509 | 18.166 | 18.285 |
| Arkansas             | 16.958 | 16.970 | 17.175 | 17.117 | 17.319 | 17.208 | 17.129 | 17.161 | 17.310 | 17.340 | 17.177 | 17.304 | 17.194 | 17.129 | 17.235 | 17.323 |
| California           | 24.388 | 24.311 | 23.802 | 23.989 | 24.409 | 24.266 | 24.383 | 23.954 | 24.711 | --     | --     | --     | --     | --     | --     | --     |
| Colorado             | 19.606 | 19.605 | 19.673 | 19.623 | 19.447 | 19.333 | 18.938 | 18.909 | 19.129 | 18.938 | 18.899 | 18.608 | 18.383 | 18.536 | 18.578 | 18.579 |
| Connecticut          | 20.326 | 20.586 | 20.345 | 21.959 | 21.024 | 18.685 | 22.384 | 18.347 | 18.219 | 18.220 | 18.240 | 18.240 | 18.240 | 18.240 | 18.240 | 18.240 |
| Delaware             | 24.637 | 24.816 | 24.548 | 24.681 | 24.598 | 24.940 | 25.499 | 25.774 | 25.780 | 25.882 | 25.820 | 25.785 | 25.790 | 25.590 | 25.880 | 26.420 |
| District of Columbia | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Florida              | 24.052 | 24.036 | 23.716 | 23.755 | 23.959 | 23.684 | 23.591 | 23.447 | 23.547 | 23.570 | 23.337 | 23.343 | 23.558 | 23.417 | 23.337 | 23.394 |
| Georgia              | 21.908 | 21.955 | 21.608 | 21.250 | 21.476 | 20.949 | 19.853 | 19.744 | 20.362 | 19.811 | 20.142 | 20.030 | 19.567 | 19.575 | 19.928 | 19.801 |
| Hawaii               | 22.077 | 22.125 | 21.306 | 21.414 | 21.150 | 20.398 | 20.481 | 20.154 | 20.629 | 20.800 | 20.839 | 19.694 | 19.564 | 19.780 | 19.827 | 19.810 |
| Idaho                | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Illinois             | 17.559 | 17.495 | 17.487 | 17.461 | 17.499 | 17.478 | 17.580 | 17.550 | 17.561 | 17.528 | 17.493 | 17.549 | 17.522 | 17.509 | 17.524 | 17.491 |
| Indiana              | 21.079 | 20.923 | 20.869 | 20.807 | 20.841 | 20.721 | 20.844 | 21.092 | 21.276 | 21.395 | 21.556 | 21.627 | 21.160 | 21.363 | 21.812 | 21.549 |
| Iowa                 | 17.294 | 17.238 | 17.053 | 17.068 | 17.016 | 17.071 | 17.067 | 17.076 | 17.137 | 17.328 | 17.469 | 17.467 | 17.212 | 17.309 | 17.401 | 17.301 |
| Kansas               | 17.176 | 17.145 | 17.015 | 17.014 | 17.041 | 17.091 | 17.207 | 17.170 | 17.233 | 17.074 | 17.196 | 17.087 | 17.087 | 16.987 | 17.096 | 17.295 |
| Kentucky             | 22.855 | 23.225 | 22.889 | 22.724 | 22.880 | 22.604 | 22.571 | 22.459 | 22.603 | 22.388 | 22.318 | 22.293 | 22.261 | 22.106 | 22.432 | 22.305 |
| Louisiana            | 16.126 | 16.053 | 15.959 | 16.040 | 15.984 | 16.077 | 16.040 | 16.374 | 16.390 | 15.821 | 15.925 | 16.491 | 16.503 | 16.547 | 16.541 | 16.467 |
| Maine                | 25.646 | 26.246 | 25.767 | 25.195 | 26.147 | 25.276 | 25.502 | 25.269 | 25.070 | 24.929 | 25.150 | 25.695 | 25.283 | 24.665 | 22.869 | 23.069 |
| Maryland             | 25.191 | 25.009 | 25.291 | 24.886 | 24.675 | 24.550 | 24.736 | 24.685 | 25.017 | 25.007 | 25.169 | 25.049 | 25.054 | 25.092 | 24.701 | 24.855 |
| Massachusetts        | 23.106 | 22.921 | 22.852 | 23.317 | 23.475 | 23.448 | 23.455 | 23.623 | 22.774 | 22.841 | 22.067 | 22.015 | --     | --     | --     | --     |
| Michigan             | 19.852 | 19.723 | 19.530 | 19.317 | 19.372 | 19.186 | 18.866 | 18.604 | 18.849 | 18.822 | 18.689 | 18.538 | 18.666 | 18.695 | 19.031 | 18.858 |
| Minnesota            | 17.633 | 17.686 | 17.703 | 17.592 | 17.474 | 17.573 | 17.665 | 17.691 | 17.520 | 17.563 | 17.643 | 17.630 | 17.506 | 17.599 | 17.592 | 17.556 |
| Mississippi          | 17.965 | 18.345 | 18.324 | 16.512 | 16.953 | 16.915 | 15.237 | 16.187 | 17.406 | 14.299 | 13.539 | 13.914 | 13.319 | 13.165 | 13.022 | 13.041 |
| Missouri             | 17.539 | 17.553 | 17.526 | 17.444 | 17.467 | 17.484 | 17.559 | 17.546 | 17.525 | 17.513 | 17.491 | 17.436 | 17.515 | 17.278 | 17.494 | 17.606 |
| Montana              | 16.854 | 16.834 | 16.783 | 16.913 | 16.830 | 16.831 | 16.893 | 16.899 | 16.747 | 16.872 | 16.856 | 16.938 | 16.940 | 16.776 | 16.945 | 17.162 |
| Nebraska             | 17.014 | 17.011 | 16.979 | 17.086 | 17.069 | 16.953 | 17.043 | 17.225 | 16.931 | 16.897 | 16.886 | 16.928 | 16.876 | 16.951 | 17.139 | 17.142 |
| Nevada               | 22.799 | 22.688 | 21.725 | 21.043 | 21.191 | 21.029 | 20.342 | 19.521 | 20.869 | 19.781 | 20.396 | 19.591 | 19.940 | 19.662 | 19.791 | 20.310 |
| New Hampshire        | 27.363 | 27.573 | 27.171 | 27.190 | 27.122 | 27.259 | 27.306 | 27.235 | 27.337 | 27.095 | 27.210 | 26.984 | 26.546 | 26.225 | 26.378 | 26.394 |
| New Jersey           | 25.009 | 23.931 | 23.451 | 23.443 | 23.348 | 25.103 | 25.405 | 25.482 | 25.315 | 25.660 | 26.160 | 26.146 | 25.815 | 26.018 | 25.694 | 25.368 |
| New Mexico           | 18.525 | 18.430 | 18.365 | 18.453 | 18.325 | 18.338 | 18.158 | 17.880 | 17.954 | 18.012 | 18.515 | 18.805 | 18.595 | 18.410 | 18.463 | 18.633 |
| New York             | 22.916 | 22.947 | 22.021 | 21.585 | 22.175 | 21.602 | 21.874 | 21.194 | 21.333 | 21.155 | 23.906 | 25.892 | 25.682 | 25.483 | 25.847 | --     |
| North Carolina       | 24.389 | 24.581 | 24.430 | 24.610 | 24.477 | 24.426 | 24.631 | 24.637 | 24.662 | 24.723 | 24.639 | 24.898 | 24.790 | 24.847 | 24.873 | 24.995 |
| North Dakota         | 13.072 | 13.171 | 13.302 | 13.326 | 13.513 | 13.624 | 13.643 | 13.619 | 13.665 | 13.657 | 13.736 | 13.614 | 13.470 | 13.466 | 13.528 | 13.526 |
| Ohio                 | 22.817 | 22.705 | 22.428 | 22.901 | 22.907 | 22.907 | 23.737 | 23.717 | 23.870 | 24.061 | 24.498 | 24.566 | 24.032 | 24.535 | 24.708 | 24.750 |
| Oklahoma             | 17.431 | 17.413 | 17.174 | 17.234 | 17.231 | 17.202 | 17.227 | 17.226 | 17.221 | 17.206 | 17.307 | 17.319 | 17.216 | 17.102 | 16.875 | 17.235 |
| Oregon               | 16.720 | 16.736 | 16.675 | 16.837 | 16.837 | 16.771 | 16.749 | 16.911 | 17.106 | 17.243 | 17.286 | 17.236 | 17.258 | 17.504 | 17.229 | --     |
| Pennsylvania         | 22.223 | 22.286 | 22.013 | 21.924 | 22.004 | 21.694 | 21.735 | 21.572 | 21.256 | 21.319 | 20.854 | 20.578 | 19.911 | 20.436 | 18.796 | 19.695 |
| Rhode Island         | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| South Carolina       | 24.936 | 24.881 | 24.611 | 24.782 | 24.725 | 24.549 | 24.506 | 24.471 | 24.692 | 24.782 | 24.580 | 24.323 | 24.134 | 24.162 | 24.076 | 24.371 |
| South Dakota         | 16.945 | 16.935 | 16.786 | 16.723 | 16.731 | 16.403 | 16.503 | 16.695 | 16.586 | 16.433 | 16.533 | 16.509 | 16.471 | 16.422 | 16.324 | 16.446 |
| Tennessee            | 21.970 | 21.698 | 21.208 | 21.033 | 21.519 | 20.656 | 20.472 | 19.992 | 20.415 | 21.019 | 20.756 | 20.298 | 20.759 | 19.712 | 21.398 | 21.896 |
| Texas                | 15.446 | 15.243 | 15.383 | 15.517 | 15.496 | 15.218 | 15.196 | 15.373 | 15.328 | 15.209 | 15.201 | 15.397 | 15.528 | 15.524 | 15.458 | 15.583 |
| Utah                 | 22.047 | 22.304 | 22.217 | 21.908 | 22.295 | 22.153 | 21.906 | 21.928 | 21.918 | 21.599 | 21.322 | 21.202 | 21.442 | 21.722 | 21.827 | 21.870 |
| Vermont              | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     | --     |
| Virginia             | 24.825 | 25.056 | 24.782 | 24.806 | 24.750 | 24.508 | 23.606 | 22.752 | 22.916 | 23.058 | 22.534 | 21.962 | 21.385 | 21.528 | 21.980 | 21.484 |
| Washington           | 16.278 | 16.289 | 15.902 | 16.191 | 16.101 | 16.095 | 16.209 | 16.471 | 16.501 | 16.549 | 16.724 | 16.647 | 16.477 | 16.518 | 16.653 | 16.733 |
| West Virginia        | 23.832 | 24.064 | 23.653 | 23.774 | 23.947 | 23.791 | 23.874 | 24.077 | 24.204 | 24.444 | 24.411 | 24.445 | 24.541 | 24.838 | 24.912 | 24.847 |
| Wisconsin            | 17.809 | 17.813 | 17.697 | 17.515 | 17.637 | 17.996 | 17.696 | 17.836 | 18.088 | 17.654 | 17.815 | 17.608 | 17.555 | 17.849 | 17.852 | 17.878 |
| Wyoming              | 17.386 | 17.281 | 17.294 | 17.368 | 17.342 | 17.304 | 17.461 | 17.510 | 17.382 | 17.393 | 17.398 | 17.290 | 17.403 | 17.382 | 17.457 | 17.520 |
| U.S. Average         | 19.930 | 19.908 | 19.713 | 19.521 | 19.623 | 19.341 | 19.211 | 19.174 | 19.290 | 19.146 | 19.153 | 18.981 | 18.915 | 18.903 | 18.882 | 18.941 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B14. Approximate Heat Content of Hydrocarbon Gas Liquids Consumed by the Industrial Sector, Selected Years, 1960-2005**  
(Million Btu per Barrel)

| State                | 1960  | 1965  | 1970  | 1975  | 1980  | 1985  | 1990  | 1995  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Alabama              | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Alaska               | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Arizona              | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Arkansas             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| California           | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Colorado             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Connecticut          | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Delaware             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| District of Columbia | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Florida              | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Georgia              | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Hawaii               | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Idaho                | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Illinois             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Indiana              | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Iowa                 | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Kansas               | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Kentucky             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Louisiana            | 3.783 | 3.786 | 3.648 | 3.630 | 3.804 | 3.666 | 3.819 | 3.816 | 3.635 | 3.631 | 3.570 | 3.662 | 3.623 | 3.606 |
| Maine                | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Maryland             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Massachusetts        | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Michigan             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Minnesota            | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Mississippi          | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Missouri             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Montana              | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Nebraska             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Nevada               | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| New Hampshire        | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| New Jersey           | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| New Mexico           | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| New York             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| North Carolina       | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| North Dakota         | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Ohio                 | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Oklahoma             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Oregon               | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Pennsylvania         | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Rhode Island         | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| South Carolina       | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| South Dakota         | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Tennessee            | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Texas                | 3.783 | 3.786 | 3.648 | 3.589 | 3.669 | 3.542 | 3.572 | 3.589 | 3.560 | 3.548 | 3.534 | 3.547 | 3.532 | 3.528 |
| Utah                 | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Vermont              | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Virginia             | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Washington           | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| West Virginia        | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Wisconsin            | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| Wyoming              | 3.783 | 3.786 | 3.648 | 3.534 | 3.526 | 3.421 | 3.448 | 3.462 | 3.420 | 3.426 | 3.430 | 3.447 | 3.434 | 3.433 |
| U.S. Average         | 3.783 | 3.786 | 3.648 | 3.575 | 3.629 | 3.527 | 3.578 | 3.598 | 3.549 | 3.537 | 3.519 | 3.539 | 3.523 | 3.517 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B15. Approximate Heat Content of Hydrocarbon Gas Liquids Consumed by the Industrial Sector, 2006-2021**  
(Million Btu per Barrel)

| State                | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014    | 2015    | 2016    | 2017    | 2018    | 2019    | 2020    | 2021  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------|---------|---------|---------|---------|---------|---------|-------|
| Alabama              | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Alaska               | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Arizona              | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Arkansas             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| California           | 3.420 | 3.392 | 3.370 | 3.313 | 3.838 | 3.838 | 3.838 | 3.838 | 3.838   | 3.838   | 3.838   | 3.838   | 3.838   | 3.838   | 3.838   | 3.838 |
| Colorado             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Connecticut          | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Delaware             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| District of Columbia | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | --      | --      | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Florida              | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Georgia              | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Hawaii               | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | --    | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Idaho                | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Illinois             | 3.420 | 3.392 | 3.370 | 3.313 | 3.141 | 3.133 | 3.142 | 3.218 | R 3.149 | 3.102   | 3.088   | R 3.088 | R 3.098 | R 3.150 | R 3.141 | 3.120 |
| Indiana              | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Iowa                 | 3.420 | 3.392 | 3.370 | 3.313 | 3.193 | 3.160 | 3.210 | 3.223 | 3.228   | 3.180   | 3.181   | 3.192   | R 3.194 | R 3.237 | R 3.184 | 3.175 |
| Kansas               | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Kentucky             | 3.420 | 3.392 | 3.370 | 3.313 | 3.840 | 3.840 | 3.840 | 3.788 | R 3.075 | 3.066   | R 3.071 | 3.038   | R 3.014 | R 3.017 | 3.019   | 3.013 |
| Louisiana            | 3.526 | 3.527 | 3.430 | 3.353 | 3.289 | 3.249 | 3.256 | 3.291 | 3.226   | 3.255   | 3.224   | 3.199   | 3.215   | 3.170   | 3.072   | 3.093 |
| Maine                | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Maryland             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Massachusetts        | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Michigan             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Minnesota            | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Mississippi          | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Missouri             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Montana              | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Nebraska             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Nevada               | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| New Hampshire        | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| New Jersey           | 3.420 | 3.392 | 3.370 | 3.313 | 3.835 | 3.835 | 3.836 | 3.836 | 3.836   | 3.836   | 3.836   | 3.835   | 3.835   | 3.835   | 3.836   | 3.836 |
| New Mexico           | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| New York             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| North Carolina       | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| North Dakota         | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Ohio                 | 3.420 | 3.392 | 3.370 | 3.313 | 3.838 | 3.838 | 3.838 | 3.838 | 3.838   | 3.838   | 3.838   | 3.838   | 3.838   | 3.838   | 3.838   | 3.838 |
| Oklahoma             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Oregon               | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Pennsylvania         | 3.420 | 3.392 | 3.370 | 3.313 | 3.836 | 3.836 | 3.837 | 3.836 | 3.837   | 3.836   | 3.836   | 3.836   | 3.836   | 3.836   | 3.837   | 3.837 |
| Rhode Island         | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| South Carolina       | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| South Dakota         | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Tennessee            | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Texas                | 3.489 | 3.479 | 3.467 | 3.396 | 3.370 | 3.266 | 3.335 | 3.370 | 3.333   | 3.393   | 3.341   | 3.314   | 3.280   | 3.314   | 3.283   | 3.316 |
| Utah                 | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Vermont              | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Virginia             | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Washington           | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| West Virginia        | 3.420 | 3.392 | 3.370 | 3.313 | 3.835 | 3.835 | 3.835 | 3.835 | 3.835   | 3.835   | 3.835   | 3.835   | 3.835   | 3.835   | 3.835   | 3.835 |
| Wisconsin            | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| Wyoming              | 3.420 | 3.392 | 3.370 | 3.313 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841   | 3.841 |
| U.S. Average         | 3.479 | 3.468 | 3.446 | 3.375 | 3.394 | 3.316 | 3.360 | 3.388 | 3.344   | R 3.384 | R 3.341 | R 3.314 | R 3.291 | 3.310   | 3.259   | 3.287 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.

**Table B16. Approximate Heat Content of Hydrocarbon Gas Liquids Total Consumption, Selected Years, 1960-2005**  
(Million Btu per Barrel)

| State                | 1960  | 1965  | 1970  | 1975  | 1980  | 1985  | 1990  | 1995  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Alabama              | 3.828 | 3.828 | 3.798 | 3.754 | 3.723 | 3.722 | 3.756 | 3.717 | 3.753 | 3.697 | 3.740 | 3.744 | 3.750 | 3.733 |
| Alaska               | 3.836 | 3.841 | 3.765 | 3.651 | 3.645 | 3.725 | 3.815 | 3.722 | 3.841 | 3.830 | 3.780 | 3.798 | 3.776 | 3.831 |
| Arizona              | 3.823 | 3.833 | 3.804 | 3.723 | 3.694 | 3.718 | 3.699 | 3.695 | 3.799 | 3.778 | 3.820 | 3.740 | 3.728 | 3.785 |
| Arkansas             | 3.827 | 3.830 | 3.807 | 3.753 | 3.703 | 3.718 | 3.705 | 3.675 | 3.630 | 3.656 | 3.688 | 3.705 | 3.707 | 3.709 |
| California           | 3.813 | 3.817 | 3.727 | 3.591 | 3.629 | 3.575 | 3.599 | 3.623 | 3.642 | 3.602 | 3.584 | 3.662 | 3.709 | 3.783 |
| Colorado             | 3.830 | 3.830 | 3.802 | 3.750 | 3.689 | 3.729 | 3.715 | 3.716 | 3.639 | 3.628 | 3.666 | 3.708 | 3.664 | 3.726 |
| Connecticut          | 3.822 | 3.818 | 3.748 | 3.663 | 3.676 | 3.678 | 3.706 | 3.746 | 3.737 | 3.722 | 3.787 | 3.738 | 3.708 | 3.627 |
| Delaware             | 3.795 | 3.798 | 3.691 | 3.592 | 3.571 | 3.717 | 3.704 | 3.745 | 3.782 | 3.764 | 3.805 | 3.771 | 3.783 | 3.741 |
| District of Columbia | 3.811 | 3.815 | 3.735 | 3.692 | 3.618 | 3.602 | 3.616 | 3.639 | 3.559 | 3.608 | 3.712 | 3.693 | 3.696 | 3.710 |
| Florida              | 3.832 | 3.834 | 3.818 | 3.790 | 3.684 | 3.736 | 3.757 | 3.695 | 3.722 | 3.694 | 3.759 | 3.746 | 3.780 | 3.737 |
| Georgia              | 3.821 | 3.823 | 3.778 | 3.710 | 3.706 | 3.720 | 3.716 | 3.714 | 3.679 | 3.673 | 3.671 | 3.719 | 3.729 | 3.689 |
| Hawaii               | 3.819 | 3.820 | 3.762 | 3.674 | 3.632 | 3.813 | 3.807 | 3.493 | 3.805 | 3.797 | 3.709 | 3.766 | 3.782 | 3.828 |
| Idaho                | 3.831 | 3.827 | 3.802 | 3.757 | 3.651 | 3.661 | 3.720 | 3.696 | 3.778 | 3.817 | 3.824 | 3.794 | 3.819 | 3.765 |
| Illinois             | 3.808 | 3.807 | 3.720 | 3.632 | 3.566 | 3.491 | 3.577 | 3.533 | 3.558 | 3.538 | 3.565 | 3.594 | 3.559 | 3.542 |
| Indiana              | 3.824 | 3.825 | 3.810 | 3.732 | 3.685 | 3.667 | 3.623 | 3.715 | 3.720 | 3.721 | 3.724 | 3.732 | 3.708 | 3.708 |
| Iowa                 | 3.828 | 3.827 | 3.789 | 3.715 | 3.656 | 3.599 | 3.650 | 3.567 | 3.554 | 3.532 | 3.547 | 3.609 | 3.538 | 3.532 |
| Kansas               | 3.827 | 3.828 | 3.793 | 3.733 | 3.622 | 3.452 | 3.487 | 3.599 | 3.495 | 3.511 | 3.534 | 3.514 | 3.507 | 3.818 |
| Kentucky             | 3.807 | 3.804 | 3.729 | 3.659 | 3.601 | 3.570 | 3.589 | 3.645 | 3.560 | 3.520 | 3.524 | 3.572 | 3.550 | 3.537 |
| Louisiana            | 3.789 | 3.790 | 3.662 | 3.640 | 3.805 | 3.668 | 3.820 | 3.816 | 3.639 | 3.637 | 3.574 | 3.666 | 3.626 | 3.611 |
| Maine                | 3.836 | 3.831 | 3.786 | 3.761 | 3.697 | 3.686 | 3.740 | 3.788 | 3.813 | 3.793 | 3.739 | 3.822 | 3.832 | 3.792 |
| Maryland             | 3.824 | 3.825 | 3.776 | 3.727 | 3.663 | 3.705 | 3.714 | 3.742 | 3.710 | 3.738 | 3.777 | 3.762 | 3.776 | 3.740 |
| Massachusetts        | 3.828 | 3.826 | 3.768 | 3.695 | 3.647 | 3.732 | 3.696 | 3.773 | 3.747 | 3.719 | 3.726 | 3.812 | 3.827 | 3.788 |
| Michigan             | 3.830 | 3.827 | 3.814 | 3.790 | 3.718 | 3.583 | 3.658 | 3.715 | 3.763 | 3.788 | 3.773 | 3.784 | 3.741 | 3.730 |
| Minnesota            | 3.830 | 3.832 | 3.813 | 3.775 | 3.670 | 3.652 | 3.679 | 3.670 | 3.694 | 3.686 | 3.627 | 3.699 | 3.651 | 3.652 |
| Mississippi          | 3.826 | 3.828 | 3.793 | 3.738 | 3.678 | 3.644 | 3.596 | 3.593 | 3.730 | 3.696 | 3.687 | 3.614 | 3.709 | 3.718 |
| Missouri             | 3.837 | 3.838 | 3.822 | 3.801 | 3.731 | 3.741 | 3.737 | 3.701 | 3.697 | 3.775 | 3.691 | 3.697 | 3.656 | 3.641 |
| Montana              | 3.832 | 3.831 | 3.805 | 3.802 | 3.704 | 3.624 | 3.679 | 3.703 | 3.769 | 3.760 | 3.743 | 3.802 | 3.813 | 3.793 |
| Nebraska             | 3.831 | 3.836 | 3.813 | 3.744 | 3.654 | 3.621 | 3.612 | 3.638 | 3.648 | 3.650 | 3.627 | 3.652 | 3.626 | 3.652 |
| Nevada               | 3.808 | 3.833 | 3.818 | 3.774 | 3.707 | 3.742 | 3.718 | 3.749 | 3.626 | 3.631 | 3.760 | 3.722 | 3.753 | 3.804 |
| New Hampshire        | 3.836 | 3.831 | 3.779 | 3.709 | 3.714 | 3.694 | 3.767 | 3.789 | 3.741 | 3.779 | 3.803 | 3.811 | 3.811 | 3.783 |
| New Jersey           | 3.799 | 3.796 | 3.679 | 3.585 | 3.566 | 3.491 | 3.552 | 3.638 | 3.565 | 3.556 | 3.542 | 3.738 | 3.709 | 3.728 |
| New Mexico           | 3.818 | 3.819 | 3.762 | 3.669 | 3.623 | 3.778 | 3.553 | 3.513 | 3.776 | 3.811 | 3.802 | 3.795 | 3.781 | 3.781 |
| New York             | 3.834 | 3.833 | 3.793 | 3.756 | 3.696 | 3.757 | 3.795 | 3.788 | 3.742 | 3.750 | 3.779 | 3.771 | 3.767 | 3.722 |
| North Carolina       | 3.825 | 3.826 | 3.775 | 3.665 | 3.660 | 3.640 | 3.677 | 3.681 | 3.667 | 3.680 | 3.691 | 3.739 | 3.746 | 3.709 |
| North Dakota         | 3.829 | 3.829 | 3.818 | 3.804 | 3.674 | 3.581 | 3.664 | 3.662 | 3.680 | 3.607 | 3.687 | 3.739 | 3.683 | 3.698 |
| Ohio                 | 3.816 | 3.814 | 3.752 | 3.717 | 3.549 | 3.486 | 3.638 | 3.624 | 3.693 | 3.650 | 3.626 | 3.594 | 3.664 | 3.623 |
| Oklahoma             | 3.827 | 3.829 | 3.795 | 3.767 | 3.607 | 3.553 | 3.639 | 3.617 | 3.643 | 3.660 | 3.632 | 3.659 | 3.568 | 3.520 |
| Oregon               | 3.813 | 3.839 | 3.808 | 3.719 | 3.698 | 3.641 | 3.627 | 3.631 | 3.674 | 3.770 | 3.741 | 3.796 | 3.651 | 3.789 |
| Pennsylvania         | 3.816 | 3.816 | 3.744 | 3.667 | 3.613 | 3.585 | 3.643 | 3.725 | 3.737 | 3.690 | 3.714 | 3.660 | 3.656 | 3.619 |
| Rhode Island         | 3.832 | 3.826 | 3.758 | 3.658 | 3.680 | 3.715 | 3.719 | 3.743 | 3.729 | 3.703 | 3.689 | 3.755 | 3.756 | 3.709 |
| South Carolina       | 3.830 | 3.830 | 3.790 | 3.739 | 3.705 | 3.730 | 3.727 | 3.715 | 3.649 | 3.636 | 3.710 | 3.739 | 3.767 | 3.717 |
| South Dakota         | 3.837 | 3.837 | 3.820 | 3.786 | 3.705 | 3.709 | 3.667 | 3.733 | 3.740 | 3.753 | 3.689 | 3.738 | 3.676 | 3.698 |
| Tennessee            | 3.829 | 3.826 | 3.819 | 3.804 | 3.732 | 3.713 | 3.738 | 3.755 | 3.735 | 3.723 | 3.704 | 3.764 | 3.738 | 3.722 |
| Texas                | 3.794 | 3.796 | 3.678 | 3.618 | 3.675 | 3.551 | 3.578 | 3.592 | 3.568 | 3.559 | 3.543 | 3.555 | 3.537 | 3.535 |
| Utah                 | 3.825 | 3.835 | 3.817 | 3.711 | 3.629 | 3.652 | 3.649 | 3.531 | 3.592 | 3.684 | 3.679 | 3.816 | 3.796 | 3.753 |
| Vermont              | 3.827 | 3.831 | 3.798 | 3.775 | 3.725 | 3.804 | 3.817 | 3.791 | 3.788 | 3.789 | 3.801 | 3.812 | 3.811 | 3.794 |
| Virginia             | 3.827 | 3.831 | 3.786 | 3.723 | 3.709 | 3.659 | 3.694 | 3.735 | 3.707 | 3.748 | 3.708 | 3.766 | 3.784 | 3.753 |
| Washington           | 3.827 | 3.834 | 3.809 | 3.740 | 3.701 | 3.588 | 3.630 | 3.675 | 3.580 | 3.583 | 3.740 | 3.764 | 3.757 | 3.806 |
| West Virginia        | 3.811 | 3.805 | 3.699 | 3.616 | 3.570 | 3.525 | 3.572 | 3.559 | 3.656 | 3.774 | 3.738 | 3.758 | 3.773 | 3.748 |
| Wisconsin            | 3.826 | 3.832 | 3.816 | 3.768 | 3.713 | 3.715 | 3.746 | 3.750 | 3.715 | 3.732 | 3.725 | 3.751 | 3.715 | 3.713 |
| Wyoming              | 3.821 | 3.817 | 3.781 | 3.745 | 3.655 | 3.557 | 3.635 | 3.599 | 3.630 | 3.707 | 3.734 | 3.743 | 3.780 | 3.745 |
| U.S. Average         | 3.810 | 3.810 | 3.731 | 3.671 | 3.669 | 3.584 | 3.630 | 3.641 | 3.610 | 3.604 | 3.588 | 3.610 | 3.591 | 3.589 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.



**Table B17. Approximate Heat Content of Hydrocarbon Gas Liquids Total Consumption, 2006-2021**  
(Million Btu per Barrel)

| State                | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Alabama              | 3.721 | 3.674 | 3.747 | 3.754 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Alaska               | 3.803 | 3.806 | 3.828 | 3.786 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Arizona              | 3.763 | 3.729 | 3.751 | 3.746 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Arkansas             | 3.694 | 3.666 | 3.718 | 3.699 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| California           | 3.736 | 3.766 | 3.724 | 3.660 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 |
| Colorado             | 3.615 | 3.657 | 3.789 | 3.798 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Connecticut          | 3.598 | 3.635 | 3.830 | 3.824 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Delaware             | 3.715 | 3.754 | 3.773 | 3.774 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| District of Columbia | 3.707 | 3.650 | 3.733 | 3.704 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Florida              | 3.712 | 3.729 | 3.755 | 3.763 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Georgia              | 3.673 | 3.678 | 3.712 | 3.691 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Hawaii               | 3.804 | 3.779 | 3.838 | 3.820 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Idaho                | 3.756 | 3.726 | 3.777 | 3.804 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Illinois             | 3.541 | 3.528 | 3.567 | 3.513 | 3.367 | 3.345 | 3.321 | 3.450 | 3.335 | 3.297 | 3.283 | 3.293 | 3.326 | 3.383 | 3.374 | 3.377 |
| Indiana              | 3.684 | 3.689 | 3.767 | 3.708 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Iowa                 | 3.516 | 3.523 | 3.520 | 3.480 | 3.365 | 3.352 | 3.386 | 3.378 | 3.383 | 3.355 | 3.338 | 3.341 | 3.402 | 3.437 | 3.403 | 3.374 |
| Kansas               | 3.826 | 3.454 | 3.793 | 3.770 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Kentucky             | 3.522 | 3.504 | 3.516 | 3.497 | 3.840 | 3.840 | 3.840 | 3.800 | 3.261 | 3.238 | 3.226 | 3.164 | 3.164 | 3.211 | 3.167 | 3.180 |
| Louisiana            | 3.531 | 3.531 | 3.434 | 3.358 | 3.294 | 3.254 | 3.259 | 3.294 | 3.230 | 3.257 | 3.227 | 3.203 | 3.219 | 3.174 | 3.076 | 3.096 |
| Maine                | 3.764 | 3.795 | 3.831 | 3.824 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Maryland             | 3.719 | 3.738 | 3.780 | 3.772 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Massachusetts        | 3.705 | 3.722 | 3.816 | 3.819 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Michigan             | 3.717 | 3.727 | 3.803 | 3.797 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Minnesota            | 3.650 | 3.642 | 3.683 | 3.626 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Mississippi          | 3.681 | 3.711 | 3.760 | 3.755 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Missouri             | 3.669 | 3.637 | 3.761 | 3.733 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Montana              | 3.785 | 3.740 | 3.794 | 3.835 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Nebraska             | 3.607 | 3.646 | 3.720 | 3.638 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Nevada               | 3.788 | 3.783 | 3.738 | 3.731 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| New Hampshire        | 3.755 | 3.788 | 3.810 | 3.807 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| New Jersey           | 3.725 | 3.716 | 3.769 | 3.784 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 |
| New Mexico           | 3.775 | 3.525 | 3.787 | 3.807 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| New York             | 3.738 | 3.765 | 3.799 | 3.804 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| North Carolina       | 3.678 | 3.676 | 3.741 | 3.708 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| North Dakota         | 3.684 | 3.658 | 3.729 | 3.681 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Ohio                 | 3.613 | 3.700 | 3.766 | 3.742 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 | 3.840 |
| Oklahoma             | 3.488 | 3.746 | 3.762 | 3.774 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Oregon               | 3.774 | 3.751 | 3.698 | 3.694 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Pennsylvania         | 3.603 | 3.607 | 3.585 | 3.573 | 3.838 | 3.838 | 3.839 | 3.839 | 3.839 | 3.839 | 3.839 | 3.839 | 3.839 | 3.839 | 3.839 | 3.839 |
| Rhode Island         | 3.682 | 3.716 | 3.743 | 3.729 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| South Carolina       | 3.702 | 3.722 | 3.753 | 3.720 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| South Dakota         | 3.682 | 3.686 | 3.737 | 3.703 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Tennessee            | 3.704 | 3.712 | 3.764 | 3.799 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Texas                | 3.496 | 3.485 | 3.476 | 3.405 | 3.378 | 3.275 | 3.340 | 3.376 | 3.341 | 3.399 | 3.348 | 3.320 | 3.285 | 3.320 | 3.290 | 3.322 |
| Utah                 | 3.721 | 3.701 | 3.783 | 3.788 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Vermont              | 3.765 | 3.795 | 3.807 | 3.821 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Virginia             | 3.722 | 3.748 | 3.782 | 3.778 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Washington           | 3.798 | 3.784 | 3.712 | 3.726 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| West Virginia        | 3.723 | 3.741 | 3.759 | 3.780 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.837 | 3.836 | 3.837 | 3.837 | 3.837 | 3.837 |
| Wisconsin            | 3.701 | 3.701 | 3.781 | 3.754 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| Wyoming              | 3.689 | 3.748 | 3.771 | 3.809 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 | 3.841 |
| U.S. Average         | 3.551 | 3.544 | 3.549 | 3.487 | 3.489 | 3.423 | 3.440 | 3.468 | 3.439 | 3.461 | 3.424 | 3.400 | 3.381 | 3.401 | 3.349 | 3.369 |

-- = Not applicable.  
Where shown, R = Revised data.  
Data Source: See source listing at the end of this appendix.



## Thermal Conversion Factor Source Documentation

The heat content per unit of physical unit (i.e., thermal conversion factors) provided in this section represents the gross (or higher or upper) energy content of the fuel. Gross heat content is applied in all Btu calculations for the State Energy Data System and is commonly used in energy calculations in the United States; net (or lower) heat content is typically used in European energy calculations. See “Heat Content” and “British Thermal Unit (Btu)” in the Glossary for more information.

### Approximate Heat Content of Petroleum and Natural Gas Plant Liquids

**Asphalt.** EIA adopted the thermal conversion factor of 6.636 million British thermal units (Btu) per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Aviation gasoline.** EIA adopted the Bureau of Mines thermal conversion factor of 5.048 million Btu per barrel for “Gasoline, Aviation” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

**Aviation gasoline blending components.** Assumed by EIA to be 5.048 million Btu per barrel or equal to the thermal conversion factor of aviation gasoline. See **aviation gasoline**.

**Butylene.** EIA estimated the thermal conversion factor to be 4.377 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, *NIST Chemistry WebBook, NIST Standard Reference Database Number 69*, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

**Crude oil (including lease condensate) used directly.** EIA adopted the thermal conversion factor of 5.800 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950.”

**Distillate fuel oil.** (DFTCKUS)

- 1960 through 1993: EIA adopted the Bureau of Mines thermal conversion factor of 5.285 million Btu per barrel, from the Bureau of Mines internal memorandum “Bureau of Mines Standard Average Heating Value of Various Fuels, adopted January 3, 1950.”
- 1994 forward: EIA calculates the national annual average thermal conversion factor, which includes biofuels blended into distillate fuel oil, by using the heat content values of three sulfur-content categories of distillate fuel oil, weighted by quantity consumed.

**Ethane.** EIA estimated the thermal conversion factor to be 2.783 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, *NIST Chemistry WebBook, NIST Standard Reference Database Number 69*, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

**Ethylene.** EIA adopted the thermal conversion factor of 2.436 million Btu per barrel (0.058 million Btu per gallon) as published in the Federal Register EPA; 40 CFR Part 98; e-CRF; Table C1; April 5, 2019, [http://www.ecfr.gov/cgi-bin/text-idx?SID=ae265d7d6f98ec86fcd8640b9793a3f6&mc=true&n ode=pt40.23.98&rgn=div5#ap40.23.98\\_19.1](http://www.ecfr.gov/cgi-bin/text-idx?SID=ae265d7d6f98ec86fcd8640b9793a3f6&mc=true&n ode=pt40.23.98&rgn=div5#ap40.23.98_19.1). The ethylene higher heating value is determined at 41 degrees Fahrenheit at saturation pressure.

**Hydrocarbon gas liquids.** (HLTCKUS and HLTCKZZ)

- 1960 through 2009: Calculated using consumption-weighted average of liquefied petroleum gases (LPG) and natural gasoline (pentanes plus).
- 2010 forward: Calculated using consumption-weighted average of nine HGL products: normal butane, butylene, ethane, ethylene, isobutane, isobutylene, natural gasoline, propane, and propylene.

**Isobutane.** EIA estimated the thermal conversion factor to be 4.183 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, *NIST Chemistry WebBook, NIST Standard Reference Database Number 69*, 2018; and

data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

**Isobutylene.** EIA estimated the thermal conversion factor to be 4.355 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, NIST Chemistry WebBook, *NIST Standard Reference Database Number 69*, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

**Jet fuel, kerosene type.** EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel for “Jet Fuel, Commercial” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

**Jet fuel, naphtha type.** EIA adopted the Bureau of Mines thermal conversion factor of 5.355 million Btu per barrel for “Jet Fuel, Military” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics.

**Kerosene.** EIA adopted the thermal conversion factor of 5.670 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950.”

**Liquefied petroleum gases.** (LGTCKUS)

- 1960 through 1966: EIA adopted the 1967 calculated average heat content of 3.810 million Btu per barrel
- 1967 through 2009: Calculated annually by EIA as a weighted average by multiplying the quantity consumed of each of the component products by each product’s conversion factor, listed in this appendix, and dividing the sum of those heat contents by the sum of the quantities consumed. The component products are ethane (including ethylene), propane (including propylene), normal butane (including butylene), butane-propane mixtures, ethane-propane mixtures, and isobutane. Quantities consumed are from: EIA, *Energy Data Reports*, “Petroleum Statement, Annual,” Table 1 (1967 through 1980), EIA, *Petroleum Supply Annual*, Table 2 (1981 through 2004), and EIA, *Petroleum Supply Annual*, Table 1 (2005 forward).

**Lubricants.** EIA adopted the thermal conversion factor of 6.065 million

Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Miscellaneous products.** EIA adopted the thermal conversion factor of 5.796 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Motor gasoline.** (MGTCKUS)

- 1960 through 1992: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for “Gasoline, Motor Fuel” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics. The factor excludes oxygenates.
- 1993 forward: EIA calculates national annual average thermal conversion factor, which includes fuel ethanol blended into motor gasoline (shown in Appendix B Table B1 on page 219). For 1993-2006, it also includes methyl tertiary butyl ether (MTBE) and other oxygenates blended into motor gasoline.

**Motor gasoline blending components.** (MBTCKUS)

- 1960 through 2006: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for “Gasoline, Motor Fuel” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Markets 1947-1985*, a 1968 release of historical and projected statistics.
- 2007 forward: EIA adopted the thermal conversion factor of 5.222 million Btu per barrel (124,340 Btu per gallon) for gasoline blendstock from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013.

**Natural gasoline.** EIA estimated the thermal conversion factor to be 4.638 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, *NIST Chemistry WebBook, NIST Standard Reference Database Number 69*, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute. EIA assumes a natural gasoline ratio of 29% isopentane, 29% neopentane, 20% normal pentane,

13% normal hexane, 4% cyclohexane, 3% benzene, and 2% toluene in these calculations.

**Normal butane.** EIA estimated the thermal conversion factor to be 4.353 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, *NIST Chemistry WebBook, NIST Standard Reference Database Number 69*, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

**Pentanes plus.** EIA estimated the thermal conversion factor to be 4.638 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, *NIST Chemistry WebBook, NIST Standard Reference Database Number 69*, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute. EIA assumes a pentanes plus ratio of 29% isopentane, 29% neopentane, 20% normal pentane, 13% normal hexane, 4% cyclohexane, 3% benzene, and 2% toluene in these calculations, see **natural gasoline**.

**Petrochemical feedstocks, naphtha less than 401°F.** EIA assumed the thermal conversion factor to be 5.248 million Btu per barrel, equal to that for special naphthas. See **special naphthas**.

**Petrochemical feedstock, other oils equal to or greater than 401°F.** EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel, equal to that for distillate fuel oil. See **distillate fuel oil**.

**Petrochemical feedstock, still gas.** Assumed by EIA to be 6.000 million Btu per barrel, equal to the thermal conversion factor for still gas. See **still gas**.

#### **Petroleum coke, catalyst.** (PCCTKUS)

- 1960 through 2003: EIA adopted the Bureau of Mines thermal conversion factor of 6.024 million Btu per barrel, from the Bureau of Mines internal memorandum “Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950.”
- 2004 forward: Assumed by EIA to be 6.287 million Btu per barrel or equal to the thermal conversion factor for residual fuel oil.

#### **Petroleum coke, marketable.** (PCMKKUS)

- 1960 through 2003: EIA adopted the Bureau of Mines thermal conversion factor of 6.024 million Btu per barrel, from the Bureau

of Mines internal memorandum “Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950.”

- 2004 forward: EIA adopted the thermal conversion factor of 5.719 million Btu per barrel, calculated by dividing 28,595,925 Btu per short ton for petroleum coke (from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_October 2013) by 5.0 barrels per short ton (as given in the Bureau of Mines Form 6-1300-M and successor EIA forms).

**Plant condensate.** (1973—1983) EIA estimated 5.418 million Btu per barrel from data provided by McClanahan Consultants, Inc., Houston, Texas.

**Propane.** EIA estimated the thermal conversion factor to be 3.841 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, *NIST Chemistry WebBook, NIST Standard Reference Database Number 69*, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

**Propylene.** EIA estimated the thermal conversion factor to be 3.835 million Btu per barrel, based on data for enthalpy of combustion from the National Institute of Standards and Technology, *NIST Chemistry WebBook, NIST Standard Reference Database Number 69*, 2018; and data for density of liquids at 60 degrees Fahrenheit and equilibrium pressure from the American Petroleum Institute.

**Residual fuel oil.** EIA adopted the thermal conversion factor of 6.287 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950.”

**Road oil.** EIA adopted the Bureau of Mines thermal conversion factor of 6.636 million Btu per barrel, equal to that of asphalt and first published by the Bureau of Mines in the *Petroleum Statement, Annual, 1970*. See **asphalt**.

**Special naphthas.** EIA adopted the Bureau of Mines thermal conversion factor of 5.248 million Btu per barrel, equal to that of total gasoline (aviation and motor) and first published in the *Petroleum Statement, Annual, 1970*.

**Still gas.**

- 1960 through 2015: EIA adopted the Bureau of Mines estimated thermal conversion factor of 6.000 million Btu per barrel, first published in the *Petroleum Statement, Annual*, 1970.
- 2016 forward: Assumed by EIA to be 6.287 million Btu per barrel or equal to the thermal conversion factor for residual fuel oil.

**Unfinished oil.** EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel, equal to that for distillate fuel oil and first published in the Annual Report to Congress, Volume 3, 1977. See **distillate fuel oil**.

**Unfractionated streams.** (1979—1982) EIA assumed the thermal conversion factor to be 3.800 million Btu per barrel, the average of all natural gas plant liquids calculated on their contribution to total barrels produced.

**Waxes.** EIA adopted the thermal conversion factor of 5.537 million Btu per barrel as estimated by the Bureau of Mines and first published in the EIA, *Petroleum Statement, Annual*, 1956.

## Approximate Heat Content of Natural Gas

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**Natural gas, total consumption.** (NGTCKZZ)

- 1960 through 1962: EIA adopted the thermal conversion factor of 1,035 Btu per cubic foot as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual*, 1956.
- 1963 through 1979: EIA adopted the thermal conversion factors calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual.
- 1980 through 1996: EIA, *Historical Natural Gas Annual 1930 Through 2000*, Table 16.
- 1997 forward: EIA, *Natural Gas Annual*, Table 16, <http://www.eia.gov/naturalgas/annual/> and unpublished revisions. Data from 2007 forward are also available at [http://www.eia.gov/dnav/ng/ng\\_cons\\_heat\\_a\\_EPG0\\_VGTH\\_btucf\\_a.htm](http://www.eia.gov/dnav/ng/ng_cons_heat_a_EPG0_VGTH_btucf_a.htm).

**Natural gas, consumption by the electric power sector.** (NGEIKZZ)

- 1960 through 1971: Assumed by EIA to be equal to the thermal conversion factor for the consumption of natural gas by all users. See **natural gas, total consumption**.
- 1972 through 1982: Calculated annually by EIA by dividing the total heat content of natural gas received at steam electric plants 25 megawatts or greater by the total quantity received at those electric plants. The heat contents and quantities received are from the Federal Energy Regulatory Commission (FERC) Form 423, “Monthly Report of Cost and Quality of Fuels for Electric Plants.”
- 1983 through 1988: The average heat content of natural gas received at steam electric plants 50 megawatts capacity or larger from FERC Form 423 and published from 1993 forward in Btu per cubic foot in the EIA, *Cost and Quality of Fuels for Electric Utility Plants*, Table 14. Note: For states that reported consumption on EIA-759 but were not large enough to report on FERC Form 423, factors were estimated by using previous years’ factors or the factor for total natural gas consumption in the state.
- 1989 forward: Calculated by dividing the total heat content of natural gas received at electric power plants (including electric utilities and independent power producers) by the total quantity consumed in physical units collected by EIA on Form EIA-923, “Power Plant Operations Report,” and predecessor forms, <http://>

## Approximate Heat Content of Coal and Coal Coke

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### Coal, consumption at coke plants. (CLKCKZZ)

- 1960 through 1997: Calculated by EIA as the consumption-weighted average of national-level anthracite conversion factors and state-level bituminous coal and lignite factors using factors and consumption from SEDS—Anthracite conversion factor (for all end-use sectors) sources: 1960 through 1997: Calculated annually by EIA by dividing the heat content of anthracite produced less the heat content of the anthracite consumed at electric utilities, net exports, and shipments to U.S. Armed Forces overseas by the quantity of anthracite consumption by all sectors other than the electric utility sector less the quantity of anthracite stock changes, losses, and “unaccounted for.” Bituminous coal and lignite conversion factor sources: 1960 through 1972: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*, “Coal-Bituminous and Lignite,” sum of columns “Beehive coke plants” and “Ovencoke plants.” 1973 through 1984: EIA, *Weekly Coal Production*, August 9, 1986, Table 8. 1985 through 1987: EIA, *Weekly Coal Production*, July 16, 1988, Table 7. 1988 through 1997: EIA, Unpublished data from Form EIA-5.
- 1998 through 2000: Average total coal factors by state calculated by EIA using unpublished data from Form EIA-5. The 1998 state factors are used for 1999 and 2000.
- 2001 forward: Calculated by EIA from data reported on Form EIA-5, “Quarterly Coal Consumption and Quality Report, Coke Plants” (through 2013) and Form EIA-3, “Quarterly Survey of Industrial, Commercial & Institutional Coal Users,” after Form EIA-5 was folded into Form EIA-3 in 2014. Coke plant data on tons of coal carbonized to create coke, the volatilities of the coal carbonized, and conversion factors based on coal volatility are used to calculate average conversion factors by state.

### Coal, consumption by the electric power sector. (CLEIKZZ)

- 1960 through 1988: Calculated by EIA as the consumption-weighted average of national-level anthracite conversion factors and state-level bituminous coal and lignite factors using

factors and consumption from SEDS—Anthracite conversion factor sources: 1960 through 1972: U.S. Energy Information Administration (EIA) assumed that all anthracite consumed at electric utilities was recovered from culm banks and river dredging and was estimated to have an average heat content of 17.500 million Btu per short ton. 1973 through 1988: Calculated annually by EIA by dividing the heat content of anthracite receipts at electric utilities by the quantity of anthracite received at electric utilities. These data are reported on the Federal Energy Regulatory Commission (FERC) Form 423, “Monthly Report of Cost and Quality of Fuels for Electric Plants,” and predecessor forms. Bituminous coal and lignite conversion factor sources: 1960 through 1972: EIA adopted the average thermal conversion factor of the Bureau of Mines, which used the National Coal Association (NCA) average thermal conversion factor for electric utilities calculated from the Federal Power Commission’s (FPC) Form 1 and published in *Steam Electric Plant Factors*, an NCA annual report. The specific tables are: 1960 and 1961, Table 1. 1962 through 1972, Table 2. 1973 through 1982: The average heat content of coal received at steam electric plants 25 megawatts or greater from FPC Form 423 and published in Btu per pound in EIA, *Cost and Quality of Fuels for Electric Utility Plants*, tables titled “Destination and Origin of Coal ‘Delivered to’ (1973-1979) ‘Receipts to’ (1980) ‘Received at’ (1981-1982) Steam-Electric Plants 25-MW or Greater.” 1983 through 1988: The average heat content of coal received at steam electric plants 50 megawatts capacity or larger from FERC Form 423 and published in Btu per pound in the EIA, *Cost and Quality of Fuels for Electric Utility Plants*. The specific tables are: 1983 and 1984, Table 58. 1985 through 1988, Table 48.

Notes: The state conversion factors for 1960 through 1972 were derived from actual consumption data, while the conversion factors for 1973 to 1988 were based on receipts of coal. The factors for 1960 through 1972 may also have included some quantities of anthracite. These breaks in the series create some data discrepancies. In instances where a state had no receipts for a particular year but did report consumption, it was assumed that the coal received in one year was consumed during the following year and the Btu value of the previous year’s receipts was used.

- 1989 forward: Calculated by dividing the total heat content of coal received at electric power plants (including electric utilities,

nonutility power plants, and combined heat-and-power plants) by the total quantity consumed in physical units collected on Form EIA-923, “Power Plant Operations Report,” and predecessor forms, <http://www.eia.gov/electricity/data/eia923/>.

- Alaska factors: The sources used to develop thermal conversion factors for bituminous coal and lignite consumed by the electric power sector—the National Coal Association report and the Federal Power Commission’s (FPC) Form 423 and FERC Form 423 published in the *Cost and Quality of Fuels for Electric Utility Plants*—exclude Alaska. However, Alaska reported consumption of bituminous coal and lignite at electric utilities for all years, 1960 forward. Unpublished FPC heat rates for coal at electric utilities in Alaska were used for 1960 through 1972. The 1972 conversion factor (the last year for which a conversion factor was reported for Alaska) was used for 1973 through 1978. According to industry sources, new mines were opened in 1978 and a more representative factor was used for 1979 through 1997. From 1998 forward, the Alaska factor is calculated using the same methodology as is used for other states, described above.

**Coal, consumption by other industrial users. (CLOCKZZ)**

- 1960 through 1997: Calculated by EIA as the consumption-weighted average of national level anthracite conversion factors and state-level bituminous coal and lignite factors using factors and consumption from SEDS—Anthracite conversion factor sources: 1960 through 1997: Calculated annually by EIA by dividing the heat content of anthracite produced less the heat content of the anthracite consumed at electric utilities, net exports, and shipments to U.S. Armed Forces overseas by the quantity of anthracite consumption by all sectors other than the electric utility sector less the quantity of anthracite stock changes, losses, and “unaccounted for.” Bituminous coal and lignite conversion factor sources: 1960 through 1973: Estimated by EIA by adjusting the 1974 average heat value of bituminous coal and lignite consumed by industrial users other than coke plants by the ratios of 1960 through 1973 national averages for the other industrial users to its 1974 average. 1974 through 1997: Calculated by EIA by assuming that the bituminous coal and lignite consumed by industrial users other than coke plants in each state contained



heating values equal to those of bituminous coal and lignite received at electric utilities in each state from identified coal-producing districts as reported on Federal Energy Regulatory Commission (FERC) Form 423, “Monthly Report of Cost and Quality of Fuels for Electric Plants.” The average Btu content of coal delivered from each coal-producing district was applied to deliveries to other industrial users in each State and the sum total of the heat content was divided by total tonnages, yielding a weighted average. The coal distribution data by coal-producing district are reported on Form EIA-6, “Coal Distribution Report,” and predecessor Bureau of Mines Form 6-1419-Q.

- 1998 through 2000: The average heat content of coal received at manufacturing plants (other than coke plants) consuming more than 1,000 short tons of coal during the year from Form EIA-3A and published in Btu per pound in the *EIA Annual Coal Report* and predecessor publications.
- 2001 forward: Calculated by EIA using unpublished data as the average heat content of (1) coal received at manufacturing plants (other than coke plants) consuming more than 1,000 short tons of coal annually from Form EIA-3, “Quarterly Survey of Industrial, Commercial & Institutional Coal Users,” and predecessor forms; (2) coal distributed to agricultural, mining, and construction sectors reported on Form EIA-6A, “Coal Distribution Report—Annual” with heat contents for the coal producing state reported on FERC Form 423 and Form EIA-423, “Monthly Cost and Quality of Fuels for Electric Plants” (discontinued after 2007); and (3) coal consumed by coal mining facilities reported on Form EIA-7A, “Coal Production Report,” with heat contents for the coal producing state reported on Form EIA-923, “Power Plant Operations Report,” and predecessor forms.

**Coal, consumption by residential and commercial users. (CLHCKZZ)**

- 1960 through 1997: Calculated by EIA as the consumption-weighted average of national-level anthracite conversion factors and state-level bituminous coal and lignite factors using factors and consumption from SEDS—Anthracite conversion factor sources: 1960 through 1997: Calculated annually by EIA by dividing the heat content of anthracite produced less the heat content of the anthracite consumed at electric utilities, net exports,

and shipments to U.S. Armed Forces overseas by the quantity of anthracite consumption by all sectors other than the electric utility sector less the quantity of anthracite stock changes, losses, and “unaccounted for.” Bituminous coal and lignite conversion factor sources: 1960 through 1973: Estimated by EIA by adjusting the 1974 average heat value of bituminous coal and lignite consumed in the residential and commercial sector by the ratios of 1960 through 1973 national averages for the sector to its 1974 average. 1974 through 1997: Calculated by EIA by assuming that the bituminous coal and lignite consumed in the residential and commercial sector in each state contained heating values equal to those of bituminous coal and lignite received at electric utilities in each state from identified coal-producing districts as reported on the Federal Energy Regulatory Commission (FERC) Form 423, “Monthly Report of Cost and Quality of Fuels for Electric Plants.” The average Btu content of coal delivered from each coal-producing district was applied to deliveries to the residential and commercial sector in each state and the sum total of the heat content was divided by total tonnages, yielding a weighted average. The coal distribution data by coal-producing district are reported on Form EIA-6, “Coal Distribution Report,” and predecessor Bureau of Mines Form 6-1419-Q.

- 1998 through 2000: The average heat content of coal received for the residential and commercial sectors as reported on Form EIA-860. For states that are not represented in data on Form EIA-860, it is assumed that the heat content of the coal receipts in these sectors is equal to the heat content of coal received in the other industrial sector. For states that are not represented in either the Form EIA-3A data or the Form EIA-860 data (CT, NH, VT, and DC), the heat content of coal receipts in MA is used for CT, NH, and VT, and the heat content of coal receipts in MD is used for DC, because the origin of the coal receipts are similar.
- 2001 through 2007: Calculated by EIA from the coal distribution data reported on Form EIA-6A, “Coal Distribution Report—Annual,” and the average heat content of coal reported on FERC Form 423 and Form EIA-423, “Monthly Cost and Quality of Fuels for Electric Plants.” Form EIA-6A provides distribution data for the combined residential and commercial sectors by state of origin to the destination state. FERC Form 423 and Form EIA-423 provide the average heat content of coal produced in the state of origin.

- 2008 forward: Calculated by EIA using unpublished data as the average heat content of coal received at commercial and institutional establishments consuming more than 1,000 short tons of coal annually from Form EIA-3, “Quarterly Survey of Industrial, Commercial & Institutional Coal Users.”

#### **Coal, consumption by transportation users.** (CLACKZZ)

- 1960 through 1977: Assumed by EIA to be equal to the Btu conversion factor for bituminous coal and lignite consumption by industrial users other than coke plants: 1960 through 1973: Estimated by EIA by adjusting the 1974 average heat value of bituminous coal and lignite consumed by industrial users other than coke plants by the ratios of 1960 through 1973 national averages for the other industrial users to its 1974 average. 1974 through 1977: Calculated by EIA by assuming that the bituminous coal and lignite consumed by industrial users other than coke plants in each state contained heating values equal to those of bituminous coal and lignite received at electric utilities in each state from identified coal-producing districts as reported on Federal Energy Regulatory Commission (FERC) Form 423, “Monthly Report of Cost and Quality of Fuels for Electric Plants.” The average Btu content of coal delivered from each coal-producing district was applied to deliveries to other industrial users in each state and the sum total of the heat content was divided by total tonnages, yielding a weighted average. The coal distribution data by coal-producing district are reported on Form EIA-6, “Coal Distribution Report,” and predecessor Bureau of Mines Form 6-1419-Q.
- 1978 forward: Transportation sector coal is included in the other industrial category. Zero is entered for this variable.

**Coal coke, imports and exports.** EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

## Approximate Heat Content of Renewable Energy Sources

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**Biodiesel.** EIA estimated the thermal conversion factor for biodiesel to be 5.359 million Btu per barrel, published in EIA’s *Monthly Energy Review*, Table A1, [http://www.eia.gov/totalenergy/data/monthly/pdf/sec12\\_2.pdf](http://www.eia.gov/totalenergy/data/monthly/pdf/sec12_2.pdf).

**Fuel ethanol.** EIA adopted the annual denatured fuel ethanol thermal conversion factors in million Btu per barrel published in EIA’s *Monthly Energy Review*, Table A3, [http://www.eia.gov/totalenergy/data/monthly/pdf/sec12\\_4.pdf](http://www.eia.gov/totalenergy/data/monthly/pdf/sec12_4.pdf). This factor is calculated by EIA using the quantity-weighted average of the thermal conversion factors for undenatured ethanol (3.539 million Btu per barrel), natural gasoline used as denaturant, and conventional motor gasoline used as denaturant. The factor for 2009 is used as the estimated factor for earlier years. The undenatured ethanol thermal conversion factor of 3.539 million Btu per barrel is published in “Oxygenate Flexibility for Future Fuels,” a paper presented by William J. Piel of the ARCO Chemical Company at the National Conference on Reformulated Gasolines and Clean Air Act Implementation, Washington, D.C., October 1991.

**Renewable diesel fuel.** EIA adopted the thermal conversion factor of 5.494 million Btu per barrel (130,817 Btu per gallon) for renewable diesel II (UOP-HDO) from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies Model” (GREET), version GREET1\_2022, October 2022.

**Other biofuels.** EIA assumed the thermal conversion factor to be 5.359 million Btu per barrel or equal to the thermal conversion factor for Biodiesel.

**Wood, consumption by the residential and commercial sectors.** Estimated by EIA to be 20 million Btu per cord of wood. This rough average factor takes into account a number of variables, such as moisture content and species of wood, as explained in the EIA, *Household Energy Consumption and Expenditures 1993*, page 314.

## Approximate Heat Rates for Electricity

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**Fossil-fueled steam-electric plant generation.** (FFETKUS) There is no generally accepted practice for measuring the thermal conversion rates for power plants that generate electricity from hydroelectric, biomass fuels, geothermal, solar, and wind energy sources. Therefore, EIA uses data from Forms EIA-860 and EIA-923 (and predecessor forms) to calculate a rate factor that is equal to the prevailing annual average heat rate factor for fossil-fueled steam-electric power plants in the United States. By using that factor, it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption, such as droughts. The heat content of a kilowatthour of electricity produced, regardless of the generation process, is 3,412 Btu per kilowatthour.

- 1960 through 1988: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published by EIA in *Electric Plant Cost and Power Production Expenses 1991*, Table 9.
- 1989 through 2000: Calculated annually by EIA by using heat rate data reported on Form EIA-860, “Annual Electric Generator Report” (and predecessor forms); and net generation data reported on Form EIA-759, “Monthly Power Plant Report.” The computation includes data for all electric utility steam-electric plants using fossil fuels.
- 2001 forward: Calculated annually by EIA by using fuel consumption and net generation data reported on Form EIA-923, “Power Plant Operations Report,” and predecessor forms. The computation includes data for all electric utilities and electricity-only independent power producers using fossil fuels.

**Nuclear steam-electric plant generation.** (NUETKUS)

- 1960 through 1984: Calculated annually by EIA by dividing the total heat content consumed in nuclear generating units by the total (net) electricity generated by nuclear generating units. The heat content and electricity generation data are reported on FERC Form 1, Form EIA-412, and predecessor forms. The factors for 1982 through 1991 are published in the following EIA reports—1982: *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215; 1983 and 1984: *Electric Plant Cost and Power Production Expenses 1991*, Table 13.

- 1985 forward: Calculated annually by EIA using the heat rate reported on Form EIA-860, “Annual Electric Generator Report” (and predecessor forms), and the generation reported on Form EIA-923, “Power Plant Operations Report” (and predecessor forms).