Appendix B

Thermal Conversion Factors

Table B1. Approximate Heat Content of Petroleum and Heat Rates for Electricity, Selected Years, 1960-2007

	Petroleum Consumption			Electricity Net Generation		
	Liquefied Petroleum Gases (LGTCKUS)	Motor Gasoline (MGTCKUS)	Total Petroleum Products [a] (PATCKUS)	Fossil-Fueled Steam-Electric Plants [b] (FFETKUS)	Nuclear Steam-Electric Plants (NUETKUS)	Geothermal Energy Plants (GEETKUS)
Year	Million Btu per Barrel			Btu per Kilowatthour		
1960	4.011	5.253	5.55503	10,760	11,629	23,200
1965	4.011	5.253	5.53200	10,453	11,804	22,182
1970	3.779	5.253	5.50317	10,494	10,977	21,606
1971	3.772	5.253	5.50449	10,478	10,837	21,655
1972	3.760	5.253	5.50004	10,379	10,792	21,668
1973	3.746	5.253	5.51461	10,389	10,903	21,674
1974	3.730	5.253	5.50388	10,442	11,161	21,674
1975	3.715	5.253	5.49427	10,406	11,013	21,611
1976	3.711	5.253	5.50448	10,373	11,047	21,611
1977	3.677	5.253	5.51825	10,435	10,769	21,611
1978	3.669	5.253	5.51865	10,361	10,941	21,611
1979	3.680	5.253	5.49383	10,353	10,879	21,545
1980	3.674	5.253	5.47933	10,388	10,908	21,639
1981	3.643	5.253	5.44818	10,453	11,030	21,639
1982	3.615	5.253	5.41514	10,454	11,073	21,629
1983	3.614	5.253	5.40567	10,520	10,905	21,290
1984	3.599	5.253	5.39530	10,440	10,843	21,303
1985	3.603	5.253	5.38744	10,447	10,622	21,263
1986	3.640	5.253	5.41832	10,446	10,579	21,263
1987	3.659	5.253	5.40281	10,419	10,442	21,263
1988	3.652	5.253	5.41017	10,324	10,602	21,096
1989	3.683	5.253	5.40967	10,432	10,583	21,096
1990	3.625	5.253	5.41084	10,402	10,582	21,096
1991	3.614	5.253	5.38408	10,436	10,484	20,997
1992	3.624	5.253	5.37773	10,342	10,471	20,914
1993	3.606	5.253	5.37911	10,309	10,504	20,914
1994	3.635	[c] 5.230	5.36097	10,316	10,452	20,914
1995	3.623	5.215	5.34138	10,312	10,507	20,914
1996	3.613	5.216	5.33638	10,340	10,503	20,960
1997	3.616	5.213	5.33598	10,213	10,494	20,960
1998	3.614	5.212	5.34899	10,197	10,491	21,017
1999	3.616	5.211	5.32807	10,226	10,450	21,017
2000	3.607	5.210	5.32576	10,201	10,429	21,017
2001	3.614	5.210	5.34502	10,333	10,448	21,017
2002	3.613	5.208	5.32382	10,173	10,439	21,017
2003	3.629	5.207	5.34050	10,241	10,421	21,017
2004	3.618	5.215	5.34989	10,022	10,427	21,017
2005	3.620	5.218	5.36466	9,999	10,435	21,017
2006	3.605	5.218	5.35306	9,919	10,434	21,017
2007	NA	5.219	NA	NA	NA	NA

[a] This factor is not actually applied in SEDS but is displayed here for information.
[b] 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 wind, photovoltaic, and solar thermal energy.
[c] There is a discontinuity in this time series between 1993 and 1994; beginning in 1994, the single constant factor is replaced by a factor that is a quantity-weighted average of motor gasoline's major components.
– – = Not applicable.
Where shown, R = Revised data.
NA = Not available.
Sources: 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, 1960-1994

(Thousand Btu per Cubic Foot)

State	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994
Alabama	1.03500	1.03400	1.03100	1.03300	1.13300	1.09900	1.02904	1.02401	1.02367	1.02220	1.01855
Alaska	– –	1.01000	1.00500	1.00600	1.00600	1.00600	1.02703	1.00314	1.00154	1.00051	1.00080
Arizona	1.03500	1.07600	1.05900	1.07100	1.05700	1.05900	1.03061	1.02707	1.03026	1.02705	1.02266
Arkansas	1.03500	1.00100	1.00400	1.01100	1.02600	1.05500	1.01765	1.01980	1.02501	1.02825	1.02389
California	1.03500	1.07300	1.05400	1.06300	1.05200	1.05100	1.03205	1.02858	1.03368	1.03145	1.02984
Colorado	1.03500	0.91200	0.97400	0.99600	0.98100	0.98900	1.04148	1.02137	1.09800	1.05610	1.07295
Connecticut	1.03500	1.02200	1.01600	1.00500	– –	1.03100	1.03057	1.03089	1.03009	1.02709	1.02265
Delaware	1.03500	1.04300	1.02000	1.07300	1.04200	1.03800	1.07008	1.08692	1.02704	1.03261	1.03656
District of Columbia	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Florida	1.03500	1.03700	1.04100	1.00900	1.01500	1.01100	1.01308	1.01400	1.01153	1.01167	1.01669
Georgia	1.03500	1.04000	1.03100	1.02900	1.03500	1.02400	1.02421	1.02496	1.02395	1.02307	1.02780
Hawaii	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Idaho	– –	– –	– –	1.05300	1.03700	1.04900	– –	– –	– –	– –	– –
Illinois	1.03500	1.02900	1.02500	1.02900	1.02400	1.02700	1.02323	1.02077	1.02082	1.01819	1.02230
Indiana	1.03500	0.99900	1.00600	1.00000	1.00400	1.00500	1.00251	1.00168	1.00174	1.01316	1.02306
Iowa	1.03500	1.01000	1.00900	1.00800	1.00800	1.02100	1.01396	1.01812	1.00646	1.01116	1.01292
Kansas	1.03500	0.99500	0.99800	0.99100	0.96000	0.96800	0.99773	0.97745	0.98360	0.98439	0.98966
Kentucky	1.03500	1.02800	1.01700	1.01700	1.02400	1.02400	1.02300	1.02144	1.01818	1.02029	1.01916
Louisiana	1.03500	1.04200	1.02900	1.05900	1.04100	1.04700	1.04485	1.04112	1.04249	1.04221	1.04565
Maine	– –	– –	– –	– –	– –	– –	1.00771	1.02811	1.01226	1.01124	1.00826
Maryland	1.03500	1.02500	1.02200	0.94300	1.02300	1.02500	1.03390	1.04181	1.04019	1.03675	1.04017
Massachusetts	1.03500	1.01300	1.01200	1.00200	1.00000	1.03900	1.04723	1.03680	1.02940	1.02939	1.03084
Michigan	1.03500	1.01400	1.01500	0.83400	0.73700	0.46000	0.81306	0.87079	0.88192	0.90370	0.90726
Minnesota	1.03500	0.99800	1.00200	0.98400	0.99400	1.00200	1.01509	1.01457	1.01438	1.01402	1.01272
Mississippi	1.03500	1.02900	1.02500	1.03000	1.01700	1.03900	1.03399	1.02498	1.02742	1.02249	1.03729
Missouri	1.03500	1.02000	1.00700	0.97700	0.97900	0.99200	1.01841	1.01457	1.01298	1.01096	1.00418
Montana	1.03500	1.00100	1.03200	1.14900	1.04900	1.20400	1.15891	1.07579	1.11863	1.08149	1.04877
Nebraska	1.03500	0.99100	1.00800	0.98200	0.95000	0.95700	0.95929	0.95337	0.97870	0.99290	0.99452
Nevada	1.03500	1.06200	1.08200	1.06700	1.07100	1.06500	1.03100	1.02404	1.02846	1.04035	1.04119
New Hampshire	– –	– –	– –	1.00000	– –	– –	– –	– –	1.01754	1.01781	1.01521
New Jersey	1.03500	1.04500	1.02600	1.02800	1.03400	1.04600	1.03553	1.03037	1.02742	1.02276	1.02665
New Mexico	1.03500	1.10800	1.08300	1.03300	1.02900	1.01300	1.03374	1.01695	1.01687	1.01627	1.02221
New York	1.03500	1.02600	1.02100	1.02500	1.03600	1.03500	1.03195	1.03041	1.02817	1.02833	1.02728
North Carolina	1.03500	1.03300	1.02400	1.03100	1.03400	1.03300	1.02675	1.03144	1.03321	1.03025	1.03058
North Dakota	1.03500	1.00000	1.03100	1.05400	1.05400	1.05400	1.13379	1.63934	0.72833	0.99404	1.12402
Ohio	1.03500	1.03300	1.02300	0.86400	1.00400	1.01400	1.01125	1.00952	1.03102	1.02644	1.02464
Oklahoma	1.03500	1.02600	1.03200	1.03800	1.04800	1.04400	1.04175	1.03901	1.03817	1.03920	1.03351
Oregon	1.03500	1.07000	1.04500	1.03700	0.99800	– –	1.02708	1.01222	1.01166	1.01224	1.01144
Pennsylvania	1.03500	1.03800	1.03300	1.00000	1.02000	1.00000	0.93491	1.02864	1.02943	1.03544	1.03458
Rhode Island	1.03500	1.04200	1.02100	1.04200	1.02200	1.03400	1.03210	1.03020	1.02074	1.02904	1.02013
South Carolina	1.03500	1.04200	1.02800	1.02800	1.03000	1.02900	1.02381	1.02506	1.02253	1.02231	1.02324
South Dakota	1.03500	0.99700	1.00400	1.00000	0.98800	1.01000	1.02803	1.01033	1.02260	1.02286	1.01421
Tennessee	1.03500	1.04600	1.02200	– –	1.01600	– –	1.02723	1.02281	1.02530	1.02331	1.02371
Texas	1.03500	1.03700	1.02700	1.01900	1.03700	1.03600	1.03509	1.03015	1.02694	1.02718	1.02459
Utah	1.03500	0.92500	0.93800	0.94100	0.95500	1.07500	1.02690	1.05562	1.06077	1.05143	1.04041
Vermont	– –	– –	– –	1.00000	1.00000	1.00000	1.02734	0.98778	0.98754	0.99999	0.99713
Virginia	1.03500	1.03100	1.02600	1.09800	1.10400	1.04000	1.03021	1.03652	1.03666	1.03109	1.03058
Washington	– –	– –	– –	– –	1.03000	1.03300	1.02854	1.02967	1.03216	1.02850	1.03141
West Virginia	1.03500	1.07100	1.02900	0.57500	1.00000	1.00000	0.99670	1.00675	1.03604	1.03009	1.04130
Wisconsin	1.03500	1.01800	1.01900	1.01600	1.00700	1.00000	1.01645	1.01499	1.01224	1.01329	1.01631
Wyoming	1.03500	0.92600	1.02300	0.84300	0.84700	1.04800	1.03612	1.04874	1.03531	1.05009	1.03641
U.S. Average	1.03500	1.03765	1.02944	1.02341	1.03313	1.03706	1.02725	1.02509	1.02520	1.02488	1.02488

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

Table B3. Approximate Heat Content of Natural Gas Consumed by the Electric Power Sector, 1995-2006

(Thousand Btu per Cubic Foot)

State	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Alabama	1.02310	1.02760	1.02950	1.03302	1.02466	1.02720	1.03999	1.02482	1.02736	1.02465	1.02715	1.02886
Alaska	1.00343	1.00233	1.00242	1.00268	1.00220	1.00287	1.00407	1.00932	1.00443	1.00662	R 1.00565	1.00657
Arizona	1.02137	1.01496	1.01378	1.01415	1.01305	1.01636	1.02258	1.01840	1.00837	1.01958	1.02431	1.02054
Arkansas	1.01913	1.02344	1.02498	1.01929	1.02477	1.01993	1.03734	1.01635	1.03201	1.02794	R 1.02893	1.02800
California	1.02831	1.02584	1.02032	1.02304	1.02214	1.02000	1.02692	1.02158	1.02340	1.02901	1.02923	1.03244
Colorado	1.06306	1.12266	1.04229	1.06423	1.05450	1.05607	1.04663	1.01720	1.03365	1.04033	R 1.03495	1.03880
Connecticut	1.02148	1.02345	1.02248	1.02601	1.02436	1.01244	1.01368	1.02097	1.00752	1.01537	1.01130	1.00951
Delaware	1.03205	1.03419	1.03450	0.97091	0.98134	1.01673	1.03674	1.01707	1.04245	1.03023	R 1.03715	1.03675
District of Columbia	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Florida	1.01396	1.01127	1.04256	1.04912	1.04135	1.03646	1.04178	1.02549	1.03436	1.03032	1.03436	1.02849
Georgia	1.02690	1.02431	1.00946	1.02606	1.02673	1.01594	1.01916	1.02188	1.02438	1.03018	1.04566	1.04015
Hawaii	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Idaho	– –	1.03307	1.03481	1.03002	1.05025	1.03984	1.02873	0.97878	1.00230	1.02706	R 1.02118	1.02677
Illinois	1.01663	1.01965	1.01557	1.01928	1.02158	1.01971	1.02217	1.01163	1.01480	1.02466	1.02019	1.02249
Indiana	1.02040	1.01995	1.02040	1.01648	1.01879	1.01671	1.01952	1.02556	1.02146	1.01470	1.01773	1.01512
Iowa	1.00934	1.00500	1.00831	1.01268	1.00841	1.00859	1.01359	1.00659	1.01041	0.99866	R 1.00334	1.00438
Kansas	0.98910	0.98351	0.98586	1.00521	1.01066	1.01145	1.01026	1.00056	1.00340	1.00453	R 1.00872	1.01478
Kentucky	1.02032	1.01867	1.02012	1.02181	1.01939	1.01993	1.02461	1.02361	1.02331	1.02450	R 1.03241	1.02800
Louisiana	1.04248	1.04232	1.03456	1.04232	1.03837	1.03444	1.04067	1.02701	1.03237	1.02734	1.02964	1.03741
Maine	1.00503	0.99980	0.99954	1.03073	1.00100	1.02127	1.03355	1.03812	1.03671	1.03922	1.05201	1.05568
Maryland	1.03470	1.02970	1.03684	1.03865	1.03691	1.04123	1.03292	1.04258	1.03769	1.04025	1.04852	1.04652
Massachusetts	1.02632	1.02968	1.02836	1.04262	1.01500	1.03492	1.03677	1.01676	1.02782	1.03274	1.03287	1.03225
Michigan	0.85452	0.87193	0.87129	0.88699	0.89247	0.93402	0.98983	1.00796	1.01273	1.01750	R 1.01550	1.01063
Minnesota	1.01111	1.00989	1.01220	1.05067	1.01762	1.01789	1.02240	1.00546	1.00425	1.00619	R 1.00874	1.00680
Mississippi	1.03375	1.03141	1.02934	1.03307	1.02502	1.02791	1.02876	1.02548	1.03318	1.03101	1.03170	1.03232
Missouri	1.00814	1.01468	1.01471	1.01668	1.01323	1.01404	1.09900	1.00873	1.01641	1.02156	R 1.02147	1.02477
Montana	1.03758	1.03955	1.02892	1.03493	1.03116	1.01796	1.01456	1.00955	0.95902	1.01570	R 1.01286	1.01073
Nebraska	1.00724	1.01050	1.00967	1.00763	1.00966	1.01493	1.02174	0.97662	0.99673	0.98653	R 0.99775	1.00548
Nevada	1.03278	1.03316	1.02715	1.03558	1.04377	1.02377	1.02606	1.01984	1.02357	1.03047	1.03657	1.02932
New Hampshire	1.01833	0.90226	1.01786	1.02281	1.02137	1.06899	1.07385	1.04750	1.04564	1.04510	R 1.04446	1.04314
New Jersey	1.03175	1.03056	1.03482	1.04144	1.03534	1.03151	1.03223	1.03139	1.03536	1.03575	R 1.03463	1.03521
New Mexico	1.01865	0.99824	1.00067	0.99571	0.99600	0.99198	0.98219	1.00213	1.00031	1.02146	R 1.00549	1.00779
New York	1.02207	1.02327	1.02371	1.02447	1.02417	1.01798	1.01882	1.01869	1.02450	1.02090	1.02147	1.01924
North Carolina	1.02627	1.02727	1.02622	1.02605	1.02230	1.01722	1.02407	1.00973	1.00655	1.00933	R 1.01375	1.01299
North Dakota	0.88261	1.17474	0.70771	– –	– –	– –	1.14855	1.06157	1.06157	1.18730	R 1.11553	1.08031
Ohio	1.02324	1.02085	1.02017	1.02219	1.02092	1.01937	1.01881	1.02439	1.03352	1.02722	R 1.02907	1.03092
Oklahoma	1.03384	1.02824	1.03153	1.02999	1.02781	1.02916	1.03073	1.02546	1.02943	1.03035	1.03020	1.03032
Oregon	1.01078	1.01909	1.01602	1.01970	1.01631	1.01753	1.02082	1.01680	1.02118	1.02012	1.02003	1.02464
Pennsylvania	1.02997	1.03198	1.02662	1.02931	1.03645	1.03405	1.03347	1.02807	1.03903	1.03639	1.03585	1.03422
Rhode Island	1.02106	1.02322	1.01327	1.02253	1.01450	1.03065	1.03204	1.01847	1.02214	1.02151	1.02128	1.01687
South Carolina	1.02322	1.02027	1.01971	1.03096	1.06091	1.03751	1.03684	1.02817	1.02770	1.03374	1.03487	1.04906
South Dakota	1.01701	1.01705	1.01916	1.02159	1.01887	1.01954	1.02653	0.98041	0.96009	0.98338	R 1.00858	1.00539
Tennessee	1.01900	1.01661	1.01905	1.02160	1.02350	1.03286	1.03970	1.02290	1.03185	1.02553	R 1.02331	1.02767
Texas	1.02517	1.02413	1.02310	1.02420	1.02190	1.02101	1.03022	1.01876	1.02061	1.02235	1.02805	1.02568
Utah	1.04876	1.01896	1.02582	1.03583	1.03557	1.04434	1.04644	1.00539	1.00428	1.00032	R 1.04427	1.04983
Vermont	0.99785	1.03515	1.01041	1.01633	1.01335	1.01229	1.00817	1.03054	1.02425	1.02779	R 0.88972	1.01597
Virginia	1.03249	1.03700	1.04719	1.03817	1.03962	1.03747	1.02995	1.02430	1.02763	1.02674	1.03214	1.02936
Washington	1.02840	1.02830	1.02308	1.03466	1.03892	1.02537	1.02829	1.02600	1.02062	1.02404	R 1.02332	1.02568
West Virginia	1.02773	1.01379	1.03654	1.00391	1.00545	1.00560	1.02595	1.03635	1.05680	1.06234	R 1.03941	1.04647
Wisconsin	1.01529	1.01525	1.01687	1.01313	1.01690	1.01176	1.01630	0.97482	0.98645	0.99741	R 1.01029	1.01153
Wyoming	1.04307	1.04237	1.04624	1.04321	1.04270	1.02728	1.03073	0.92332	0.93429	0.94583	R 0.92542	0.99055
U.S. Average	1.02126	1.01968	1.02011	1.02380	1.02158	1.02139	1.02874	1.02070	1.02414	1.02598	1.02840	1.02760

– – = Not applicable.
Where shown, R = Revised data.
Sources: 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, 1960-1994

(Thousand Btu per Cubic Foot)

State	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994
Alabama	1.03500	1.03400	1.03100	1.02891	1.03349	1.03770	1.02900	1.02706	1.02808	1.03017	1.03022
Alaska	1.03500	1.01000	1.00500	1.00470	1.00231	1.00600	0.94586	1.00189	1.00204	0.99348	1.00102
Arizona	1.03500	1.07600	1.05900	1.04957	1.04558	1.04578	1.03233	1.02453	1.03123	1.02821	1.02803
Arkansas	1.03500	1.00100	1.00400	0.99503	0.99415	1.01677	1.00761	1.01657	1.00681	1.01255	1.02178
California	1.03500	1.07300	1.05400	1.05594	1.04358	1.03848	1.03198	1.02635	1.02657	1.03809	1.01923
Colorado	1.03500	0.91200	0.97400	0.89576	0.99471	0.99923	1.00299	1.02940	1.01930	1.00902	1.00003
Connecticut	1.03500	1.02200	1.01600	1.00500	1.02200	1.02998	1.03333	1.03102	1.02774	1.02699	1.03121
Delaware	1.03500	1.04300	1.02000	1.01468	1.03285	1.02197	1.00925	1.00647	1.03714	1.03563	1.03569
District of Columbia	1.03500	1.02400	1.01600	1.01200	1.00300	1.01500	1.00800	1.00600	1.00700	1.00700	1.01100
Florida	1.03500	1.03700	1.04100	1.07754	1.06968	1.10911	1.08380	1.09835	1.09963	1.09898	1.12842
Georgia	1.03500	1.04000	1.03100	1.02672	1.03196	1.02801	1.02702	1.02701	1.02500	1.02703	1.03001
Hawaii	– –	– –	– –	– –	0.96300	1.08200	1.07000	1.08000	1.07300	1.06200	1.05100
Idaho	1.03500	1.06500	1.06100	1.05500	1.05301	1.04900	1.02800	1.03300	1.03000	1.03800	1.03800
Illinois	1.03500	1.02900	1.02500	1.02590	1.02196	1.04008	1.02199	1.01898	1.01797	1.02104	1.02095
Indiana	1.03500	0.99900	1.00600	0.98976	0.98894	1.00801	1.01823	1.01428	1.01115	1.01300	1.01282
Iowa	1.03500	1.01000	1.00900	1.00800	1.00287	1.01091	1.00687	1.00780	1.00397	1.00285	1.00793
Kansas	1.03500	0.99500	0.99800	0.98159	0.99404	0.99990	0.99911	1.01019	0.98714	0.98715	0.99858
Kentucky	1.03500	1.02800	1.01700	1.00799	1.00886	1.03004	1.04003	1.04703	1.05806	1.04804	1.06207
Louisiana	1.03500	1.04200	1.02900	1.03153	1.03707	1.03819	1.04137	1.04827	1.04430	1.03604	1.03879
Maine	– –	– –	1.01200	1.02400	1.02400	1.03500	1.00488	1.00517	1.01302	1.01408	1.01415
Maryland	1.03500	1.02500	1.02200	1.01323	1.01990	1.03408	1.02720	1.02500	1.02691	1.02749	1.03018
Massachusetts	1.03500	1.01300	1.01200	1.00402	1.01646	1.02388	1.03523	1.03963	1.03924	1.04058	1.02421
Michigan	1.03500	1.01400	1.01500	1.02420	1.01961	1.02304	1.04436	1.03551	1.03493	1.03493	1.03530
Minnesota	1.03500	0.99800	1.00200	1.00225	0.99709	1.00401	1.00379	1.01195	1.01095	1.01096	1.01097
Mississippi	1.03500	1.02900	1.02500	1.02189	1.03421	1.02459	1.03266	1.03034	1.05273	1.02311	1.03098
Missouri	1.03500	1.02000	1.00700	1.00822	1.01577	1.01714	1.01089	1.00871	1.00189	1.00388	1.00603
Montana	1.03500	1.00100	1.03200	1.01927	1.00926	0.99897	1.02672	1.02872	1.02254	1.01768	1.02370
Nebraska	1.03500	0.99100	1.00800	0.99650	0.98019	0.98226	0.98383	0.98501	0.97901	0.97473	0.98476
Nevada	1.03500	1.06200	1.08200	1.06700	1.05209	1.06122	1.03100	1.03623	1.03300	1.02847	1.02775
New Hampshire	1.03500	1.01200	1.01000	1.01024	1.02000	1.02700	1.01400	1.00700	1.00867	1.00994	1.01285
New Jersey	1.03500	1.04500	1.02600	1.03111	1.03269	1.02214	1.02434	1.02496	1.02567	1.03927	1.04231
New Mexico	1.03500	1.10800	1.08300	1.07555	1.04776	1.08795	1.05642	1.04226	1.04289	1.04235	0.99971
New York	1.03500	1.02600	1.02100	1.01476	1.02277	1.02724	1.02930	1.02717	1.02928	1.02921	1.02827
North Carolina	1.03500	1.03300	1.02400	1.01799	1.01175	1.03400	1.03209	1.03201	1.03402	1.03509	1.03604
North Dakota	1.03500	1.00000	1.03100	1.00077	1.05200	1.06200	1.03199	1.04599	1.04501	1.06000	1.05800
Ohio	1.03500	1.03300	1.02300	1.02403	1.01606	1.04403	1.04005	1.04415	1.03602	1.03804	1.03704
Oklahoma	1.03500	1.02600	1.03200	0.99619	1.00198	1.01970	1.02103	1.01318	1.02118	1.02104	1.02589
Oregon	1.03500	1.07000	1.04500	1.03900	1.04620	1.03000	1.02270	1.03073	1.03819	1.04058	1.04635
Pennsylvania	1.03500	1.03800	1.03300	1.02505	1.02201	1.03409	1.03938	1.03507	1.03612	1.03705	1.03606
Rhode Island	1.03500	1.04200	1.02100	1.01399	1.02094	1.03291	1.02678	1.02703	1.01664	1.02896	1.03379
South Carolina	1.03500	1.04200	1.02800	1.02346	1.03312	1.02800	1.02824	1.02715	1.02706	1.02909	1.03116
South Dakota	1.03500	0.99700	1.00400	1.00000	0.99811	1.01000	1.01589	1.01805	1.01499	1.01294	1.00998
Tennessee	1.03500	1.04600	1.02200	1.03100	1.01600	1.03400	1.03502	1.03301	1.03101	1.03507	1.03203
Texas	1.03500	1.03700	1.02700	1.02966	1.03085	1.03909	1.04215	1.04004	1.05007	1.02838	1.04276
Utah	1.03500	0.92500	0.93800	0.95023	1.09212	1.07500	1.08848	1.07371	1.07898	1.08137	1.06884
Vermont	– –	– –	1.00600	1.00930	0.98936	0.99185	0.98245	0.98804	0.99588	0.99792	0.99597
Virginia	1.03500	1.03100	1.02600	1.01868	1.01471	1.03899	1.04266	1.04253	1.03929	1.04662	1.03943
Washington	1.03500	1.07500	1.05500	1.04200	1.05216	1.04000	1.03000	1.03101	1.03306	1.03823	1.04294
West Virginia	1.03500	1.07100	1.02900	1.03805	1.03201	1.06707	1.07109	1.07310	1.06513	1.06509	1.06408
Wisconsin	1.03500	1.01800	1.01900	1.02023	1.00804	1.01004	1.00591	1.00693	1.00897	1.01098	1.01195
Wyoming	1.03500	0.92600	1.02300	0.93453	1.06069	1.05100	1.09905	1.06001	1.05802	1.05600	1.05602
U.S. Average	1.03500	1.03182	1.02543	1.02232	1.02375	1.03156	1.03079	1.03093	1.03150	1.02888	1.03032

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

Table B5. Approximate Heat Content of Natural Gas Consumed by All Sectors Except Electric Power, 1995-2006

(Thousand Btu per Cubic Foot)

State	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Alabama	1.02917	1.03313	1.04144	1.03955	1.03584	1.04401	1.03244	1.06486	0.99110	1.04676	1.03262	1.02908
Alaska	1.00619	0.98908	0.99979	0.99874	0.99983	0.76085	1.01051	1.01438	1.01487	1.01475	R 1.00164	1.00028
Arizona	1.03798	1.01012	1.02278	1.01667	1.01596	1.01006	1.00624	1.03410	1.00208	0.98574	1.00791	1.01227
Arkansas	1.08447	1.02637	1.01395	1.02485	1.01791	1.01885	1.01324	1.05351	1.05143	1.04523	1.00566	1.03519
California	1.01096	1.03426	1.01711	1.05636	1.01470	0.95633	1.01548	0.98692	1.02137	1.01723	1.01880	1.00918
Colorado	1.01419	1.01517	1.00918	1.00627	1.00036	0.99802	1.00535	1.00250	0.99877	0.98318	R 1.02630	1.03275
Connecticut	1.02968	1.02869	1.02792	1.02600	1.02391	1.02845	1.02306	1.03522	1.00542	0.99599	1.03018	1.04433
Delaware	1.03556	1.03562	1.03526	1.06180	1.06762	1.04124	1.03282	1.05002	1.04319	1.04228	R 1.03694	1.03579
District of Columbia	1.00600	1.00900	1.02100	1.02700	1.02100	1.02700	1.02600	1.02400	1.02700	1.02700	1.05200	1.02500
Florida	1.06972	1.11625	1.05806	1.05438	1.04611	1.10825	1.06501	1.01936	1.07730	1.02379	1.09565	1.02557
Georgia	1.02597	1.02298	1.02784	1.02709	1.02703	1.01823	1.03452	1.02437	1.04473	1.04469	1.02910	1.02831
Hawaii	1.04800	1.05700	1.03000	1.05600	1.05500	1.04700	1.03600	1.06000	1.04700	1.04800	1.03700	1.04700
Idaho	1.03000	1.02999	1.03090	1.03821	1.03769	1.02464	1.01754	1.02059	1.02514	1.02461	R 1.05404	1.04650
Illinois	1.02013	1.01898	1.02124	1.02217	1.02202	1.02211	1.01989	1.03155	0.99951	0.99918	1.01467	1.01567
Indiana	1.01187	1.01093	1.01092	1.01701	1.01798	1.02522	1.02416	0.94474	1.02835	1.03070	1.01802	1.01711
Iowa	1.00492	1.00601	1.00901	1.01096	1.01925	1.00493	1.00375	1.00803	1.00897	1.00835	1.00626	1.01486
Kansas	1.00306	0.99685	1.00225	0.99370	0.99516	1.00759	1.00451	0.99781	1.04199	1.04151	1.01431	1.02050
Kentucky	1.09629	1.04924	1.05029	1.03435	1.03234	1.04038	1.03727	1.03147	1.03215	1.02808	1.02873	1.02906
Louisiana	1.03321	1.04431	1.13486	1.07709	1.04300	1.06383	1.02388	1.08262	1.04168	1.04282	1.04799	1.03810
Maine	1.01621	1.01614	1.01410	1.01687	1.01945	1.15289	1.17664	1.26332	1.19899	1.13093	1.07713	1.15914
Maryland	1.02506	1.02895	1.03378	1.03679	1.03362	1.03286	1.03744	1.02613	1.02955	1.02932	1.04794	1.03457
Massachusetts	1.02584	1.02600	1.01939	1.01524	1.06021	1.04444	1.04537	1.05133	1.04878	1.04531	1.00963	1.00056
Michigan	1.04042	1.03412	1.04030	1.04705	1.04155	1.03633	1.03105	0.99858	0.99840	0.99936	R 1.01608	1.01915
Minnesota	1.01305	1.01812	1.01810	1.01875	1.01905	1.01492	1.01167	1.00913	1.01027	1.01014	1.01225	1.01778
Mississippi	1.02111	1.02937	1.03587	1.05199	1.04182	1.04308	1.02193	1.07990	0.98122	1.04715	1.02861	1.01521
Missouri	1.00695	1.01093	1.00987	1.01062	1.01298	1.01512	1.00628	1.00455	1.01705	1.01653	R 1.01980	1.02044
Montana	1.02995	1.02993	1.03101	1.02592	1.02397	1.02402	1.02202	0.99097	0.98911	0.99795	1.04008	1.01705
Nebraska	0.97938	1.00694	0.99776	1.00281	0.99858	1.00455	1.01683	1.00100	1.00013	0.99628	1.01089	1.01351
Nevada	1.03329	1.03993	1.02680	1.04807	1.02043	1.02996	1.02332	1.06771	1.01939	1.00438	1.05496	1.05549
New Hampshire	1.01007	1.01902	1.01081	1.01091	1.00864	1.05764	1.06173	1.06267	0.94880	1.07094	R 1.02018	1.02208
New Jersey	1.03463	1.03722	1.03504	1.03715	1.03990	1.03601	1.03840	1.04315	1.04506	1.03995	R 1.04141	1.03756
New Mexico	1.02024	1.03464	1.02240	0.97888	0.97522	0.96773	0.97338	1.01149	1.01200	1.03137	R 1.03440	1.02934
New York	1.03108	1.02699	1.02704	1.02956	1.02845	1.03229	1.03347	0.98173	1.04481	1.01972	1.02777	1.02661
North Carolina	1.03319	1.03615	1.03628	1.04095	1.03577	1.03075	1.04244	1.04474	1.04449	1.03770	1.04123	1.03821
North Dakota	1.05000	1.05099	1.05001	1.03800	1.04500	1.03500	1.02899	0.97200	0.97000	1.00599	1.03600	1.04400
Ohio	1.03812	1.03805	1.04510	1.04018	1.03722	1.04226	1.04231	1.02605	1.02788	1.02495	1.04452	1.03926
Oklahoma	1.01462	1.02259	1.00586	1.00666	1.02064	1.00814	1.02651	1.03120	1.03662	1.03456	1.04526	1.09887
Oregon	1.04450	1.04356	1.05050	1.04997	1.06029	1.03123	1.02891	1.03504	1.03629	1.04403	1.04411	1.03424
Pennsylvania	1.03528	1.03407	1.03525	1.03633	1.03598	1.03503	1.05476	1.05392	1.05282	1.05392	1.04055	1.03986
Rhode Island	1.02872	1.09977	1.03591	1.02711	1.03037	1.04690	1.02937	1.05098	1.03045	1.03239	1.05354	1.05558
South Carolina	1.02717	1.03008	1.03120	1.03418	1.02895	1.02852	1.03810	0.99302	0.99720	0.99204	1.03911	1.03360
South Dakota	1.01392	1.01394	1.01794	1.00890	1.00502	1.00347	0.99520	1.02124	1.02326	1.02153	R 1.00686	1.00279
Tennessee	1.03110	1.03203	1.03107	1.03019	1.02708	1.03708	1.03697	1.08059	1.03507	1.03509	1.03529	1.03832
Texas	1.04232	1.03666	1.03009	1.04975	1.03769	1.03343	1.02371	1.13132	1.15959	0.98772	1.02796	1.02623
Utah	1.06384	1.04260	1.04241	1.04637	1.05582	1.05145	1.05258	1.06349	1.06357	1.06171	1.05480	1.05831
Vermont	0.99596	1.01493	1.01201	1.01189	1.01196	1.01197	1.01206	1.00388	1.00593	1.00386	R 1.00444	1.00094
Virginia	1.03071	1.03928	1.04374	1.04382	1.03772	1.03461	1.03814	1.03667	1.03614	1.02706	1.04484	1.03916
Washington	1.04218	1.03856	1.04878	1.04667	1.05368	1.04243	1.03480	1.01757	1.02242	1.02265	1.03221	1.03253
West Virginia	1.06116	1.06110	1.06811	1.06321	1.05518	1.06822	1.06778	1.00662	1.04887	1.17429	1.06959	1.13486
Wisconsin	1.01089	1.01296	1.01076	1.01085	1.01171	1.00990	1.00852	1.00564	1.00834	1.00439	1.01345	1.01093
Wyoming	1.06303	1.06102	1.06902	1.06706	1.05101	1.04635	1.05569	1.04816	1.05050	1.04248	1.04363	1.04240
U.S. Average	1.02981	1.03076	1.03524	1.03740	1.02937	1.01978	1.02624	1.03933	1.04595	1.01941	1.02897	1.02807

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

Table B6. Approximate Heat Content of Natural Gas Total Consumption, Selected Years, 1960-1994

(Thousand Btu per Cubic Foot)

State	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994
Alabama	1.03500	1.03400	1.03100	1.02900	1.03400	1.03800	1.02900	1.02700	1.02800	1.03000	1.03000
Alaska	1.03500	1.01000	1.00500	1.00500	1.00300	1.00600	0.95400	1.00200	1.00200	0.99400	1.00100
Arizona	1.03500	1.07600	1.05900	1.05200	1.04900	1.05000	1.03200	1.02500	1.03100	1.02800	1.02700
Arkansas	1.03500	1.00100	1.00400	0.99700	1.00100	1.01900	1.00900	1.01700	1.00900	1.01400	1.02200
California	1.03500	1.07300	1.05400	1.05700	1.04600	1.04300	1.03200	1.02700	1.02900	1.03600	1.02300
Colorado	1.03500	0.91200	0.97400	0.91300	0.99300	0.99900	1.00500	1.02900	1.02300	1.01100	1.00500
Connecticut	1.03500	1.02200	1.01600	1.00500	1.02200	1.03000	1.03300	1.03100	1.02800	1.02700	1.03000
Delaware	1.03500	1.04300	1.02000	1.02000	1.03500	1.02500	1.02600	1.03400	1.03500	1.03500	1.03600
District of Columbia	1.03500	1.02400	1.01600	1.01200	1.00300	1.01500	1.00800	1.00600	1.00700	1.00700	1.01100
Florida	1.03500	1.03700	1.04100	1.04300	1.04100	1.05300	1.04300	1.04900	1.04900	1.05200	1.06800
Georgia	1.03500	1.04000	1.03100	1.02700	1.03200	1.02800	1.02700	1.02700	1.02500	1.02700	1.03000
Hawaii	1.03500	– –	0.96200	0.94700	0.96300	1.08200	1.07000	1.08000	1.07300	1.06200	1.05100
Idaho	1.03500	1.06500	1.06100	1.05500	1.05300	1.04900	1.02800	1.03300	1.03000	1.03800	1.03800
Illinois	1.03500	1.02900	1.02500	1.02600	1.02200	1.04000	1.02200	1.01900	1.01800	1.02100	1.02100
Indiana	1.03500	0.99900	1.00600	0.99000	0.98900	1.00800	1.01800	1.01400	1.01100	1.01300	1.01300
Iowa	1.03500	1.01000	1.00900	1.00800	1.00300	1.01100	1.00700	1.00800	1.00400	1.00300	1.00800
Kansas	1.03500	0.99500	0.99800	0.98400	0.98700	0.99800	0.99900	1.00700	0.98700	0.98700	0.99800
Kentucky	1.03500	1.02800	1.01700	1.00800	1.00900	1.03000	1.04000	1.04700	1.05800	1.04800	1.06200
Louisiana	1.03500	1.04200	1.02900	1.03700	1.03800	1.04000	1.04200	1.04700	1.04400	1.03700	1.04000
Maine	1.03500	– –	1.01200	1.02400	1.02400	1.03500	1.00500	1.00600	1.01300	1.01400	1.01400
Maryland	1.03500	1.02500	1.02200	1.01300	1.02000	1.03400	1.02800	1.02700	1.02800	1.02800	1.03100
Massachusetts	1.03500	1.01300	1.01200	1.00400	1.01600	1.02700	1.03800	1.03900	1.03700	1.03800	1.02600
Michigan	1.03500	1.01400	1.01500	1.01200	1.01100	1.01500	1.02200	1.02000	1.02000	1.02100	1.02100
Minnesota	1.03500	0.99800	1.00200	1.00100	0.99700	1.00400	1.00400	1.01200	1.01100	1.01100	1.01100
Mississippi	1.03500	1.02900	1.02500	1.02300	1.02800	1.02800	1.03300	1.02900	1.04700	1.02300	1.03300
Missouri	1.03500	1.02000	1.00700	1.00600	1.01400	1.01700	1.01100	1.00900	1.00200	1.00400	1.00600
Montana	1.03500	1.00100	1.03200	1.02100	1.01200	1.00100	1.02800	1.02900	1.02300	1.01800	1.02400
Nebraska	1.03500	0.99100	1.00800	0.99400	0.97800	0.98200	0.98300	0.98400	0.97900	0.97500	0.98500
Nevada	1.03500	1.06200	1.08200	1.06700	1.06100	1.06200	1.03100	1.03200	1.03100	1.03400	1.03500
New Hampshire	1.03500	1.01200	1.01000	1.01000	1.02000	1.02700	1.01400	1.00700	1.00900	1.01000	1.01300
New Jersey	1.03500	1.04500	1.02600	1.03100	1.03300	1.02600	1.02600	1.02600	1.02600	1.03600	1.03900
New Mexico	1.03500	1.10800	1.08300	1.06400	1.04300	1.07400	1.05400	1.03900	1.04000	1.03900	1.00300
New York	1.03500	1.02600	1.02100	1.01500	1.02500	1.02900	1.03000	1.02800	1.02900	1.02900	1.02800
North Carolina	1.03500	1.03300	1.02400	1.01800	1.01200	1.03400	1.03200	1.03200	1.03400	1.03500	1.03600
North Dakota	1.03500	1.00000	1.03100	1.00100	1.05200	1.06200	1.03200	1.04600	1.04500	1.06000	1.05800
Ohio	1.03500	1.03300	1.02300	1.02300	1.01600	1.04400	1.04000	1.04400	1.03600	1.03800	1.03700
Oklahoma	1.03500	1.02600	1.03200	1.01500	1.02300	1.02800	1.02700	1.02100	1.02600	1.02600	1.02800
Oregon	1.03500	1.07000	1.04500	1.03900	1.04600	1.03000	1.02300	1.02900	1.03500	1.03700	1.04000
Pennsylvania	1.03500	1.03800	1.03300	1.02500	1.02200	1.03400	1.03700	1.03500	1.03600	1.03700	1.03600
Rhode Island	1.03500	1.04200	1.02100	1.01400	1.02100	1.03300	1.02800	1.02800	1.01800	1.02900	1.02900
South Carolina	1.03500	1.04200	1.02800	1.02400	1.03300	1.02800	1.02800	1.02700	1.02700	1.02900	1.03100
South Dakota	1.03500	0.99700	1.00400	1.00000	0.99800	1.01000	1.01600	1.01800	1.01500	1.01300	1.01000
Tennessee	1.03500	1.04600	1.02200	1.03100	1.01600	1.03400	1.03500	1.03300	1.03100	1.03500	1.03200
Texas	1.03500	1.03700	1.02700	1.02600	1.03300	1.03800	1.04000	1.03700	1.04300	1.02800	1.03700
Utah	1.03500	0.92500	0.93800	0.95000	1.08600	1.07500	1.08800	1.07300	1.07800	1.08000	1.06700
Vermont	1.03500	– –	1.00600	1.00800	0.99000	0.99200	0.98700	0.98800	0.99500	0.99800	0.99600
Virginia	1.03500	1.03100	1.02600	1.01900	1.01600	1.03900	1.04200	1.04200	1.03900	1.04400	1.03800
Washington	1.03500	1.07500	1.05500	1.04200	1.05200	1.04000	1.03000	1.03100	1.03300	1.03700	1.04100
West Virginia	1.03500	1.07100	1.02900	1.03700	1.03200	1.06700	1.07100	1.07300	1.06500	1.06500	1.06400
Wisconsin	1.03500	1.01800	1.01900	1.02000	1.00800	1.01000	1.00600	1.00700	1.00900	1.01100	1.01200
Wyoming	1.03500	0.92600	1.02300	0.93400	1.06000	1.05100	1.09900	1.06000	1.05800	1.05600	1.05600
U.S. Average	1.03500	1.03271	1.02618	1.02249	1.02549	1.03253	1.03019	1.02994	1.03042	1.02821	1.02932

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

Table B7. Approximate Heat Content of Natural Gas Total Consumption, 1995-2006

(Thousand Btu per Cubic Foot)

State	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Alabama	1.02900	1.03300	1.04100	1.03900	1.03500	1.04200	1.03400	1.05300	1.00000	1.04000	1.03100	1.02900
Alaska	1.00600	0.99000	1.00000	0.99900	1.00000	0.78100	1.01000	1.01400	1.01400	1.01400	1.00200	1.00100
Arizona	1.03500	1.01100	1.02100	1.01600	1.01500	1.01300	1.01500	1.02500	1.00600	1.00900	1.01900	1.01800
Arkansas	1.07600	1.02600	1.01500	1.02400	1.01900	1.01900	1.01600	1.04700	1.04700	1.04200	1.01100	1.03300
California	1.01600	1.03200	1.01800	1.04700	1.01700	0.97900	1.02000	0.99800	1.02200	1.02100	1.02200	1.01700
Colorado	1.01800	1.02400	1.01200	1.01200	1.00700	1.00800	1.01300	1.00500	1.00500	0.99400	1.02800	1.03400
Connecticut	1.02800	1.02800	1.02700	1.02600	1.02400	1.02500	1.02100	1.03000	1.00600	1.00300	1.02300	1.02900
Delaware	1.03400	1.03500	1.03500	1.03700	1.03700	1.03700	1.03400	1.03900	1.04300	1.03900	1.03700	1.03600
District of Columbia	1.00600	1.00900	1.02100	1.02700	1.02100	1.02700	1.02600	1.02400	1.02700	1.02700	1.05200	1.02500
Florida	1.03300	1.05000	1.04800	1.05100	1.04300	1.06000	1.04900	1.02400	1.04400	1.02900	1.04600	1.02800
Georgia	1.02600	1.02300	1.02700	1.02700	1.02700	1.01800	1.03300	1.02400	1.04300	1.04300	1.03200	1.03100
Hawaii	1.04800	1.05700	1.03000	1.05600	1.05500	1.04700	1.03600	1.06000	1.04700	1.04800	1.03700	1.04700
Idaho	1.03000	1.03000	1.03100	1.03800	1.03800	1.02500	1.01900	1.01900	1.02200	1.02500	1.04900	1.04400
Illinois	1.02000	1.01900	1.02100	1.02200	1.02200	1.02200	1.02000	1.03000	1.00000	1.00000	1.01500	1.01600
Indiana	1.01200	1.01100	1.01100	1.01700	1.01800	1.02500	1.02400	0.95000	1.02800	1.03000	1.01800	1.01700
Iowa	1.00500	1.00600	1.00900	1.01100	1.01900	1.00500	1.00400	1.00800	1.00900	1.00800	1.00600	1.01400
Kansas	1.00200	0.99600	1.00100	0.99500	0.99700	1.00800	1.00500	0.99800	1.04000	1.04000	1.01400	1.02000
Kentucky	1.09600	1.04900	1.05000	1.03400	1.03200	1.04000	1.03700	1.03100	1.03200	1.02800	1.02900	1.02900
Louisiana	1.03500	1.04400	1.11800	1.07000	1.04200	1.05800	1.02700	1.07000	1.04000	1.04000	1.04400	1.03800
Maine	1.01600	1.01600	1.01400	1.01700	1.01800	1.07300	1.05700	1.06200	1.06000	1.05100	1.05600	1.07500
Maryland	1.02600	1.02900	1.03400	1.03700	1.03400	1.03400	1.03700	1.02800	1.03000	1.03000	1.04800	1.03600
Massachusetts	1.02600	1.02700	1.02200	1.02300	1.04800	1.04200	1.04300	1.04000	1.04000	1.04000	1.01900	1.01500
Michigan	1.01700	1.01200	1.01600	1.02000	1.01800	1.02200	1.02500	1.00000	1.00000	1.00200	1.01600	1.01800
Minnesota	1.01300	1.01800	1.01800	1.02000	1.01900	1.01500	1.01200	1.00900	1.01000	1.01000	1.01200	1.01700
Mississippi	1.02600	1.03000	1.03400	1.04600	1.03600	1.03800	1.02500	1.05400	1.00000	1.04100	1.03000	1.02300
Missouri	1.00700	1.01100	1.01000	1.01100	1.01300	1.01500	1.01700	1.00500	1.01700	1.01700	1.02000	1.02100
Montana	1.03000	1.03000	1.03100	1.02600	1.02400	1.02400	1.02200	0.99100	0.98900	0.99800	1.04000	1.01700
Nebraska	0.98000	1.00700	0.99800	1.00300	0.99900	1.00500	1.01700	1.00000	1.00000	0.99600	1.01000	1.01300
Nevada	1.03300	1.03600	1.02700	1.04100	1.03400	1.02600	1.02500	1.03800	1.02200	1.02100	1.04300	1.03800
New Hampshire	1.01100	1.01900	1.01100	1.01100	1.00900	1.05800	1.06200	1.06200	1.00000	1.05500	1.03600	1.03600
New Jersey	1.03400	1.03600	1.03500	1.03800	1.03900	1.03500	1.03700	1.04000	1.04300	1.03900	1.04000	1.03700
New Mexico	1.02000	1.02900	1.01900	0.98200	0.97900	0.97200	0.97500	1.01000	1.01000	1.03000	1.02900	1.02400
New York	1.02800	1.02600	1.02600	1.02800	1.02700	1.02800	1.02900	0.99300	1.04000	1.02000	1.02600	1.02400
North Carolina	1.03300	1.03600	1.03600	1.04000	1.03500	1.03000	1.04100	1.04000	1.04200	1.03500	1.03800	1.03500
North Dakota	1.05000	1.05100	1.05000	1.03800	1.04500	1.03500	1.02900	0.97200	0.97000	1.00600	1.03600	1.04400
Ohio	1.03800	1.03800	1.04500	1.04000	1.03700	1.04200	1.04200	1.02600	1.02800	1.02500	1.04400	1.03900
Oklahoma	1.02000	1.02400	1.01200	1.01400	1.02300	1.01500	1.02800	1.02900	1.03400	1.03300	1.03900	1.06800
Oregon	1.04000	1.04000	1.04600	1.04300	1.05100	1.02700	1.02600	1.03000	1.03100	1.03500	1.03500	1.03100
Pennsylvania	1.03500	1.03400	1.03500	1.03600	1.03600	1.03500	1.05400	1.05200	1.05200	1.05200	1.04000	1.03900
Rhode Island	1.02600	1.06000	1.02400	1.02500	1.02300	1.03800	1.03100	1.03100	1.02600	1.02700	1.03600	1.03400
South Carolina	1.02700	1.03000	1.03100	1.03400	1.03100	1.02900	1.03800	1.00000	1.00000	1.00000	1.03800	1.03800
South Dakota	1.01400	1.01400	1.01800	1.01000	1.00600	1.00500	0.99900	1.02000	1.02000	1.02000	1.00700	1.00300
Tennessee	1.03100	1.03200	1.03100	1.03000	1.02700	1.03700	1.03700	1.08000	1.03500	1.03500	1.03500	1.03800
Texas	1.03700	1.03300	1.02800	1.04100	1.03200	1.02900	1.02600	1.09100	1.11000	1.00000	1.02800	1.02600
Utah	1.06300	1.04200	1.04200	1.04600	1.05500	1.05100	1.05200	1.05800	1.05800	1.05800	1.05400	1.05700
Vermont	0.99600	1.01500	1.01200	1.01200	1.01200	1.01200	1.01200	1.00400	1.00600	1.00400	1.00400	1.00100
Virginia	1.03100	1.03900	1.04400	1.04300	1.03800	1.03500	1.03700	1.03500	1.03500	1.02700	1.04200	1.03700
Washington	1.04000	1.03700	1.04600	1.04500	1.05200	1.03800	1.03300	1.01900	1.02200	1.02300	1.03000	1.03100
West Virginia	1.06100	1.06100	1.06800	1.06300	1.05500	1.06800	1.06700	1.00700	1.04900	1.17300	1.06900	1.13200
Wisconsin	1.01100	1.01300	1.01100	1.01100	1.01200	1.01000	1.00900	1.00400	1.00700	1.00400	1.01300	1.01100
Wyoming	1.06300	1.06100	1.06900	1.06700	1.05100	1.04600	1.05500	1.04400	1.04800	1.04200	1.04300	1.04200
U.S. Average	1.02818	1.02890	1.03254	1.03460	1.02770	1.02014	1.02684	1.03474	1.04092	1.02101	1.02881	1.02794

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

Table B8. Approximate Heat Content of Coal Consumed by the Residential and Commercial Sector, Selected Years, 1960-1994

(Million Btu per Short Ton)

State	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994
Alabama	24.90955	24.77905	23.93285	23.51979	24.04242	24.40711	24.62888	24.64742	24.20442	24.24951	24.45597
Alaska	18.90636	18.80731	18.16504	17.68304	– –	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000
Arizona	– –	– –	– –	– –	– –	19.78800	18.69794	20.99769	21.90138	21.38908	25.03703
Arkansas	– –	– –	– –	– –	23.89952	22.99046	24.83396	25.96800	24.68871	23.97978	26.10174
California	23.01295	22.89238	22.11061	– –	23.10930	23.55520	23.18400	23.14011	23.07808	23.20120	23.24015
Colorado	22.95289	22.83264	22.05291	20.82582	21.46057	21.21743	21.43489	21.57494	20.93156	21.83245	22.14453
Connecticut	24.86790	24.40178	23.47600	22.27200	22.71900	23.03100	25.19900	25.26800	24.79498	24.09600	25.05358
Delaware	24.72100	24.31600	23.47600	22.27200	23.14289	24.11686	24.85615	25.02730	24.71273	23.83238	23.85575
District of Columbia	25.10862	24.97707	24.12411	23.24075	24.54122	24.88768	24.96081	25.04028	24.93794	24.98614	24.95716
Florida	– –	– –	– –	– –	24.28341	24.88200	24.86125	25.26805	23.34733	24.96116	24.94758
Georgia	24.74225	24.61262	23.77210	23.49417	24.32123	24.83223	25.14330	25.18826	25.19263	24.99917	25.34326
Hawaii	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Idaho	24.83140	24.70130	23.85776	22.66294	22.29152	22.83215	22.47778	22.57314	22.43044	22.43248	22.47832
Illinois	24.04164	23.91539	23.09871	22.52260	22.06925	22.26944	22.45162	22.59360	22.82204	22.61287	22.44937
Indiana	24.06516	23.93847	23.12085	22.13233	21.88129	22.25860	22.46054	22.45911	22.45790	22.60689	22.64376
Iowa	21.32126	21.20956	20.48526	18.27722	20.22308	21.40188	23.96001	24.08672	23.73387	23.46034	23.62240
Kansas	21.78815	21.67400	20.93384	– –	21.18218	21.14600	24.27951	24.51147	24.41040	22.71888	24.51341
Kentucky	24.43091	24.28447	23.45391	23.17784	23.83696	24.34440	24.45011	24.71246	24.79925	24.87005	24.86330
Louisiana	– –	– –	– –	– –	21.36502	– –	– –	25.26800	– –	24.09600	– –
Maine	24.96425	24.70177	23.61235	22.51890	23.54561	24.27817	24.93701	25.24114	24.95461	24.67605	25.03700
Maryland	25.03270	24.87495	23.94377	22.93823	24.04282	24.74887	25.06708	25.16569	25.13399	24.95297	25.25646
Massachusetts	24.89361	24.49344	23.55718	22.43028	23.41739	23.77832	25.07028	25.21557	24.84729	24.43131	25.02901
Michigan	24.75940	24.62836	23.78687	23.46574	24.35257	24.46038	24.81175	24.88677	24.91422	24.72948	24.48071
Minnesota	21.97087	21.85576	21.10939	19.25676	20.82860	19.14210	17.89230	17.73444	17.80440	18.36730	19.60526
Mississippi	– –	– –	– –	– –	22.99343	24.54115	24.85200	25.26800	24.61700	24.09667	– –
Missouri	22.94167	22.82147	22.04212	21.40447	21.80697	22.80191	21.93585	21.94880	22.01651	22.44298	22.86902
Montana	21.33557	21.22380	20.49901	20.38911	22.04235	17.68025	18.78135	18.01546	18.17794	18.88756	18.05498
Nebraska	20.91322	20.80366	20.09322	18.40616	18.03826	21.52621	21.37396	22.63244	21.59428	21.70581	21.88812
Nevada	25.11444	25.04926	24.21082	23.32668	22.43015	23.56200	24.01028	23.14800	23.09600	23.20000	23.23600
New Hampshire	24.72100	24.31600	23.47600	22.27200	22.71900	23.03100	25.17092	25.26800	24.77167	24.09600	25.03700
New Jersey	24.72427	24.35398	23.48102	22.26344	22.71900	23.21834	25.17308	25.26177	24.71277	24.09600	25.03700
New Mexico	22.99301	22.87255	22.09147	– –	19.78553	19.81693	18.69800	18.63858	19.82432	19.35042	19.54379
New York	24.70038	24.36019	23.49620	22.57414	23.33679	23.81886	24.85588	25.01257	24.73886	24.38320	25.04668
North Carolina	24.76213	24.63240	23.79120	23.49258	24.42236	24.85944	25.18700	25.26828	25.03861	25.01550	24.99588
North Dakota	15.55018	15.46871	14.94046	13.75718	13.24298	13.13815	13.90962	13.90692	14.54945	14.76482	14.92006
Ohio	23.86178	23.73246	22.92073	22.32478	23.20690	23.83693	24.14408	24.17839	24.36654	24.32312	24.33250
Oklahoma	22.72718	22.60811	21.83605	20.67259	23.29143	23.39403	24.83400	25.96800	24.88048	23.89800	26.02613
Oregon	24.60503	24.47612	23.64027	22.38275	22.72195	22.60723	23.18400	23.14800	23.09600	23.70388	23.86580
Pennsylvania	24.73076	24.36478	23.54189	22.48706	23.15028	23.72419	25.11754	25.17103	24.87198	24.45001	25.05420
Rhode Island	24.72100	24.31600	23.47600	22.27200	22.71900	23.03100	25.19900	25.26800	24.61700	24.09600	25.03700
South Carolina	24.76172	24.63199	23.79081	23.49264	24.41433	24.85378	24.87489	25.13865	24.98263	24.88256	24.94988
South Dakota	19.41154	19.30984	18.65041	16.85997	18.42630	19.36902	18.37453	17.50120	19.09582	17.29400	20.61708
Tennessee	24.71533	24.58404	23.74488	23.48019	23.96977	24.38903	24.74124	25.11263	24.27714	25.11816	25.16264
Texas	14.95177	14.87344	14.36552	– –	15.20049	22.51056	25.89608	25.71797	21.70100	18.41093	26.10171
Utah	25.89198	25.75633	24.87676	23.74007	23.17910	23.56200	23.14974	23.14850	23.09571	23.20000	23.24200
Vermont	24.72100	24.31600	23.47600	22.27200	22.71900	24.39899	25.19900	25.26800	24.61700	24.09600	24.83200
Virginia	24.78525	24.65237	23.81029	23.46220	24.41436	24.86362	25.08712	25.12517	25.13025	24.99384	24.98404
Washington	22.90924	22.78922	22.01097	19.96772	22.77100	23.45190	21.73662	22.33357	22.18710	22.50221	22.42899
West Virginia	24.99691	24.86595	24.01679	23.70919	24.05881	24.85990	25.01748	25.01572	24.94682	24.82827	24.95405
Wisconsin	21.92254	21.80607	21.06114	18.98021	24.26544	24.56793	24.97777	25.06509	25.03715	24.96032	24.94413
Wyoming	20.62538	20.51732	19.81665	18.57163	17.80856	17.26200	19.93489	23.14964	18.91636	18.55083	18.45662
U.S. Average	23.94283	23.77600	22.98985	22.12012	22.89233	22.68213	23.02050	23.09941	23.14212	22.83810	22.91565

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

Table B9. Approximate Heat Content of Coal Consumed by the Residential and Commercial Sector, 1995-2006

(Million Btu per Short Ton)

State	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Alabama	24.64589	24.63827	24.64215	25.47588	25.88280	25.45000	18.84468	24.23196	24.22414	24.22414	25.12953	24.29513
Alaska	15.80000	15.80000	15.84800	15.71000	15.60000	15.60000	15.60000	15.60000	15.60000	15.60000	15.60000	15.60000
Arizona	21.96150	19.28500	19.10306	21.69872	21.95554	21.95554	18.81885	18.96261	18.65717	18.77970	18.95945	18.91365
Arkansas	– –	– –	24.49708	25.08934	25.46394	– –	– –	25.20226	– –	25.20226	– –	25.20226
California	23.29600	23.28200	23.10055	23.62691	23.74003	23.79000	23.54564	25.20226	24.57779	22.39951	22.69029	23.54564
Colorado	22.16939	22.10652	18.71008	22.43624	22.48006	21.70600	22.42877	22.40126	22.49956	22.46007	22.38331	22.32441
Connecticut	23.80410	24.63800	24.49700	27.35000	27.53000	24.84184	25.19040	25.20226	25.17420	25.20226	25.20226	25.20226
Delaware	24.69600	24.93390	25.05444	26.90254	26.15092	26.11800	25.20226	– –	– –	– –	– –	– –
District of Columbia	25.17800	24.74271	24.57946	25.31000	25.30000	25.30000	24.69356	24.69356	24.69356	24.69356	24.69356	– –
Florida	24.64400	25.04400	– –	26.04235	25.97502	25.75000	23.49457	24.35506	24.70354	– –	25.20226	25.20226
Georgia	24.98009	25.04400	25.69800	25.65432	25.84901	25.64200	25.71566	25.71566	– –	25.71415	24.87197	– –
Hawaii	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Idaho	21.71685	21.72486	22.68311	19.71901	21.04956	22.06000	22.34782	22.07382	21.64352	18.44441	21.28274	21.54563
Illinois	22.51632	22.68127	22.80243	21.96000	21.96000	21.95496	23.09564	23.07288	22.94355	22.88660	22.90367	22.93419
Indiana	22.29025	22.23182	22.19420	22.75000	25.00000	23.51901	22.30349	22.27207	22.38880	22.34328	22.45479	22.37152
Iowa	24.36084	24.52912	23.56166	24.41000	25.97000	26.10085	23.86811	24.17926	24.05462	23.39265	23.53537	23.40740
Kansas	23.94481	24.10800	22.52800	24.68789	24.70725	24.15600	24.17185	24.02541	23.54564	– –	– –	23.54564
Kentucky	24.92797	24.35637	23.26395	25.46950	26.23869	26.40800	24.90121	24.70391	24.37750	24.09277	24.06740	23.66777
Louisiana	25.07800	– –	24.53000	– –	– –	23.48200	– –	– –	– –	– –	– –	– –
Maine	24.69600	24.63800	24.49700	26.34731	26.08147	25.92200	25.19811	25.19627	25.20226	25.20226	25.20226	25.20226
Maryland	24.83796	25.08097	25.13840	25.31044	25.29975	25.07200	24.92243	24.61596	24.79575	24.69992	24.70913	24.73325
Massachusetts	24.83425	24.79549	24.70762	27.34861	27.53458	27.07000	25.39455	24.64837	24.99683	24.46855	24.96940	24.77280
Michigan	24.66160	24.84902	24.59315	24.80000	25.10000	25.09987	24.08681	23.59538	23.70301	24.50332	24.35677	24.37527
Minnesota	20.25825	17.54796	18.40880	19.25179	19.31135	19.29400	24.33092	17.38221	18.74383	20.36034	19.42854	17.78220
Mississippi	– –	– –	24.49708	– –	– –	– –	– –	– –	– –	– –	– –	– –
Missouri	22.63423	22.66103	22.82574	22.00000	22.43000	22.01372	22.98069	23.14705	23.25095	23.19464	23.21647	23.19520
Montana	21.22785	18.18800	17.85986	23.37560	17.09403	16.01600	18.22272	18.51422	18.41265	18.11776	18.12135	18.11776
Nebraska	20.32116	24.63800	17.33200	20.74919	– –	– –	22.34669	22.39411	22.43902	22.39620	22.37023	22.29536
Nevada	23.44269	23.28200	23.09600	22.98804	23.10820	23.10820	19.61653	18.11776	18.11776	18.11776	18.11776	18.11776
New Hampshire	24.86761	24.84196	24.55195	27.35000	27.53000	25.92200	25.20226	25.20226	25.20226	25.20226	25.20226	25.20226
New Jersey	24.69600	24.63800	24.49700	25.22885	25.31653	25.50000	25.20226	25.20226	25.20226	25.20226	25.20226	25.20226
New Mexico	19.23183	19.32888	18.92150	24.76400	25.11200	25.21200	18.81885	18.78502	19.00920	19.24556	18.81298	18.92875
New York	24.95806	24.82789	24.83757	25.45000	25.51000	25.31147	24.84639	25.09365	25.20226	24.99169	25.01044	24.85989
North Carolina	25.16371	24.83876	24.99447	26.70000	27.00000	27.00000	25.07997	24.82548	25.32901	24.77161	25.37342	25.11335
North Dakota	15.53547	14.92702	14.93796	14.27578	14.26426	14.22800	16.00252	16.22776	16.37937	16.98175	18.09798	17.84725
Ohio	24.43882	23.79691	23.89197	25.25000	24.14000	24.01316	24.11117	24.20238	24.14877	21.33540	23.98104	24.19434
Oklahoma	25.89400	26.12800	17.35345	19.93863	19.77893	– –	24.21484	24.21484	24.21484	– –	24.27606	24.55713
Oregon	23.29600	– –	23.09600	22.00000	23.30868	23.30868	– –	– –	– –	– –	– –	– –
Pennsylvania	24.82982	24.70349	24.64969	25.26545	25.44396	26.38599	25.13691	25.10969	25.12376	25.10462	25.13163	25.12478
Rhode Island	24.69600	24.63800	24.49700	27.35000	27.53000	25.92200	25.20226	25.20226	25.20226	25.20226	25.20226	25.20226
South Carolina	25.50314	24.71660	24.97200	26.21051	26.34668	– –	– –	25.20226	– –	– –	– –	24.33114
South Dakota	19.07166	21.61937	17.33200	19.76699	20.36609	20.86800	23.50629	17.38116	17.38116	17.38116	17.38116	17.38116
Tennessee	25.27626	25.04338	25.02904	26.04000	26.04000	26.04538	24.45667	24.55328	23.83116	23.49719	24.70386	24.38566
Texas	– –	– –	25.51014	24.81832	16.25125	16.28000	25.62310	18.68536	19.22769	25.68290	25.71566	25.20226
Utah	23.29600	23.28200	23.09345	23.54893	23.36625	23.21000	23.54375	23.54578	23.54700	23.54652	23.55080	23.54245
Vermont	24.69600	24.63800	24.61419	27.35000	27.53000	25.92200	25.20226	25.20226	25.20226	25.20226	25.20226	25.20226
Virginia	24.99689	25.10405	24.92831	26.40706	26.45535	26.17391	25.04189	25.04500	24.92450	25.00427	24.85854	24.74545
Washington	22.63392	23.09783	22.87154	26.60000	25.98000	25.96100	23.48820	23.50574	23.51911	23.51009	– –	– –
West Virginia	24.82246	24.68019	24.73754	25.76982	25.70998	25.74200	24.76458	24.74624	24.76538	24.71213	24.69710	24.71636
Wisconsin	25.07766	25.05235	24.92021	27.45000	26.79000	27.65942	24.44771	24.30858	24.71652	24.32607	18.94545	24.35425
Wyoming	18.24057	18.19276	18.03000	20.31540	20.19004	20.11600	17.74573	17.83742	17.86023	17.87893	17.86891	17.89542
U.S. Average	23.02709	22.71809	22.37879	23.27631	23.66758	23.36355	22.70619	22.44931	22.48756	22.31421	22.05262	21.91407

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

Table B10. Approximate Heat Content of Coal Consumed by Other Industrial Users, Selected Years, 1960-1994

(Million Btu per Short Ton)

State	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994
Alabama	25.17776	24.96027	23.54166	22.98960	24.10560	24.38311	24.67898	24.58103	24.64283	24.53557	24.65614
Alaska	19.42837	19.25707	18.14004	17.68383	– –	– –	– –	– –	– –	15.80000	16.46473
Arizona	21.61434	21.42376	20.18105	19.77788	20.37305	20.25740	20.07050	19.94197	20.31671	19.99527	20.15810
Arkansas	25.42843	25.20422	– –	21.33575	21.40613	21.30956	22.80790	24.19421	24.00205	23.45115	24.82810
California	26.05221	25.82250	24.32464	22.98540	22.17313	23.29909	22.52224	22.73094	22.97040	23.20026	23.22969
Colorado	23.55826	23.35054	21.99607	21.39183	21.81821	21.56832	21.10513	21.08138	20.10740	20.93740	21.56872
Connecticut	25.78016	25.55285	24.07063	23.62736	– –	24.41914	25.19900	24.84324	24.93613	24.79454	25.27560
Delaware	25.35920	25.12886	23.74325	23.44148	24.47242	24.71973	24.93784	25.07321	25.25103	25.20759	25.24459
District of Columbia	25.88358	25.65536	24.16719	23.78591	24.35746	– –	– –	– –	– –	– –	– –
Florida	– –	– –	– –	23.54145	22.89184	24.77766	25.00471	25.13081	25.00174	24.88237	24.92795
Georgia	25.42319	25.19903	23.73733	23.50777	24.33122	24.81778	25.14819	25.13954	25.14655	25.10235	25.07263
Hawaii	– –	– –	– –	– –	– –	24.68800	24.81000	24.85000	24.83000	24.83000	21.50000
Idaho	22.54363	22.34486	21.04872	19.93455	17.68403	17.76163	17.85823	17.75592	17.52799	18.16523	17.74360
Illinois	23.84790	23.63069	22.26726	21.69430	22.35658	22.79936	22.55646	21.86486	22.75432	22.86151	22.65432
Indiana	24.01127	23.79938	22.41888	21.82415	22.25323	22.43118	22.71236	22.92005	22.95050	22.85609	22.63570
Iowa	23.56545	23.33520	21.98253	21.31980	21.51657	22.61050	22.58587	22.19280	20.56822	20.16583	20.11051
Kansas	22.67087	22.47098	21.16753	20.47974	21.56793	21.50635	24.22372	24.42437	24.48944	23.55304	23.96144
Kentucky	24.73441	24.49683	23.11929	22.90395	24.05911	24.51775	24.63342	24.90217	24.89135	24.83788	24.75797
Louisiana	– –	– –	– –	– –	22.15263	24.05362	19.97897	18.36116	18.56416	18.41604	18.41001
Maine	25.88863	25.62632	24.13365	23.97519	24.43949	24.86127	24.92375	25.01017	25.06970	24.97451	24.96127
Maryland	25.90399	25.67570	24.18970	23.65802	24.48487	24.72752	25.11792	25.14601	25.20668	25.26143	25.40216
Massachusetts	26.14994	25.90591	24.40195	23.79824	24.60203	24.84959	24.87740	24.92877	24.89677	24.90752	24.96452
Michigan	24.83068	24.61006	23.18747	22.89244	24.04413	24.74112	24.45063	24.52149	24.40010	24.20802	24.22421
Minnesota	19.52134	19.34921	18.22684	18.91730	17.08375	20.69045	18.56250	19.36088	18.52981	18.14535	18.50432
Mississippi	25.68109	25.45466	23.97813	23.21260	23.44243	23.39939	23.25386	23.26526	23.34142	24.01959	23.89459
Missouri	23.60136	23.39246	22.03613	21.43028	22.00267	22.32881	22.98843	23.26695	23.43390	23.57812	23.00631
Montana	22.82715	22.62588	21.31344	20.87854	19.03489	18.06841	18.37578	18.47768	18.78661	18.55546	18.33765
Nebraska	21.97456	21.78080	20.51738	19.28537	19.19380	18.59708	19.05305	18.91741	18.44837	18.77025	19.10347
Nevada	26.49581	26.14446	24.78307	23.42175	23.16143	23.56200	23.18400	23.14800	23.09600	23.20000	23.23600
New Hampshire	24.45007	24.23285	22.94496	23.36408	24.11207	24.62418	24.93865	25.26108	25.31936	24.98000	– –
New Jersey	25.38804	25.15576	23.71203	23.37734	23.52635	24.45329	25.23639	25.26680	25.33154	25.26040	25.06850
New Mexico	23.03750	22.83438	21.50984	– –	21.86701	21.62540	21.38800	21.54400	20.39800	21.70600	21.92600
New York	25.71896	25.48611	24.05437	23.63516	24.45387	24.85826	25.10824	25.19174	25.15526	25.14915	25.20620
North Carolina	25.44614	25.22177	23.75876	23.49028	24.41869	24.88021	24.93830	25.10847	25.08579	25.14470	25.10470
North Dakota	14.81208	14.68148	13.82987	13.03850	13.12013	13.16040	13.48903	13.41305	13.32713	13.32920	13.45017
Ohio	24.78928	24.56848	23.14857	22.67582	23.33942	24.17814	24.30376	24.44410	24.42144	24.55123	24.55067
Oklahoma	25.38348	25.15967	– –	23.43863	21.21166	21.43419	22.80216	23.80519	22.75512	22.42776	21.09034
Oregon	22.67719	22.47724	21.17342	20.34784	17.69347	17.86804	17.35230	17.33432	17.88959	19.00958	19.69751
Pennsylvania	25.47879	25.24913	23.88921	23.42998	24.11035	24.67778	24.92015	25.06594	25.08790	25.07589	25.11963
Rhode Island	24.72100	24.31600	23.47600	22.96321	24.09889	24.41914	25.19900	– –	– –	– –	– –
South Carolina	25.42102	25.19405	23.75586	23.47287	24.39898	24.86134	25.11786	25.22595	25.19592	25.17487	25.07478
South Dakota	19.90924	19.73370	18.58902	18.76511	19.21967	17.26200	17.33800	17.46595	17.29575	17.29400	17.26800
Tennessee	25.05567	24.83269	23.41284	23.12927	24.14518	24.57948	25.13269	25.12446	25.25216	25.15832	25.05625
Texas	16.85433	16.90156	17.88528	18.82484	16.29553	15.57653	14.78967	15.05322	14.31012	15.18809	15.48368
Utah	26.19847	25.96747	24.46120	23.64361	22.33114	22.27355	23.18867	23.12437	23.09600	23.49359	22.92161
Vermont	26.52519	26.29132	24.76626	24.05572	24.88781	24.26487	25.07890	25.74698	25.70000	– –	– –
Virginia	25.46128	25.23740	23.77727	23.47269	24.44795	24.90014	25.06954	25.16480	25.19517	25.09637	25.05070
Washington	25.95480	25.72596	24.23369	23.54643	21.36337	21.63429	22.70686	21.74506	20.69363	20.21833	19.27531
West Virginia	25.51633	25.29299	23.83024	23.52175	24.34671	24.84946	24.88832	24.99430	24.94736	24.93580	24.97828
Wisconsin	24.59694	24.37976	22.96605	21.95744	22.73534	23.32295	24.15041	24.30622	24.27108	23.95843	24.16167
Wyoming	20.53852	20.35742	19.17657	18.35566	17.95474	17.55529	22.17752	22.05079	21.11792	21.28174	21.75639
U.S. Average	24.65746	24.46031	23.06438	22.29033	22.69605	22.24945	22.42959	22.45443	22.20892	22.16755	22.02827

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

Table B11. Approximate Heat Content of Coal Consumed by Other Industrial Users, 1995-2006

(Million Btu per Short Ton)

State	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Alabama	24.84808	24.78508	24.67890	24.87433	24.87429	25.45000	25.56317	25.61134	25.60454	25.33626	24.56787	24.70862
Alaska	– –	15.80000	15.84800	15.71000	15.71000	15.71000	15.60000	15.60000	15.60000	15.60000	15.60000	15.60000
Arizona	19.96204	19.79709	19.54036	19.25030	19.23730	22.16400	21.90688	22.34502	22.40728	21.93836	22.16263	22.04758
Arkansas	23.95685	23.98664	23.58123	24.43193	24.43179	25.15400	24.92946	24.79729	24.30495	24.40426	25.22954	24.90428
California	23.29600	23.28200	23.05519	22.99659	22.99659	23.79000	24.12823	23.88255	24.16352	24.12961	23.65788	24.09150
Colorado	21.70231	21.57372	21.57222	21.26260	21.25734	21.70600	21.76792	23.37126	23.21756	22.77619	23.14017	22.74847
Connecticut	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	24.69356	– –
Delaware	25.19175	25.14560	25.21542	25.16859	25.16618	26.15092	26.08942	25.91692	25.68903	26.08198	26.36905	26.40967
District of Columbia	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Florida	25.10701	25.11598	25.05234	25.00217	25.00308	25.75000	25.72868	25.61772	25.50327	25.85017	25.82357	25.40963
Georgia	25.19814	25.13735	25.08994	25.07925	25.07909	25.64200	25.71929	25.89083	25.86071	25.66513	25.58213	25.67680
Hawaii	21.50000	21.50000	22.49862	23.04000	23.04000	19.51800	18.13971	13.21369	26.40000	23.76000	23.87597	27.96538
Idaho	19.03477	18.16585	17.33200	18.15972	18.15972	22.06000	20.56167	20.87305	20.27673	20.34949	20.57427	20.35847
Illinois	22.83681	22.84938	23.17145	23.04887	23.05062	22.55200	22.27503	22.00140	21.63749	21.35039	21.60585	21.65652
Indiana	23.05468	22.71535	23.18017	23.25752	23.26278	23.86600	24.72806	24.56617	24.09312	24.36426	23.44946	23.48307
Iowa	20.97803	21.30743	20.93210	21.17668	21.17762	20.98000	20.98995	20.46674	20.79014	20.23722	20.18304	19.83169
Kansas	24.24071	25.47579	24.52305	24.79541	24.79543	24.15600	23.38449	24.01263	24.28579	24.85503	24.51132	24.00164
Kentucky	24.84676	24.74520	24.48063	24.69544	24.69546	26.40800	26.07951	26.73192	26.18923	26.29921	26.08980	26.10292
Louisiana	18.13611	25.01815	24.85731	25.18061	25.18061	24.50200	24.79641	24.38702	24.23213	24.62068	24.26804	24.09402
Maine	25.10225	25.02589	24.98213	24.50979	24.50979	25.92200	25.87095	25.85521	26.13598	25.57684	25.26999	25.43767
Maryland	25.32368	25.13270	25.11468	25.02943	24.99151	25.07200	26.15043	25.73619	25.39493	25.12167	24.44112	24.17387
Massachusetts	25.17556	24.90749	25.03547	24.47621	24.47621	27.07000	26.97528	27.05517	27.05441	27.23207	27.44733	26.26734
Michigan	24.02603	24.34533	24.35386	23.73938	23.73938	24.91200	25.09757	25.51789	25.63669	25.18729	25.02474	24.87818
Minnesota	19.07827	19.14046	18.86921	18.61519	18.61053	19.29400	19.46505	19.33533	18.93818	18.99910	18.99020	18.93201
Mississippi	24.07263	23.90664	23.67600	24.07408	24.07408	23.92200	24.17841	24.36851	24.14262	23.32565	23.65026	24.16007
Missouri	23.17545	23.13412	22.82012	22.90858	22.91315	23.12800	22.97924	23.15466	23.06086	23.00128	22.79619	22.73549
Montana	18.09956	18.21032	18.24449	17.91315	18.02330	16.01600	16.45749	14.69448	14.62430	14.87796	14.69438	14.46974
Nebraska	19.35912	18.82313	19.13176	19.07469	19.04352	20.50800	19.55943	20.50057	20.26782	20.10598	19.89831	19.42767
Nevada	22.66808	22.61981	22.98074	23.13890	23.13890	23.28000	23.37973	23.05508	23.27639	23.02476	22.61537	22.65562
New Hampshire	25.21628	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
New Jersey	23.98345	24.63800	24.49700	23.78144	23.53789	25.50000	24.80000	25.20000	25.24380	25.23317	25.20163	25.06377
New Mexico	22.00800	21.97600	21.78800	21.98800	21.98800	25.21200	25.06600	24.75071	25.19525	24.67538	24.58808	24.56943
New York	25.11701	25.02823	25.16298	25.04125	25.04584	26.29400	25.53551	25.97046	26.07853	26.15033	26.37665	25.92775
North Carolina	25.26890	25.14978	25.06093	25.06861	25.06878	26.49200	26.75042	26.39726	26.46086	26.32947	26.21123	26.25415
North Dakota	13.35266	13.38232	13.28668	13.34170	13.34170	14.22800	14.17729	13.98412	14.31013	14.34435	14.27845	14.29338
Ohio	24.51161	24.46949	24.43845	24.36431	24.36436	24.81600	25.03997	25.14220	25.08606	25.23022	25.10471	25.03739
Oklahoma	22.67545	22.23193	20.88353	23.32931	23.32931	19.88200	19.97336	20.14169	20.43344	21.17481	21.15552	20.51318
Oregon	19.02589	21.29915	20.52349	20.16974	– –	– –	– –	22.26898	23.08909	21.85459	23.53227	24.54067
Pennsylvania	25.13491	25.06116	25.16267	24.90182	24.90660	24.47600	24.31768	24.11592	24.04275	23.71597	23.08512	22.68587
Rhode Island	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
South Carolina	25.19274	25.06364	25.08769	25.03090	25.03144	26.27000	26.07798	26.33401	26.19595	25.98648	25.82668	25.74241
South Dakota	17.25800	17.30000	17.41854	17.51564	17.51564	20.86800	16.86083	16.85455	16.76268	16.61502	16.63025	16.64773
Tennessee	25.13542	25.02032	25.00384	25.02139	25.02261	26.08800	25.74152	26.03713	26.00196	25.99079	25.90898	25.92540
Texas	14.96538	15.34020	15.55204	14.23099	14.22843	16.28000	17.00044	17.70065	17.54537	17.09972	17.16594	17.29000
Utah	23.00279	23.28200	23.48885	23.05627	23.05627	23.21000	23.45310	23.01697	23.15785	21.02872	23.05499	23.16044
Vermont	– –	– –	24.49700	24.44600	24.44600	– –	– –	– –	– –	– –	– –	– –
Virginia	25.08451	25.09830	24.94586	24.86104	24.86104	26.38600	26.21774	25.65424	26.31620	26.25933	26.11264	26.05355
Washington	19.00628	19.65817	20.64702	23.00664	23.00664	22.33200	22.65849	22.06989	23.17996	21.86739	20.75241	21.28815
West Virginia	24.97467	24.93964	24.96660	24.78222	24.78182	25.74200	25.53245	25.44492	25.17669	24.56337	24.80656	24.95200
Wisconsin	24.21942	23.89132	24.13111	24.27928	24.27942	23.69800	23.54541	23.45084	23.18524	23.15207	23.09987	22.71690
Wyoming	21.94055	21.89685	21.58115	21.93124	21.93124	20.11600	19.98672	20.14835	19.84803	19.91358	19.75331	19.82848
U.S. Average	22.11162	22.15728	22.18651	21.96645	21.88346	22.47646	22.65178	22.57467	22.51083	22.46391	22.17371	22.03659

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

Table B12. Approximate Heat Content of Coal Consumed by the Electric Power Sector, Selected Years, 1960-1994

(Million Btu per Short Ton)

State	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994
Alabama	24.12600	23.70400	23.31400	23.16350	23.91189	24.11116	24.29927	24.30955	24.25124	24.27176	24.21300
Alaska	17.72900	17.85800	17.08000	17.40000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000	15.80000
Arizona	– –	20.85000	21.23800	21.08957	21.24312	20.98564	20.95147	20.69528	20.65065	20.54730	20.56591
Arkansas	– –	– –	– –	– –	17.00887	17.20748	17.47750	17.45691	17.44748	17.33422	17.43423
California	– –	– –	– –	– –	– –	– –	20.70330	21.48931	21.51984	20.36472	22.05471
Colorado	20.54600	21.32200	21.53000	19.80780	19.99201	19.49701	19.65952	19.84719	19.87082	19.84346	20.02006
Connecticut	26.54800	25.90800	23.54800	23.90400	– –	26.31651	25.80757	25.74956	25.73142	25.33500	25.53117
Delaware	25.98200	26.39200	24.18600	24.53412	24.92212	25.92406	26.06306	26.11092	26.12684	26.05616	25.90977
District of Columbia	27.46000	26.94800	25.92000	25.61888	– –	– –	– –	– –	– –	– –	– –
Florida	24.60600	23.76200	22.74800	23.09252	23.68622	24.45038	24.81791	24.77806	24.30273	24.39829	24.22274
Georgia	25.04200	24.93200	23.75600	23.75121	23.80495	24.24094	23.63792	23.75845	23.97928	24.13074	23.32369
Hawaii	– –	– –	– –	– –	– –	– –	17.56757	17.30769	21.77202	22.25097	22.48571
Idaho	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Illinois	21.69400	21.44800	21.00200	20.25912	20.59267	20.96903	21.58672	21.43711	21.57668	20.73708	20.56048
Indiana	22.64000	22.46600	22.03000	21.22923	21.63186	21.31356	21.12450	21.11605	21.14148	21.10610	21.03393
Iowa	20.76800	21.21800	20.88800	20.38486	18.63318	18.19661	17.82578	17.77717	17.72343	17.42828	17.55983
Kansas	23.75400	24.19200	24.10000	19.95680	18.36976	17.53691	17.84113	17.98156	17.72963	17.34725	17.47459
Kentucky	22.97200	22.89200	21.85200	21.48102	22.91705	22.76930	23.09104	23.04490	23.21940	23.35765	23.33411
Louisiana	– –	16.03793	– –	– –	– –	16.90673	16.42027	16.44092	16.24591	16.24590	16.27974
Maine	28.58000	– –	– –	– –	– –	– –	28.00000	26.19913	25.50211	25.50000	25.50211
Maryland	26.61600	26.37200	24.61200	24.32290	24.75727	25.32555	25.47905	25.59031	25.50364	25.50728	25.64576
Massachusetts	26.35200	26.07200	23.26000	24.34726	26.75129	26.56066	26.12189	26.27022	26.14894	25.90039	25.64677
Michigan	24.88400	24.80400	24.20200	23.66213	24.02458	23.39292	22.24344	22.09388	22.00826	21.78981	21.91547
Minnesota	22.39000	22.17600	20.27400	17.94022	17.55670	17.45075	17.64386	17.66237	17.72078	17.75298	17.68430
Mississippi	24.85800	24.89000	24.09800	23.16389	23.99361	24.25244	25.11539	25.11886	25.02120	24.68746	22.61120
Missouri	21.90400	21.55000	21.51800	21.49363	21.30576	21.28922	20.75755	20.57265	20.60369	19.78479	19.34971
Montana	13.50000	13.14000	15.47400	15.95909	17.00328	17.30703	17.10463	17.03682	17.13824	16.98078	16.98694
Nebraska	24.78200	24.56800	23.91400	20.95357	18.80879	17.29876	17.12467	17.08491	17.10644	17.13093	17.16925
Nevada	– –	25.48800	25.65400	22.38788	22.07779	22.76835	22.19062	22.25653	22.08991	22.05208	22.60884
New Hampshire	25.44800	27.90400	27.43200	26.70098	26.81635	26.90451	26.64473	26.52078	26.52041	26.34608	26.10531
New Jersey	26.76842	26.45784	24.94400	25.40124	26.18199	26.47525	26.83090	26.76530	26.88122	26.86979	26.58017
New Mexico	25.00000	18.00400	17.96600	17.84874	17.69514	18.37577	18.23374	18.21130	18.02430	17.98831	18.08926
New York	26.50514	26.67800	24.66400	24.05032	24.63519	25.20035	25.71847	25.85121	25.90782	25.79884	25.90120
North Carolina	26.24200	25.81400	24.11400	23.78836	24.53799	24.97487	25.19066	25.12432	25.03817	25.03573	24.96001
North Dakota	13.83600	13.91800	13.66600	13.34445	13.23368	13.15028	13.26794	13.20103	13.12054	13.14975	13.18614
Ohio	23.77000	23.56400	22.50000	21.91934	22.88041	23.62539	23.77469	23.89863	23.92793	24.08432	23.90231
Oklahoma	25.94198	24.00000	25.07600	25.07607	17.39280	17.16768	17.79161	17.88450	17.73038	17.57122	17.54149
Oregon	– –	– –	– –	– –	16.39258	16.58400	16.69555	16.85837	19.28304	17.60130	17.87420
Pennsylvania	23.43570	24.09503	23.34132	23.49794	24.17625	24.44508	23.35218	23.46570	23.01454	22.94278	22.58965
Rhode Island	28.15200	27.46800	– –	– –	– –	– –	– –	– –	– –	– –	– –
South Carolina	26.73400	25.82200	24.27400	24.16051	24.84295	25.13214	25.30294	25.45216	25.63625	25.59571	25.54903
South Dakota	17.16800	17.90400	16.57200	12.61613	12.59940	12.20986	13.20310	13.05575	13.07256	12.95171	12.94018
Tennessee	24.04000	23.59000	22.59400	21.98283	23.25397	23.65727	23.94393	24.33412	24.35048	24.52504	24.36212
Texas	– –	– –	– –	13.10305	14.79112	14.80734	14.57822	14.45537	14.46625	14.75740	14.76697
Utah	24.94000	25.18400	24.81200	23.64976	22.90042	23.60722	23.00247	22.88724	22.79854	22.81283	22.67316
Vermont	27.76000	27.34000	24.87000	25.74400	25.92600	25.62800	– –	– –	– –	– –	– –
Virginia	26.72600	26.47400	24.78200	23.93019	25.01317	25.62794	25.46145	25.56398	25.69509	25.67493	25.62715
Washington	– –	– –	– –	16.20000	16.20000	16.20000	16.27013	16.01428	16.37870	16.24657	16.80124
West Virginia	23.90800	23.73600	23.31800	23.22075	24.26929	24.82719	24.93097	24.92569	24.75582	24.27763	24.40917
Wisconsin	24.20800	24.03600	22.44600	21.23552	20.52333	19.54733	19.11105	19.16292	19.19254	18.82005	18.99358
Wyoming	14.84600	15.99000	16.53400	16.62585	17.59029	17.50962	17.68200	17.55373	17.70171	17.60368	17.58637
U.S. Average	23.92159	23.78120	22.57470	21.65048	21.35691	21.02274	20.77650	20.72774	20.70652	20.67519	20.58686

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

Table B13. Approximate Heat Content of Coal Consumed by the Electric Power Sector, 1995-2006

(Million Btu per Short Ton)

State	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Alabama	23.71814	23.62530	23.23960	23.11732	22.19134	22.06190	21.89221	22.45197	21.79318	21.47520	21.61294	21.54145
Alaska	15.80000	15.80000	15.80000	16.90141	16.65753	16.57100	16.53408	16.13460	16.26433	16.03953	R 15.27687	15.30577
Arizona	20.57766	20.44148	20.34739	20.38344	20.50387	20.42598	20.30467	20.30611	20.19154	20.39896	R 20.28681	20.26956
Arkansas	17.36965	17.39802	17.41297	17.34710	17.30255	17.35216	17.41107	17.28087	17.01818	16.97863	R 16.95471	16.95785
California	22.06625	23.45821	21.85178	22.24980	23.45239	23.50623	23.53335	23.59704	24.40935	24.37750	R 23.71536	24.38821
Colorado	19.77843	19.90650	19.73791	19.76528	19.55575	19.68516	19.56638	19.57370	19.46454	19.66261	R 19.81655	19.60565
Connecticut	25.61179	25.61007	25.78092	25.60594	24.57017	24.54238	24.57295	22.61785	20.35817	20.58514	R 20.22853	20.32643
Delaware	26.17331	26.03587	26.13235	25.90669	25.85637	25.89995	22.85394	24.64016	24.86200	24.57259	R 24.28918	24.63733
District of Columbia	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Florida	24.30112	24.38155	24.32881	24.27066	24.36377	24.39667	24.19654	24.47833	24.54170	24.31042	R 24.23466	24.05163
Georgia	22.99264	23.07567	23.26596	23.34800	23.25969	23.17564	23.32263	23.27634	23.19329	21.86921	R 21.87928	21.90760
Hawaii	22.46192	21.99277	21.86457	21.98890	21.92900	21.96268	21.95915	22.85558	22.78043	22.38156	R 22.18415	22.07704
Idaho	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Illinois	20.23176	20.09605	19.81497	19.95586	19.88917	19.00766	18.96250	17.98552	18.05192	17.94032	R 17.68141	17.55926
Indiana	20.72512	20.75962	20.84809	20.99836	21.17079	21.18776	21.07405	20.63657	20.77922	20.93008	R 21.19063	21.07852
Iowa	17.46392	17.36788	17.35340	17.75846	17.74086	17.74159	17.75174	17.45934	17.40657	17.36769	R 17.28278	17.29399
Kansas	17.46468	17.63768	17.53745	17.39772	17.28344	17.35757	17.40822	17.09551	17.07787	17.18553	R 17.00119	17.17619
Kentucky	23.29869	23.07877	23.16404	23.09505	23.10287	23.21985	22.85597	23.02596	22.91007	22.74221	R 22.82043	22.85545
Louisiana	16.16720	16.32941	16.25260	16.19171	16.29411	16.06360	16.02309	15.78423	15.83440	15.94057	R 15.95451	16.12599
Maine	25.50000	25.50000	26.00000	25.50000	25.50065	25.50206	25.50913	25.67508	26.34278	25.70385	R 25.85265	25.64576
Maryland	25.92837	25.77953	25.82604	25.83073	25.87305	25.58099	25.39357	25.94153	25.26517	25.16579	R 25.23948	25.19092
Massachusetts	25.40011	25.28340	25.12795	25.11719	25.17950	25.13633	24.58141	24.98333	24.27228	23.58130	R 23.16258	23.10606
Michigan	21.37664	21.04777	21.18818	21.17513	21.03606	20.87626	20.35290	19.80311	19.72285	19.57395	R 19.80124	19.85214
Minnesota	17.69994	17.86324	17.81417	17.80430	17.81200	17.88333	17.84650	17.52943	17.68778	17.63017	R 17.64381	17.63271
Mississippi	22.43229	21.98747	20.96791	21.25237	22.11560	23.07236	23.34428	19.15204	18.37832	18.21678	17.76711	17.96529
Missouri	18.50887	18.16688	17.97357	17.86978	17.90978	17.83803	17.83536	17.58855	17.52202	17.54282	17.62647	17.53874
Montana	16.99483	16.87895	16.81662	16.83133	16.84815	16.76161	16.76781	16.92120	17.00369	16.98384	16.87603	16.85404
Nebraska	17.19095	17.19019	17.19342	17.16400	17.00357	17.26387	17.16865	17.18567	17.23930	17.08374	17.13192	17.01431
Nevada	22.12016	22.27863	22.36387	22.40233	22.49028	22.46450	22.42843	20.35415	22.53116	22.19884	R 22.40665	22.79904
New Hampshire	26.26872	26.25812	26.12156	26.28170	26.33989	26.26371	26.10294	26.03410	26.06670	26.14875	R 25.58350	27.36274
New Jersey	26.51285	26.07115	26.01541	26.14646	26.14399	26.10622	26.00633	25.70562	25.49757	25.38483	R 25.04601	25.00918
New Mexico	18.06103	18.22953	18.14272	18.16905	18.26593	18.38786	18.50342	18.57152	18.35153	18.44799	R 18.54649	18.52520
New York	25.91197	25.83610	26.01414	26.04338	26.10032	26.09609	26.03933	25.59208	25.09965	24.07376	R 23.48868	22.91565
North Carolina	25.05575	24.94896	24.80074	24.85444	24.94669	24.96554	24.69647	24.61092	24.69934	24.59170	R 24.63823	24.38898
North Dakota	13.16609	13.18832	13.09621	13.12410	13.09452	13.05680	13.08158	13.00238	12.83980	12.93321	R 13.19614	13.07231
Ohio	24.24279	24.07984	23.78736	23.81224	23.85473	23.54852	23.09420	23.27825	23.48272	23.41869	23.03406	22.81731
Oklahoma	17.46308	17.48181	17.58891	17.67738	17.56985	17.71738	17.64096	17.63499	17.58214	17.58968	R 17.40067	17.43083
Oregon	17.76504	17.56340	17.51550	17.37069	17.92307	17.27270	17.41227	17.00023	17.12684	16.87973	R 16.83949	16.72021
Pennsylvania	22.65412	22.62252	22.70900	22.84248	23.02907	23.16297	22.44516	23.56468	22.98280	22.89975	22.49018	22.22317
Rhode Island	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
South Carolina	25.70586	25.52136	25.70091	25.55763	25.56171	25.40681	25.12150	24.67291	24.99159	24.89169	24.83801	24.93642
South Dakota	14.27626	18.32551	17.62504	17.75382	17.46863	17.18875	17.08216	16.95465	16.94182	16.95651	R 17.19573	16.94489
Tennessee	24.29681	24.22004	23.99457	24.23173	24.26070	24.20313	24.17211	23.03553	22.89925	22.64532	R 22.02668	21.96961
Texas	14.72568	14.98921	15.01066	15.05700	15.01573	15.19314	15.33008	15.44303	15.24670	15.27832	R 15.38507	15.44616
Utah	22.78871	22.76216	22.40057	22.31132	22.90924	22.92554	22.74758	22.51816	22.30324	22.08164	R 21.70165	22.04669
Vermont	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –	– –
Virginia	25.53894	25.25975	25.15090	25.22663	25.45736	25.67355	25.37158	25.42008	24.39707	24.46955	R 24.70347	24.82489
Washington	16.53810	15.86645	16.08781	16.43364	16.46003	16.19347	16.00174	15.99992	15.79913	16.01374	R 15.83882	16.27828
West Virginia	24.48178	24.50303	24.54181	24.37571	24.47831	24.33315	24.14704	24.20576	24.18395	24.05631	R 23.71011	23.83154
Wisconsin	18.56316	18.47512	18.67642	18.65018	18.59654	18.88566	18.70978	19.23048	18.27612	18.34786	R 19.31630	17.80872
Wyoming	17.54191	17.47664	17.65017	17.63874	17.61607	17.63312	17.72695	17.43899	17.79030	17.64501	17.56342	17.38634
U.S. Average	20.54157	20.54538	20.51618	20.51614	20.48955	20.51062	20.33690	20.23817	20.08181	19.97985	19.98765	19.93054

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

APPENDIX B

Thermal Conversion Factor Source Documentation

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.

Butane. EIA adopted the Bureau of Mines thermal conversion factor of 4.326 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

Butane-Propane Mixture. EIA adopted the Bureau of Mines calculation of 4.130 million Btu per barrel based on an assumed mixture of 60 percent butane and 40 percent propane. See **Butane** and **Propane**.

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. EIA adopted the thermal conversion factor of 5.825 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."

Ethane. EIA adopted the Bureau of Mines thermal conversion factor of 3.082 million Btu per barrel as published in the *California Oil World and Petroleum Industry,* First Issue, April 1942.

Ethane-Propane Mixture. EIA calculated 3.308 million Btu per barrel on the basis of an assumed mixture of 70 percent ethane and 30 percent propane. See **Ethane** and **Propane**.

Isobutane. EIA adopted the Bureau of Mines thermal conversion factor of 3.974 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

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: U.S. Department of the Interior, Bureau of Mines, *Mineral Industry Surveys*, "Crude Petroleum and Petroleum Products, 1956," Table 4 footnote, constant value of 4.011 million Btu per barrel. • 1967 forward: 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: 1967 through 1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual," Table 1. 1981 through 2004: EIA, *Petroleum Supply Annual*, Table 2. 2005: EIA, *Petroleum Supply Annual*, Table 1.

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 1993: 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. • 1994 forward: EIA calculates national annual quantity-weighted average conversion factors for conventional, reformulated, and oxygenated motor gasolines (see Table B1). The factor for conventional motor gasoline is 5.253 million Btu per barrel, as used for previous years. The factors for reformulated and oxygenated gasolines, both currently 5.150 million Btu per barrel, are based on data published in the Environmental Protection Agency, Office of Mobile Sources, National Vehicle and Fuel Emissions Laboratory report EPA 420-F-95-003, *Fuel Economy Impact Analysis of Reformulated Gasoline*.

Natural Gasoline. EIA adopted the thermal conversion factor of 4.620 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

Pentanes Plus. EIA assumed the thermal conversion factor to be 4.620 million Btu per barrel, equal to that for natural gasoline. See **Natural Gasoline**.

Petrochemical Feedstocks, Naphtha Less Than 401 ºF. 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 ºF. 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. EIA adopted the thermal conversion factor of 6.024 million Btu per barrel as reported in Btu per short ton in a Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Value of Various Fuels, Adopted January 3, 1950." The Bureau of Mines calculated this factor by dividing 30,120,000 Btu per short ton, as given in the referenced Bureau of Mines internal memorandum, by 5.0 barrels per short ton, as given in the Bureau of Mines Form 6–1300–M and successor EIA forms.

Petroleum Products, Total Consumption. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed, weighted by the quantity of each petroleum product consumed.

Plant Condensate. EIA estimated 5.418 million Btu per barrel from data provided by McClanahan Consultants, Inc., Houston, Texas.

Propane. EIA adopted the Bureau of Mines thermal conversion factor of 3.836 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

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. EIA adopted the Bureau of Mines estimated thermal conversion factor of 6.000 million Btu per barrel and first published in the *Petroleum Statement, Annual, 1970*.

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 Stream. EIA assumed the thermal conversion factor to be 5.418 million Btu per barrel, equal to that for plant condensate and first published in the EIA, *Annual Report to Congress, Volume 2, 1981*. See **Plant Condensate**.

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

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.doe.gov/oil_gas/natural_gas/data_publications /natural_gas_annual/nga_historical.html and unpublished revisions.

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, http://www.eia.doe.gov/cneaf/ electricity/cq/cq_sum.html. 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, nonutility power plants and combined heat-and-power plants) by the total quantity consumed in physical units collected by the EIA on Forms EIA-906, "Power Plant Report," and the EIA-920, "Combined Heat and Power Plant Report," and predecessor forms http://www.eia.doe.gov/cneaf/electricity/ page/eia906_920.html.

Approximate Heat Content of Coal and Coal Coke

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 "Oven coke 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." 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: 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 1997 edition is available electronically only via Internet at: http://tonto.eia.doe.gov/bookshelf/index.html, click on "Electricity." 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 Forms EIA-906, "Power Plant Report," and the EIA-920, "Combined Heat and Power Plant Report," and predecessor forms http://www.eia.doe.gov /cneaf/electricity/page/eia906_920.html. • 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 Coal Consumption and Quality Report, Manufacturing Plants," 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;" 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 FERC Form 423 and Form EIA-423.

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 the EIA-860. For States that are not represented in data on the EIA-860, it is assumed that the heat content of the coal receipts in theses sectors is equivalent to the heat content of coal received in the other industrial sector. For States that are not represented in either the EIA-3A data or the 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, since the origin of the coal receipts are similar. • 2001 forward: 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.

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

Fuel Ethanol. Fuel ethanol, which is derived from agricultural feedstocks (primarily corn) and blended into motor gasoline, is computed separately in SEDS to display the use of renewable energy in the commercial, industrial, and transportation sector. EIA adopted the thermal conversion factor of 3.539 million Btu per barrel 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.

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

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, wind, photovoltaic, or solar thermal energy sources. Therefore, EIA uses data from Form EIA–767 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-906, "Power Plant Report." The computation includes data for all electric utilities and electricity-only independent power producers using fossil fuels.

Geothermal Energy Plant Generation. (GEETKUS) • 1960 through 1981: Calculated by EIA by weighting the annual average heat rates of operating geothermal units by the installed nameplate capacities as reported on FPC Form 12. • 1982 forward: Estimated annually by EIA based on an informal survey of relevant plants.

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-906, "Power Plant Report" (and predecessor forms).