

Section 2. Energy Consumption by Sector

U.S. total energy consumption in July 2004 was 8.4 quadrillion Btu, 1 percent higher than in July 2003.

Residential sector total consumption was 1.7 quadrillion Btu in July 2004, slightly lower than the July 2003 level. The sector accounted for 21 percent of total energy consumption.

Commercial sector total consumption was 1.5 quadrillion Btu in July 2004, 1 percent lower than the July 2003 level. The sector accounted for 18 percent of total energy consumption.

Industrial sector total consumption was 2.8 quadrillion Btu in July 2004, 1 percent higher than the July 2003 level. The

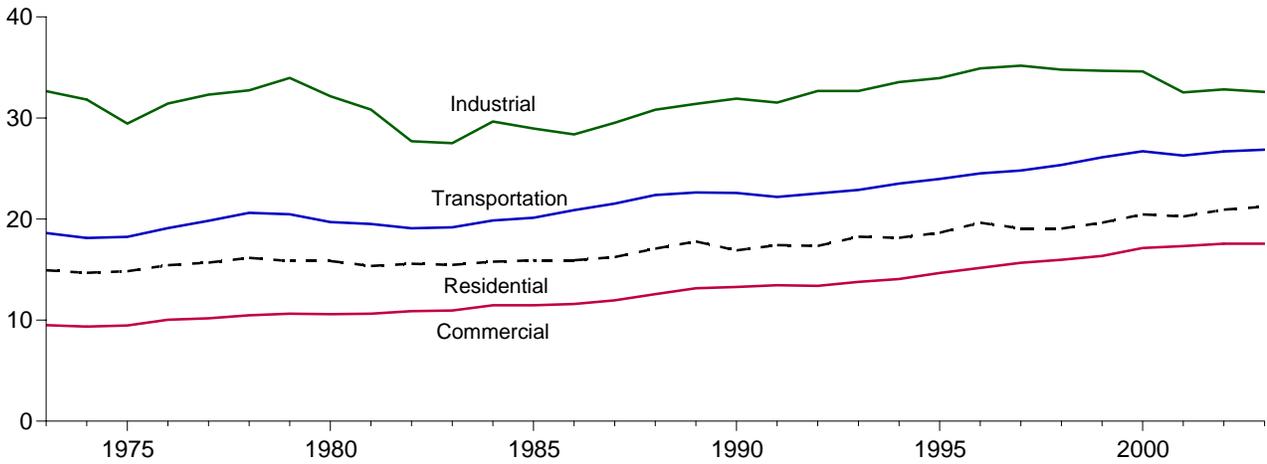
sector accounted for 33 percent of total energy consumption.

Transportation sector total consumption was 2.4 quadrillion Btu in July 2004, 2 percent higher than the July 2003 level. The sector accounted for 29 percent of total energy consumption.

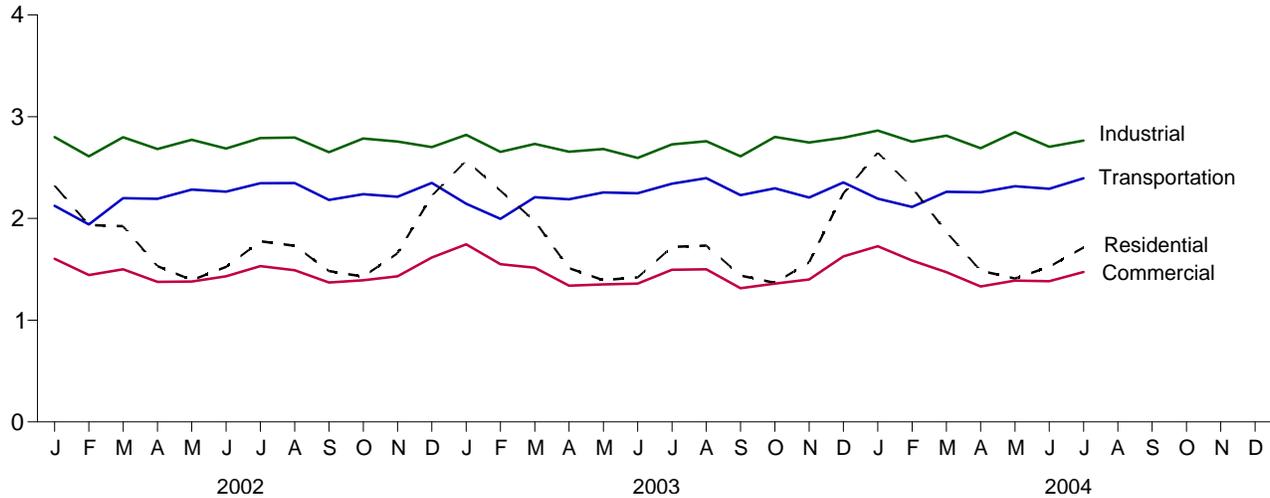
Electric power sector primary consumption was 3.7 quadrillion Btu in July 2004, slightly lower than the July 2003 level. Fossil fuels accounted for 71 percent of all primary energy consumed by the electric power sector; nuclear electric power 20 percent; and renewable energy 9 percent.

Figure 2.1 Energy Consumption by Sector
(Quadrillion Btu)

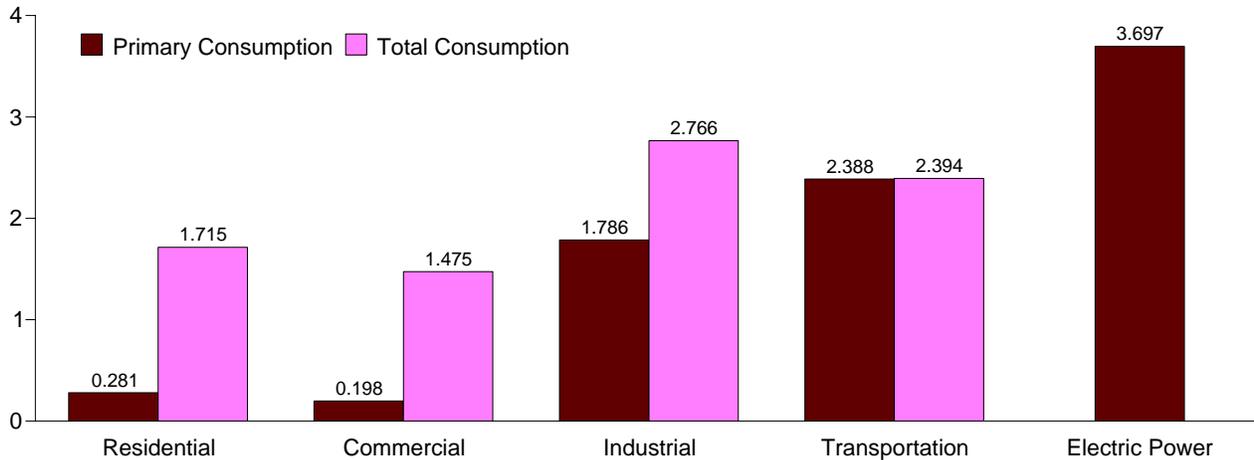
Total Consumption by End-Use Sector, 1973-2003



Total Consumption by End-Use Sector, Monthly



By Sector, July 2004



Note: Because vertical scales differ, graphs should not be compared.
 Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
 Source: Table 2.1.

Table 2.1 Energy Consumption by Sector
(Quadrillion Btu)

	End-Use Sectors								Electric Power Sector ^{c,d}	Adjustments ^e	Total ^b
	Residential		Commercial ^a		Industrial ^b		Transportation				
	Primary	Total	Primary	Total	Primary	Total	Primary	Total			
1973 Total	8.250	14.930	4.381	9.507	24.741	32.653	18.576	18.612	19.753	0.007	75.708
1974 Total	7.928	14.683	4.221	9.363	23.816	31.819	18.086	18.119	19.933	.007	73.991
1975 Total	8.006	14.842	4.023	9.466	21.454	29.447	18.209	18.244	20.307	.001	71.999
1976 Total	8.408	15.441	4.333	10.035	22.685	31.429	19.065	19.099	21.513	.008	76.012
1977 Total	8.207	15.689	4.217	10.177	23.193	32.307	19.784	19.820	22.591	.007	78.000
1978 Total	8.272	16.156	4.269	10.481	23.277	32.733	20.580	20.615	23.587	.002	79.986
1979 Total	7.934	15.842	4.333	10.627	24.211	33.962	20.436	20.471	23.987	.002	80.903
1980 Total	7.504	15.848	4.097	10.594	22.673	32.152	19.658	19.696	24.359	-.001	78.289
1981 Total	7.103	15.353	3.831	10.638	21.404	30.836	19.476	19.513	24.525	.003	76.342
1982 Total	7.163	15.577	3.859	10.880	19.112	27.704	19.051	19.088	24.063	.004	73.253
1983 Total	6.834	15.459	3.827	10.952	18.598	27.511	19.133	19.176	24.705	.003	73.101
1984 Total	6.992	15.777	3.989	11.463	20.208	29.643	19.804	19.851	25.741	.003	76.736
1985 Total	6.992	15.928	3.708	11.465	19.540	28.958	20.075	20.122	26.158	-.004	76.469
1986 Total	6.812	15.927	3.647	11.600	19.133	28.375	20.828	20.877	26.359	.003	76.782
1987 Total	6.846	16.233	3.738	11.951	20.046	29.519	21.474	21.524	27.124	-.003	79.225
1988 Total	7.249	17.069	3.948	12.571	20.958	30.818	22.331	22.382	28.354	.003	82.844
1989 Total	7.495	17.774	3.952	13.156	20.888	31.396	22.568	22.622	30.044	.009	84.957
1990 Total	6.460	16.900	3.810	13.281	21.235	31.918	22.535	22.589	30.647	-.020	84.668
1991 Total	6.692	17.414	3.860	13.458	20.903	31.527	22.142	22.195	30.999	.001	84.595
1992 Total	6.883	17.339	3.898	13.394	21.806	32.673	22.489	22.542	30.873	(s)	85.949
1993 Total	7.122	18.249	3.892	13.788	21.738	32.668	22.830	22.883	32.006	-.010	87.578
1994 Total	6.949	18.135	3.930	14.059	22.376	33.557	23.448	23.503	32.551	-.006	89.248
1995 Total	7.022	18.653	4.032	14.665	22.643	33.941	23.905	23.960	33.616	.003	91.221
1996 Total	7.556	19.643	4.218	15.161	23.364	34.905	24.456	24.511	34.626	.004	94.224
1997 Total	7.088	19.067	4.248	15.679	23.608	35.167	24.753	24.808	35.024	.006	94.727
1998 Total	6.462	19.052	3.956	15.964	23.067	34.777	25.301	25.357	36.363	-.003	95.146
1999 Total	6.810	19.634	3.984	16.347	22.826	34.679	26.050	26.108	37.097	.006	96.774
2000 Total	7.147	20.453	4.192	17.129	22.740	34.616	26.645	26.705	38.180	.002	98.905
2001 Total	6.909	20.247	4.044	17.323	21.834	32.527	26.215	26.276	37.372	.004	96.378
2002 January	1.048	2.323	.550	1.604	1.970	2.799	2.120	2.124	3.162	-.001	8.849
February	.910	1.935	.495	1.445	1.807	2.611	1.938	1.942	2.782	-.004	7.928
March	.855	1.925	.467	1.500	1.928	2.799	2.196	2.200	2.978	-.003	8.421
April	.577	1.532	.345	1.377	1.807	2.682	2.188	2.193	2.866	-.002	7.782
May	.402	1.394	.259	1.380	1.840	2.772	2.279	2.284	3.050	.000	7.830
June	.299	1.524	.210	1.431	1.751	2.687	2.258	2.263	3.388	.004	7.910
July	.271	1.775	.204	1.531	1.824	2.791	2.340	2.346	3.803	.009	8.452
August	.257	1.731	.202	1.492	1.841	2.795	2.342	2.347	3.724	.008	8.374
September	.264	1.484	.204	1.370	1.758	2.651	2.178	2.183	3.284	.004	7.691
October	.414	1.428	.271	1.392	1.884	2.786	2.233	2.238	3.042	-.001	7.843
November	.661	1.658	.385	1.432	1.869	2.755	2.209	2.214	2.935	-.002	8.057
December	.987	2.223	.527	1.616	1.817	2.701	2.345	2.349	3.214	-.001	8.888
Total	6.946	20.934	4.118	17.568	22.096	32.830	26.626	26.683	38.228	.011	98.026
2003 January	R 1.208	R 2.569	R .638	R 1.746	R 1.949	R 2.822	2.140	2.144	3.346	.001	R 9.281
February	R 1.108	R 2.273	.586	1.551	R 1.844	R 2.654	1.991	R 1.996	2.943	-.003	8.470
March	R .875	R 1.975	.481	1.516	R 1.866	R 2.733	2.204	2.208	3.006	-.004	8.429
April	R .589	R 1.511	.341	1.339	R 1.772	R 2.655	2.184	2.188	2.806	-.005	R 7.688
May	.394	1.395	.246	1.352	R 1.748	R 2.683	R 2.251	2.255	3.047	-.001	R 7.684
June	.292	1.421	.199	1.360	R 1.652	R 2.595	2.243	2.248	3.238	.001	R 7.625
July	.273	1.719	.200	R 1.495	R 1.772	R 2.728	2.336	2.341	3.702	.004	R 8.288
August	.263	1.733	.202	1.501	R 1.783	R 2.759	2.391	2.397	3.750	.006	R 8.395
September	.278	1.439	.200	1.314	R 1.746	R 2.611	2.224	2.229	3.144	.001	R 7.594
October	.396	1.367	.254	1.360	R 1.880	R 2.801	2.292	2.297	3.004	-.001	R 7.824
November	.590	1.569	.335	1.400	R 1.836	R 2.747	2.201	2.206	2.960	-.002	R 7.920
December	.971	2.247	.503	1.627	R 1.891	R 2.794	2.349	2.354	3.307	-.001	R 9.021
Total	R 7.236	R 21.226	R 4.185	R 17.557	R 21.741	R 32.577	26.805	26.863	38.255	-.005	R 98.219
2004 January	R 1.231	R 2.646	R .621	R 1.727	1.968	R 2.864	2.188	R 2.195	3.424	(s)	9.432
February	1.087	R 2.306	.574	R 1.586	1.896	R 2.755	2.106	R 2.113	3.097	-.001	8.759
March	R .795	R 1.866	.443	R 1.473	1.912	R 2.813	2.257	R 2.262	3.008	-.004	8.410
April	R .564	R 1.487	.330	R 1.332	R 1.788	R 2.690	2.252	R 2.258	2.833	-.004	R 7.763
May	.367	R 1.410	.235	R 1.390	R 1.840	R 2.848	2.310	R 2.316	3.211	(s)	R 7.965
June	R .290	R 1.526	.200	R 1.384	R 1.745	R 2.704	R 2.286	R 2.292	R 3.384	.003	R 7.908
July	.281	1.715	.198	1.475	1.786	2.766	2.388	2.394	3.697	.003	8.353
7-Month Total	4.615	12.955	2.601	10.366	12.936	19.440	15.787	15.831	22.654	-.003	58.589
2003 7-Month Total	4.738	12.861	2.690	10.359	12.605	18.871	15.349	15.381	22.090	-.007	57.465
2002 7-Month Total	4.363	12.408	2.530	10.268	12.927	19.142	15.320	15.352	22.029	.003	57.173

^a Commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See note at end of Section 7.

^b Industrial sector fuel use, including that at industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See note at end of Section 7.

^c The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

^d Through 1988, data are for consumption at electric utilities only. Beginning in 1989, data also include consumption at independent power producers.

^e A balancing item. The sum of primary consumption in the five energy-use

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

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

Notes: • Primary consumption includes coal, natural gas, petroleum, nuclear electric power, hydroelectric power, wood, waste, alcohol fuels, geothermal, solar, wind, coal coke net imports, and electricity net imports. • Total consumption includes primary consumption, electricity retail sales, and electrical system energy losses. • Totals may not equal sum of components due to independent rounding.

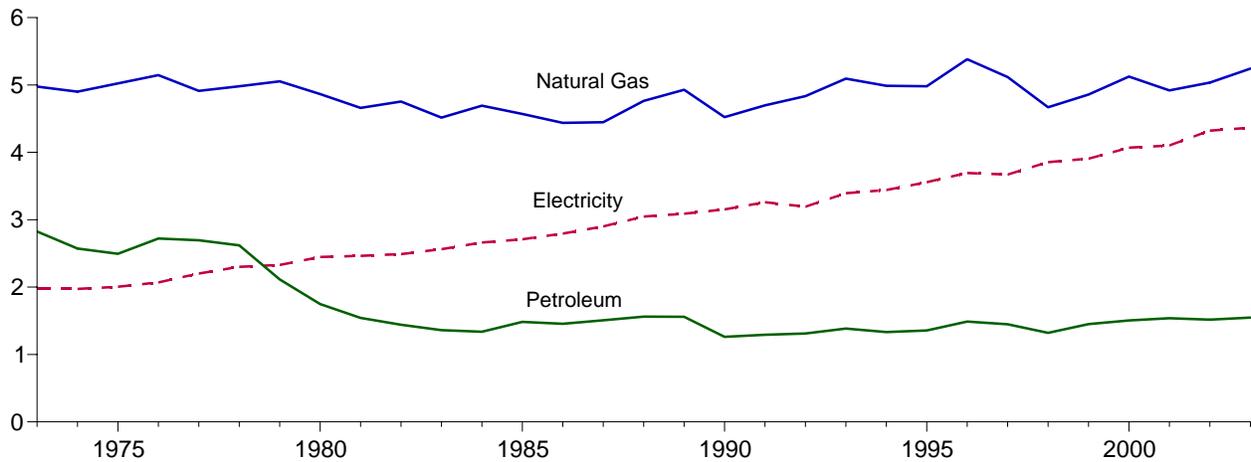
• Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>

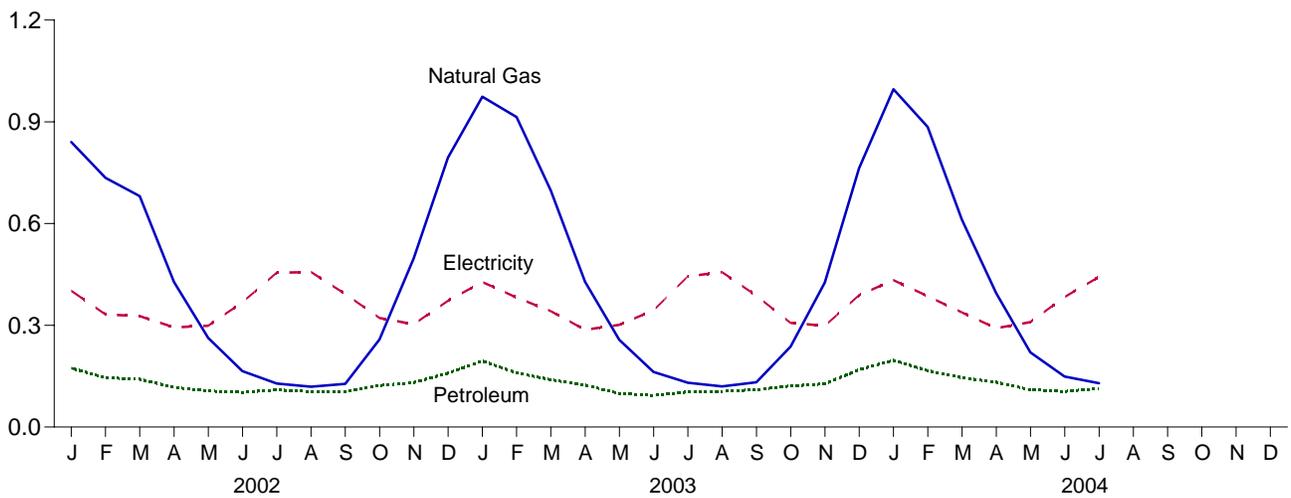
Additional Notes and Sources: See Tables 2.2-2.6 and end of section.

Figure 2.2 Residential Sector Energy Consumption
(Quadrillion Btu)

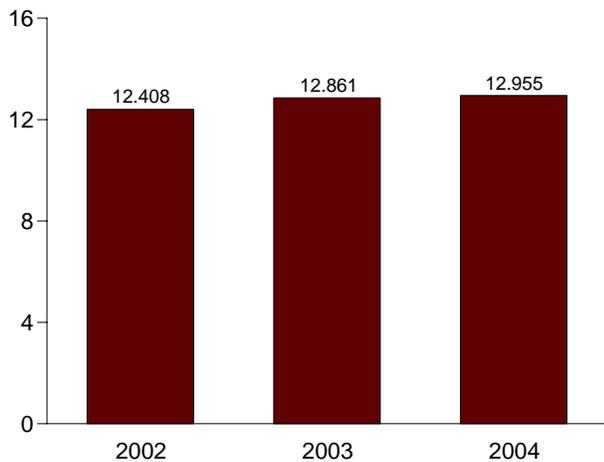
By Major Sources, 1973-2003



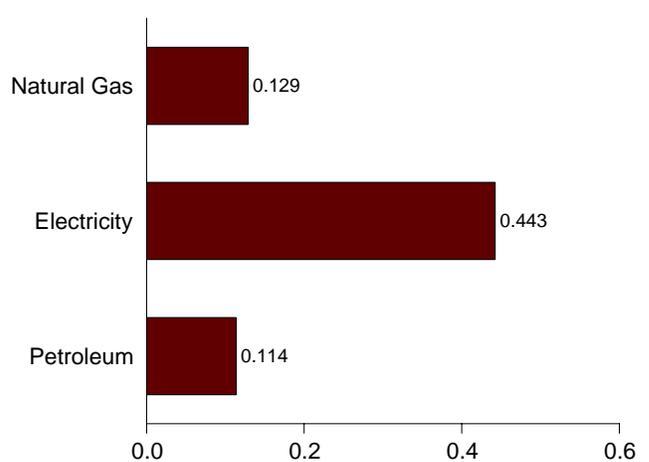
By Major Sources, Monthly



Total, January-July



By Major Sources, July 2004



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.2.

Table 2.2 Residential Sector Energy Consumption
(Quadrillion Btu)

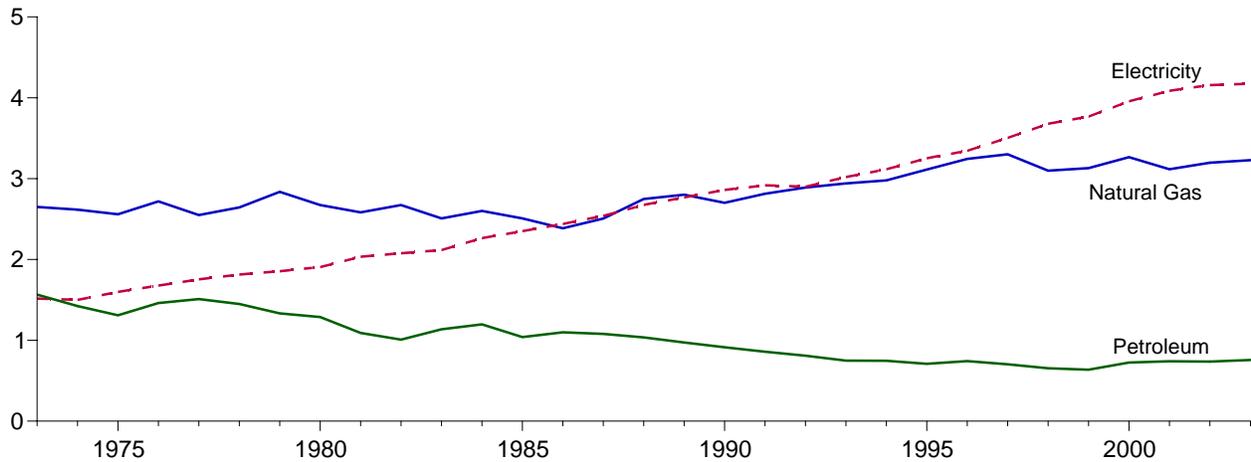
	Primary Consumption								Total Primary	Electricity Retail Sales ^e	Electrical System Energy Losses ^f	Total
	Fossil Fuels				Renewable Energy ^a							
	Coal	Natural Gas ^b	Petroleum	Total	Wood	Geo-thermal ^c	Solar ^d	Total				
1973 Total	0.094	4.977	2.825	7.896	0.354	NA	NA	0.354	8.250	1.976	4.703	14.930
1974 Total	.082	4.901	2.573	7.557	.371	NA	NA	.371	7.928	1.973	4.783	14.683
1975 Total	.063	5.023	2.495	7.580	.425	NA	NA	.425	8.006	2.007	4.829	14.842
1976 Total	.059	5.147	2.720	7.927	.482	NA	NA	.482	8.408	2.069	4.963	15.441
1977 Total	.057	4.913	2.695	7.666	.542	NA	NA	.542	8.207	2.202	5.280	15.689
1978 Total	.049	4.981	2.620	7.651	.622	NA	NA	.622	8.272	2.301	5.582	16.156
1979 Total	.037	5.055	2.114	7.206	.728	NA	NA	.728	7.934	2.330	5.578	15.842
1980 Total	.031	4.866	1.748	6.645	.859	NA	NA	.859	7.504	2.448	5.897	15.848
1981 Total	.030	4.660	1.543	6.234	.869	NA	NA	.869	7.103	2.464	5.786	15.353
1982 Total	.032	4.753	1.441	6.226	.937	NA	NA	.937	7.163	2.489	5.925	15.577
1983 Total	.031	4.516	1.362	5.909	.925	NA	NA	.925	6.834	2.562	6.063	15.459
1984 Total	.040	4.692	1.337	6.069	.923	NA	NA	.923	6.992	2.662	6.123	15.777
1985 Total	.039	4.571	1.483	6.093	.899	NA	NA	.899	6.992	2.709	6.227	15.928
1986 Total	.040	4.439	1.457	5.936	.876	NA	NA	.876	6.812	2.795	6.320	15.927
1987 Total	.037	4.449	1.508	5.994	.852	NA	NA	.852	6.846	2.902	6.485	16.233
1988 Total	.037	4.765	1.563	6.364	.885	NA	NA	.885	7.249	3.046	6.774	17.069
1989 Total	.031	4.929	1.560	6.519	.918	.005	.053	.976	7.495	3.090	7.189	17.774
1990 Total	.031	4.523	1.263	5.817	.581	.006	.056	.642	6.460	3.153	7.287	16.900
1991 Total	.025	4.697	1.293	6.015	.613	.006	.058	.677	6.692	3.260	7.463	17.414
1992 Total	.026	4.835	1.311	6.172	.645	.006	.060	.711	6.883	3.193	7.263	17.339
1993 Total	.026	5.095	1.385	6.506	.548	.007	.062	.616	7.122	3.394	7.733	18.249
1994 Total	.021	4.988	1.333	6.342	.537	.006	.064	.607	6.949	3.441	7.746	18.135
1995 Total	.017	4.981	1.356	6.355	.596	.007	.065	.667	7.022	3.557	8.073	18.653
1996 Total	.017	5.383	1.489	6.888	.595	.007	.065	.667	7.556	3.694	8.393	19.643
1997 Total	.016	5.118	1.448	6.582	.433	.008	.065	.506	7.088	3.671	8.308	19.067
1998 Total	.012	4.669	1.322	6.003	.387	.008	.065	.459	6.462	3.856	8.733	19.052
1999 Total	.014	4.858	1.452	6.324	.414	.009	.064	.486	6.810	3.906	8.917	19.634
2000 Total	.011	5.126	1.506	6.643	.433	.009	.061	.503	7.147	4.069	9.238	20.453
2001 Total	.012	4.919	1.539	6.470	.370	.009	.060	.439	6.909	4.103	9.234	20.247
2002 January	.001	.840	.174	1.015	.027	.001	.005	.032	1.048	.402	.873	2.323
February	.001	.735	.145	.881	.024	.001	.005	.029	.910	.332	.692	1.935
March	.001	.681	.141	.823	.027	.001	.005	.032	.855	.327	.742	1.925
April	.001	.428	.117	.546	.026	.001	.005	.031	.577	.294	.661	1.532
May	.001	.263	.106	.370	.027	.001	.005	.032	.402	.299	.693	1.394
June	.001	.165	.102	.268	.026	.001	.005	.031	.299	.368	.857	1.524
July	.001	.128	.109	.239	.027	.001	.005	.032	.271	.455	1.049	1.775
August	.001	.119	.105	.224	.027	.001	.005	.032	.257	.457	1.017	1.731
September	.001	.128	.104	.232	.026	.001	.005	.031	.264	.392	.828	1.484
October	.001	.258	.123	.381	.027	.001	.005	.032	.414	.322	.693	1.428
November	.001	.497	.131	.630	.026	.001	.005	.031	.661	.303	.693	1.658
December	.001	.794	.159	.955	.027	.001	.005	.032	.987	.372	.863	2.223
Total	.011	5.036	1.516	6.564	.313	.010	.059	.382	6.946	4.323	9.665	20.934
2003 January	.001	R .974	.195	R 1.171	.030	.002	.005	.037	R 1.208	.428	.933	R 2.569
February	.001	R .914	.160	R 1.075	.028	.001	.004	.033	R 1.108	.382	.782	R 2.273
March	.001	R .697	.140	R .838	.030	.002	.005	.037	R .875	.342	.758	R 1.975
April	.001	.429	.124	R .553	.030	.001	.005	.036	R .589	.287	.635	R 1.511
May	.001	.257	.099	.357	.030	.002	.005	.037	.394	.301	.700	1.395
June	.001	.163	.093	.257	.030	.001	.005	.036	.292	.344	.784	1.421
July	.001	.131	.104	.236	.030	.002	.005	.037	.273	.444	1.002	1.719
August	.001	.120	.105	.226	.030	.002	.005	.037	.263	.457	1.013	1.733
September	.001	.132	.110	.243	.030	.001	.005	.036	.278	.387	.774	1.439
October	.001	.237	.121	.359	.030	.002	.005	.037	.396	.307	.664	1.367
November	.001	.426	.127	.554	.030	.001	.005	.036	.590	.298	.681	1.569
December	.002	.763	.169	.934	.030	.002	.005	.037	.971	.389	.887	2.247
Total	.012	R 5.243	1.547	R 6.802	.359	.018	.058	.435	R 7.236	4.367	9.622	R 21.226
2004 January	.001	R .996	.197	R 1.194	.030	.002	.005	.037	R 1.231	.433	R .982	R 2.646
February	.001	.885	.166	1.052	.028	.001	.005	.034	1.087	R .386	R .834	R 2.306
March	.001	.611	.146	R .758	.030	.002	.005	.037	R .795	R .338	R .733	R 1.866
April	.001	R .395	.132	R .528	.029	.001	.005	.036	R .564	R .292	R .631	R 1.487
May	.001	.220	.110	.331	.030	.002	.005	.037	.367	R .309	R .733	R 1.410
June	.001	R .149	.105	R .255	.029	.001	.005	.036	R .290	R .383	R .852	R 1.526
July	.001	.129	.114	.244	.030	.002	.005	.037	.281	.443	.991	1.715
7-Month Total	.007	3.386	.969	4.362	.209	.010	.034	.253	4.615	2.584	5.757	12.955
2003 7-Month Total	.007	3.565	.915	4.486	.209	.010	.034	.253	4.738	2.529	5.594	12.861
2002 7-Month Total	.007	3.240	.895	4.142	.182	.006	.034	.222	4.363	2.476	5.568	12.408

a All values are estimated; see Table 10.2a.
b Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
c Geothermal heat pump and direct use energy.
d Solar thermal direct use and photovoltaic electricity generation. Includes small amounts of commercial sector use.
e Electricity retail sales to ultimate customers reported by electric utilities and

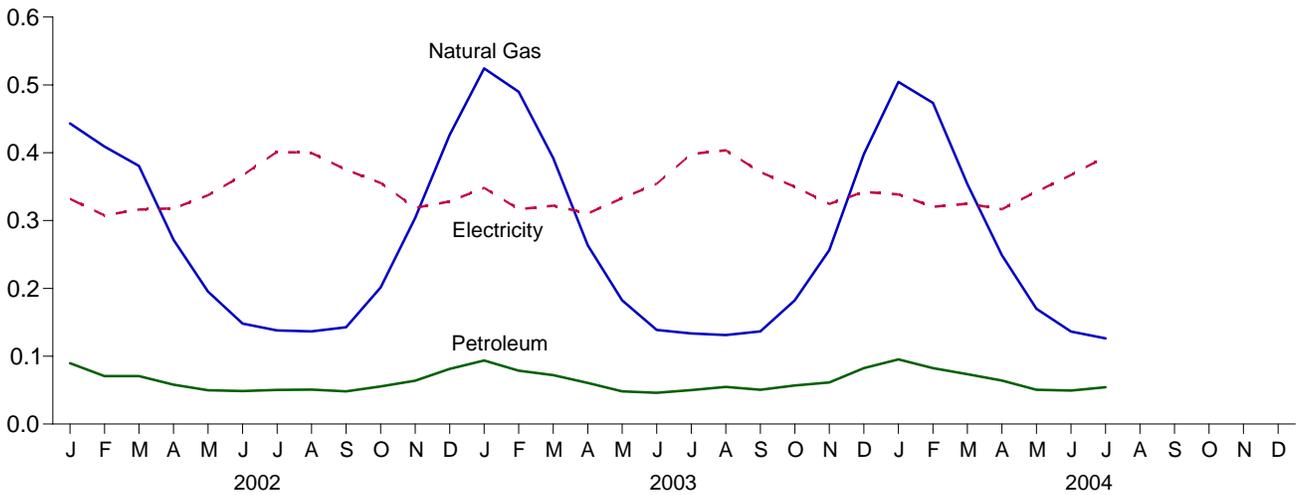
other energy service providers.
f See Note 12 at end of section.
R=Revised. NA=Not available.
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Additional Notes and Sources: See end of section.

Figure 2.3 Commercial Sector Energy Consumption
(Quadrillion Btu)

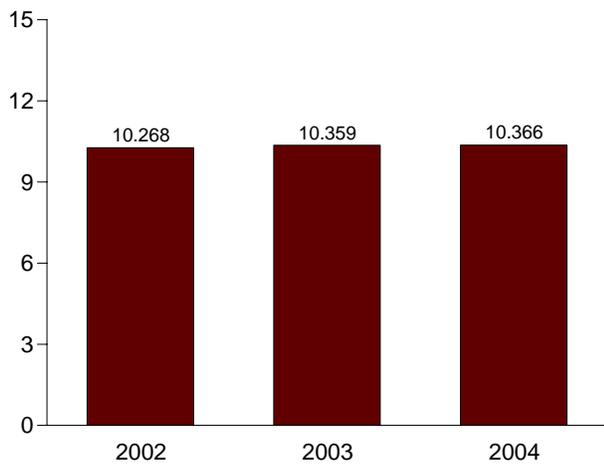
By Major Sources, 1973-2003



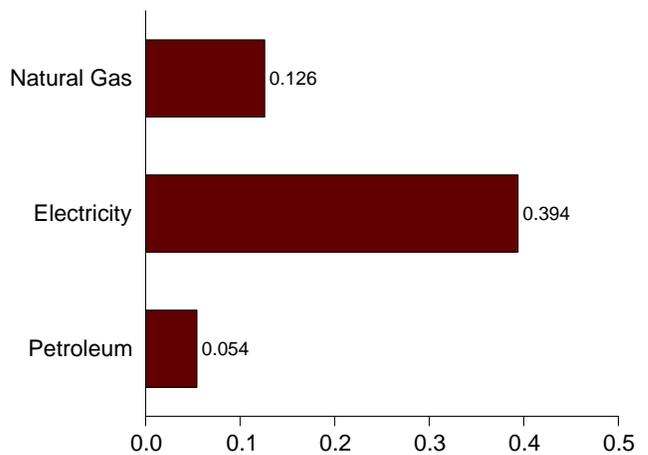
By Major Sources, Monthly



Total, January-July



By Major Sources, July 2004



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.3.

Table 2.3 Commercial Sector Energy Consumption
(Quadrillion Btu)

	Primary Consumption								Total Primary	Electricity Retail Sales ^e	Electrical System Energy Losses ^f	Total
	Fossil Fuels				Renewable Energy ^a							
	Coal	Natural Gas ^b	Petroleum	Total	Hydro-power ^c	Wood and Waste	Geo-thermal ^d	Total				
1973 Total	0.160	2.649	1.565	4.374	NA	0.007	NA	0.007	4.381	1.517	3.609	9.507
1974 Total	.175	2.617	1.423	4.214	NA	.007	NA	.007	4.221	1.501	3.640	9.363
1975 Total	.147	2.558	1.310	4.015	NA	.008	NA	.008	4.023	1.598	3.845	9.466
1976 Total	.144	2.718	1.461	4.324	NA	.009	NA	.009	4.333	1.678	4.025	10.035
1977 Total	.148	2.548	1.511	4.207	NA	.010	NA	.010	4.217	1.754	4.206	10.177
1978 Total	.165	2.643	1.450	4.257	NA	.012	NA	.012	4.269	1.813	4.398	10.481
1979 Total	.149	2.836	1.334	4.319	NA	.014	NA	.014	4.333	1.854	4.439	10.627
1980 Total	.115	2.674	1.288	4.076	NA	.021	NA	.021	4.097	1.906	4.591	10.594
1981 Total	.137	2.583	1.090	3.810	NA	.021	NA	.021	3.831	2.033	4.774	10.638
1982 Total	.155	2.673	1.008	3.837	NA	.022	NA	.022	3.859	2.077	4.944	10.880
1983 Total	.162	2.508	1.136	3.805	NA	.022	NA	.022	3.827	2.116	5.008	10.952
1984 Total	.169	2.600	1.198	3.967	NA	.022	NA	.022	3.989	2.264	5.209	11.463
1985 Total	.137	2.508	1.039	3.684	NA	.024	NA	.024	3.708	2.351	5.405	11.465
1986 Total	.135	2.386	1.099	3.620	NA	.027	NA	.027	3.647	2.439	5.515	11.600
1987 Total	.125	2.505	1.079	3.709	NA	.029	NA	.029	3.738	2.539	5.674	11.951
1988 Total	.131	2.748	1.037	3.916	NA	.032	NA	.032	3.948	2.675	5.948	12.571
1989 Total	.115	2.802	.973	3.891	.001	.058	.003	.061	3.952	2.767	6.437	13.156
1990 Total	.124	2.701	.913	3.739	.001	.067	.003	.071	3.810	2.860	6.611	13.281
1991 Total	.116	2.813	.859	3.788	.001	.068	.003	.072	3.860	2.918	6.681	13.458
1992 Total	.117	2.890	.811	3.817	.001	.077	.003	.081	3.899	2.900	6.596	13.394
1993 Total	.117	2.942	.750	3.809	.001	.079	.003	.084	3.892	3.019	6.877	13.788
1994 Total	.118	2.979	.747	3.844	.001	.081	.004	.086	3.930	3.116	7.013	14.059
1995 Total	.117	3.113	.710	3.940	.001	.086	.005	.092	4.032	3.252	7.381	14.665
1996 Total	.122	3.244	.743	4.108	.001	.103	.005	.110	4.218	3.344	7.599	15.161
1997 Total	.129	3.302	.704	4.135	.001	.107	.006	.113	4.248	3.503	7.928	15.679
1998 Total	.093	3.098	.653	3.845	.001	.102	.007	.111	3.956	3.678	8.330	15.964
1999 Total	.103	3.130	.637	3.870	.001	.106	.007	.114	3.984	3.766	8.597	16.347
2000 Total	.092	3.265	.726	4.083	.001	.100	.008	.109	4.192	3.956	8.982	17.129
2001 Total	.097	3.116	.742	3.955	.001	.080	.008	.089	4.044	4.086	9.194	17.323
2002 January	.010	.443	.090	.543	(s)	.007	.001	.007	.550	.332	.721	1.604
February	.009	.409	.071	.489	(s)	.006	.001	.007	.495	.308	.642	1.445
March	.008	.381	.071	.460	(s)	.007	.001	.007	.467	.316	.717	1.500
April	.007	.272	.058	.337	(s)	.007	.001	.007	.345	.318	.715	1.377
May	.006	.195	.050	.251	(s)	.007	.001	.008	.259	.337	.784	1.380
June	.005	.148	.049	.202	(s)	.007	.001	.008	.210	.367	.854	1.431
July	.007	.138	.050	.196	(s)	.008	.001	.008	.204	.401	.925	1.531
August	.006	.137	.051	.194	(s)	.008	.001	.008	.202	.400	.890	1.492
September	.005	.143	.048	.196	(s)	.007	.001	.008	.204	.375	.791	1.370
October	.006	.201	.055	.263	(s)	.007	.001	.008	.271	.355	.766	1.392
November	.009	.304	.064	.377	(s)	.007	.001	.008	.385	.319	.729	1.432
December	.012	.426	.081	.519	(s)	.007	.001	.007	.527	.328	.761	1.616
Total	.091	3.196	.738	4.025	(s)	.084	.009	.093	4.118	4.157	9.293	17.568
2003 January	.011	R .524	.094	R .630	(s)	.007	.001	.008	R .638	.348	.760	R 1.746
February	.010	.490	.079	.578	(s)	.007	.001	.008	.586	.317	.648	1.551
March	.007	.392	.072	.471	(s)	.008	.001	.009	.481	.322	.714	1.516
April	.008	.263	.061	.332	(s)	.008	.001	.009	.341	.311	.687	1.339
May	.006	.182	.048	.236	(s)	.008	.001	.009	.246	.333	.773	1.352
June	.005	.139	.046	.190	(s)	.008	.001	.009	.199	.354	.807	1.360
July	.007	R .133	.050	.191	(s)	.008	.001	.009	.200	.398	.897	R 1.495
August	.007	.131	.055	.193	(s)	.008	.001	.009	.202	.403	.895	1.501
September	.005	.137	.051	.192	(s)	.007	.001	.008	.200	.371	.742	1.314
October	.006	.182	.057	.245	(s)	.008	.001	.009	.254	.350	.756	1.360
November	.009	.256	.061	.327	(s)	.008	.001	.009	.335	.325	.740	1.400
December	.014	.398	.082	.494	(s)	.008	.001	.009	.503	.342	.781	1.627
Total	.094	R 3.229	.756	R 4.078	.001	.090	.015	.107	R 4.185	4.174	9.198	R 17.557
2004 January	.012	R .504	.095	R .612	(s)	.008	.001	.009	R .621	R .339	R .768	R 1.727
February	.010	.473	.082	.566	(s)	.007	.001	.008	.574	.320	R .692	R 1.586
March	.006	.354	.073	.434	(s)	.008	.001	.009	.443	R .325	R .705	R 1.473
April	.008	.249	.064	.321	(s)	.008	.001	.009	.330	.317	R .686	R 1.332
May	.006	.170	.051	.226	(s)	.008	.001	.009	.235	.343	R .812	R 1.390
June	.005	R .137	.049	.191	(s)	.008	.001	.009	.200	.367	R .816	R 1.384
July	.008	.126	.054	.189	(s)	.008	.001	.009	.198	.394	.883	1.475
7-Month Total	.055	2.014	.470	2.538	.001	.053	.009	.063	2.601	2.404	5.360	10.366
2003 7-Month Total	.054	2.124	.450	2.628	.001	.052	.009	.062	2.690	2.383	5.286	10.359
2002 7-Month Total	.053	1.986	.438	2.477	(s)	.048	.005	.053	2.530	2.379	5.358	10.268

^a All values are estimated; see Table 10.2a.

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

^c Conventional hydroelectric power.

^d Geothermal heat pump and direct use energy.

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

^f See Note 12 at end of section.

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

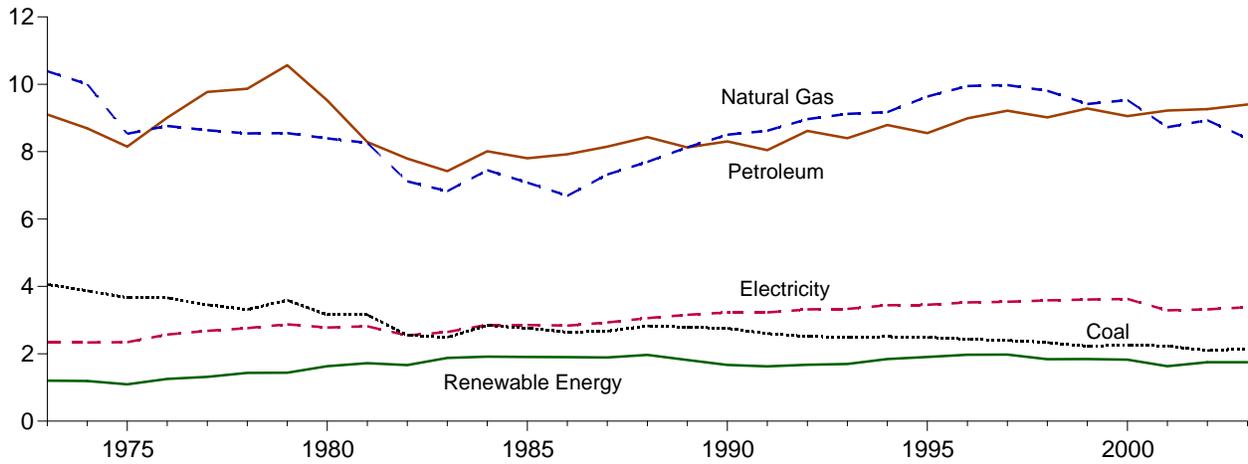
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.

Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.

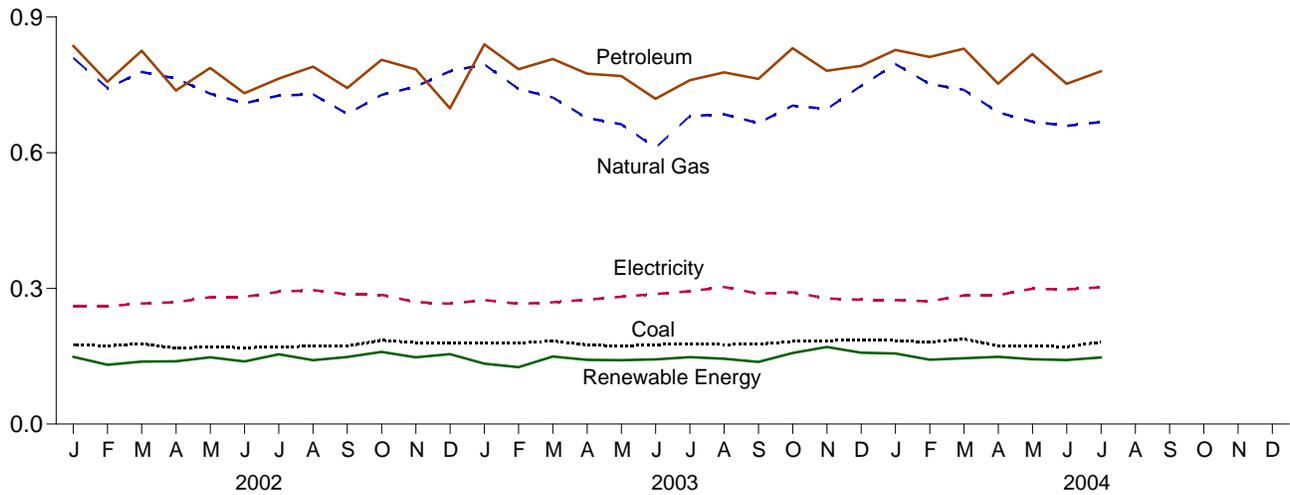
Additional Notes and Sources: See end of section.

Figure 2.4 Industrial Sector Energy Consumption
(Quadrillion Btu)

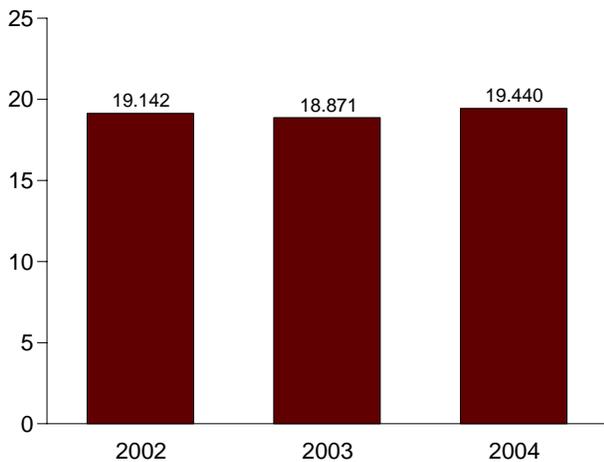
By Major Sources, 1973-2003



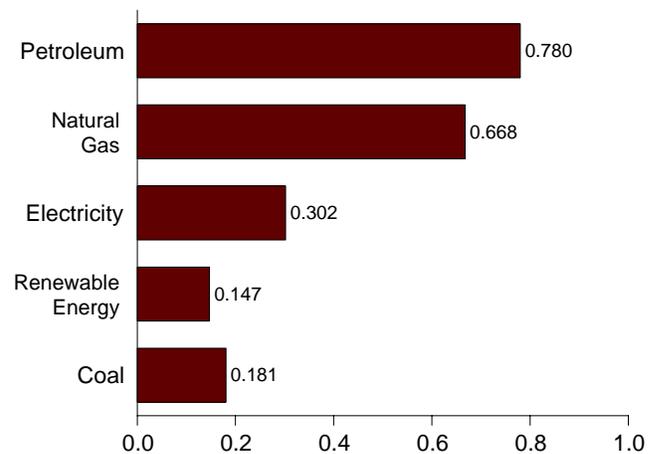
By Major Sources, Monthly



Total, January-July



By Major Sources, July 2004



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.4.

Table 2.4 Industrial Sector Energy Consumption
(Quadrillion Btu)

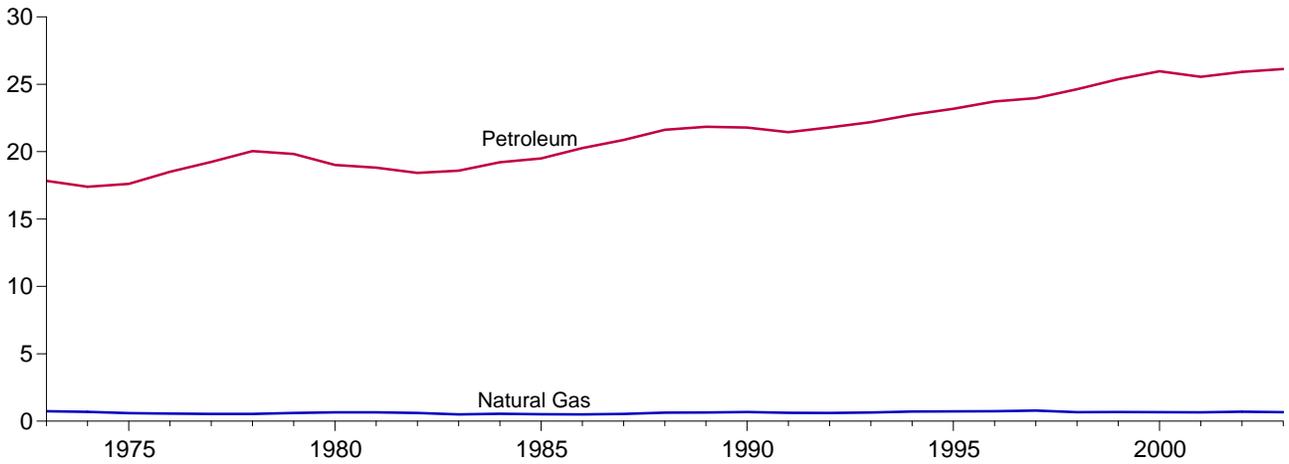
	Primary Consumption								Total Primary	Electricity Retail Sales ^h	Electrical System Energy Losses ⁱ	Total ^c
	Fossil Fuels				Renewable Energy ^a							
	Coal	Natural Gas ^b	Petroleum	Total ^c	Hydro-power ^d	Wood ^e and Waste ^f	Geo-thermal ^g	Total				
1973 Total	4.057	10.388	9.104	23.541	0.035	1.165	NA	1.200	24.741	2.341	5.571	32.653
1974 Total	3.870	10.004	8.694	22.624	.033	1.159	NA	1.192	23.816	2.337	5.666	31.819
1975 Total	3.667	8.532	8.146	20.359	.032	1.063	NA	1.096	21.454	2.346	5.647	29.447
1976 Total	3.661	8.762	9.010	21.432	.033	1.220	NA	1.253	22.685	2.573	6.171	31.429
1977 Total	3.454	8.635	9.774	21.879	.033	1.281	NA	1.314	23.193	2.682	6.432	32.307
1978 Total	3.314	8.539	9.867	21.845	.032	1.400	NA	1.432	23.277	2.761	6.696	32.733
1979 Total	3.593	8.549	10.568	22.773	.034	1.405	NA	1.439	24.211	2.873	6.878	33.962
1980 Total	3.155	8.395	9.525	21.040	.033	1.600	NA	1.633	22.673	2.781	6.698	32.152
1981 Total	3.157	8.257	8.285	19.682	.033	1.689	NA	1.722	21.404	2.817	6.615	30.836
1982 Total	2.552	7.121	7.794	17.446	.033	1.634	NA	1.667	19.112	2.542	6.050	27.704
1983 Total	2.490	6.826	7.420	16.720	.033	1.845	NA	1.879	18.598	2.648	6.265	27.511
1984 Total	2.842	7.448	8.014	18.292	.033	1.883	NA	1.916	20.208	2.859	6.576	29.643
1985 Total	2.760	7.080	7.805	17.632	.033	1.875	NA	1.908	19.540	2.855	6.563	28.958
1986 Total	2.641	6.690	7.920	17.234	.033	1.866	NA	1.899	19.133	2.834	6.408	28.375
1987 Total	2.673	7.323	8.151	18.155	.033	1.858	NA	1.891	20.046	2.928	6.545	29.519
1988 Total	2.828	7.696	8.430	18.993	.033	1.933	NA	1.965	20.958	3.059	6.801	30.818
1989 Total	2.787	8.131	8.126	19.074	.028	1.784	.002	1.814	20.888	3.158	7.349	31.396
1990 Total	2.756	8.502	8.305	19.568	.031	1.634	.002	1.667	21.235	3.226	7.457	31.918
1991 Total	2.601	8.619	8.047	19.277	.030	1.595	.002	1.626	20.903	3.230	7.394	31.527
1992 Total	2.515	8.967	8.616	20.133	.031	1.640	.002	1.672	21.806	3.319	7.548	32.673
1993 Total	2.496	9.120	8.398	20.042	.030	1.664	.002	1.696	21.738	3.334	7.596	32.668
1994 Total	2.510	9.172	8.792	20.532	.062	1.779	.003	1.844	22.376	3.439	7.742	33.557
1995 Total	2.488	9.637	8.552	20.738	.055	1.847	.003	1.905	22.643	3.455	7.842	33.941
1996 Total	2.434	9.947	8.989	21.393	.061	1.907	.003	1.971	23.364	3.527	8.014	34.905
1997 Total	2.395	9.976	9.214	21.632	.058	1.915	.003	1.976	23.608	3.542	8.017	35.167
1998 Total	2.335	9.806	9.017	21.226	.055	1.784	.003	1.841	23.067	3.587	8.124	34.777
1999 Total	2.227	9.415	9.284	20.983	.049	1.791	.004	1.843	22.826	3.611	8.242	34.679
2000 Total	2.256	9.535	9.055	20.912	.042	1.781	.004	1.828	22.740	3.631	8.245	34.616
2001 Total	2.230	8.725	9.220	20.204	.032	1.593	.005	1.630	21.834	3.290	7.404	32.527
2002 January	.175	.810	.837	1.821	.003	.145	(s)	.149	1.970	.261	.568	2.799
February	.173	.743	.757	1.676	.003	.128	(s)	.131	1.807	.261	.544	2.611
March	.177	.779	.826	1.789	.003	.135	(s)	.138	1.928	.267	.605	2.799
April	.168	.768	.738	1.668	.003	.135	(s)	.139	1.807	.269	.605	2.682
May	.170	.731	.788	1.693	.003	.144	(s)	.147	1.840	.281	.652	2.772
June	.169	.710	.732	1.612	.003	.136	(s)	.139	1.751	.281	.655	2.687
July	.170	.726	.764	1.670	.003	.151	(s)	.154	1.824	.292	.674	2.791
August	.173	.729	.790	1.699	.003	.138	(s)	.141	1.841	.296	.659	2.795
September	.172	.686	.743	1.610	.002	.145	(s)	.148	1.758	.287	.606	2.651
October	.185	.728	.806	1.725	.003	.156	(s)	.159	1.884	.286	.616	2.786
November	.180	.746	.785	1.721	.005	.143	(s)	.148	1.869	.270	.617	2.755
December	.180	.780	.698	1.662	.005	.149	(s)	.155	1.817	.266	.618	2.701
Total	2.094	8.931	9.262	20.348	.039	1.705	.005	1.748	22.096	3.317	7.416	32.830
2003 January	.179	R .795	.840	R 1.816	.004	.129	(s)	.134	R 1.949	.274	.598	R 2.822
February	.179	R .741	.785	R 1.719	.004	.122	(s)	.126	R 1.844	.266	.544	R 2.654
March	.184	R .722	.807	R 1.717	.005	.144	(s)	.149	R 1.866	.269	.597	R 2.733
April	.175	R .677	.775	R 1.631	.004	.137	(s)	.142	R 1.772	.275	.608	R 2.655
May	.172	R .663	.769	R 1.607	.005	.135	(s)	.141	R 1.748	.281	.654	R 2.683
June	.175	R .611	.719	R 1.509	.005	.138	(s)	.143	R 1.652	.288	.655	R 2.595
July	.178	R .681	.761	R 1.624	.005	.143	(s)	.148	R 1.772	.294	.662	R 2.728
August	.176	R .685	.778	R 1.639	.005	.139	(s)	.144	R 1.783	.303	.672	R 2.759
September	.176	R .665	.763	R 1.609	.004	.133	(s)	.137	R 1.746	.288	.576	R 2.611
October	.183	R .704	.831	R 1.722	.004	.153	(s)	.157	R 1.880	.292	.630	R 2.801
November	.184	R .697	.781	R 1.666	.004	.166	(s)	.170	R 1.836	.278	.633	R 2.747
December	.187	R .748	.792	R 1.733	.006	.151	(s)	.158	R 1.891	.275	.628	R 2.794
Total	2.149	R 8.390	9.402	R 19.991	.057	1.689	.005	1.750	R 21.741	3.383	7.453	R 32.577
2004 January	.185	.796	.827	1.812	.005	.150	(s)	.156	1.968	R .274	R .622	R 2.864
February	.181	.752	.812	1.754	.004	.138	(s)	.142	1.896	R .271	.587	R 2.755
March	.188	.739	.830	1.767	.004	.141	(s)	.145	1.912	R .284	R .617	R 2.813
April	.173	R .690	.753	R 1.639	.004	.145	(s)	.149	R 1.788	R .285	.617	R 2.690
May	.173	R .669	.818	R 1.697	.004	.139	(s)	.143	R 1.840	.299	R .709	R 2.848
June	.171	R .660	.752	R 1.604	.003	R .138	(s)	R .141	R 1.745	R .298	R .662	R 2.704
July	.181	.668	.780	1.639	.003	.144	(s)	.147	1.786	.302	.677	2.766
7-Month Total	1.252	4.973	5.573	11.911	.028	.994	.003	1.025	12.936	2.014	4.490	19.440
2003 7-Month Total	1.243	4.890	5.457	11.622	.033	.947	.003	.983	12.605	1.947	4.318	18.871
2002 7-Month Total	1.203	5.262	5.440	11.930	.020	.974	.003	.997	12.927	1.912	4.303	19.142

^a All values are estimated; see Table 10.2b.
^b Natural gas, plus a small amount of supplemental gaseous fuels that cannot be identified separately.
^c Includes coal coke net imports, which are not separately displayed. See Table 1.4.
^d Conventional hydroelectric power.
^e Wood, black liquor, and other wood waste.
^f Municipal solid waste, landfill gas, sludge waste, tires, agricultural byproducts, and other biomass.

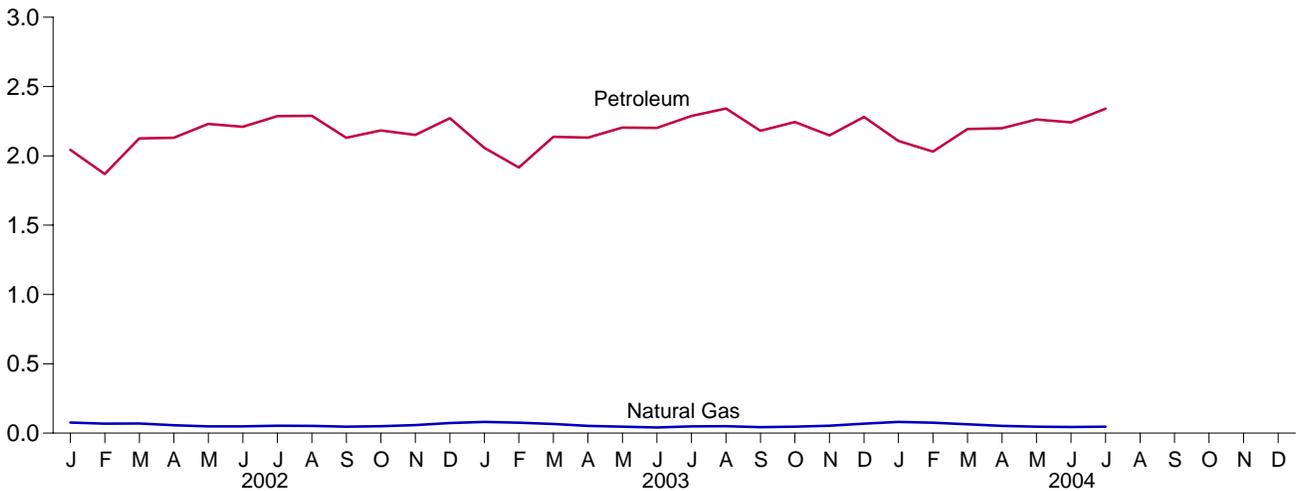
^g Geothermal heat pump and direct use energy.
^h Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.
ⁱ See Note 12 at end of section.
R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Additional Notes and Sources: See end of section.

Figure 2.5 Transportation Sector Energy Consumption
(Quadrillion Btu)

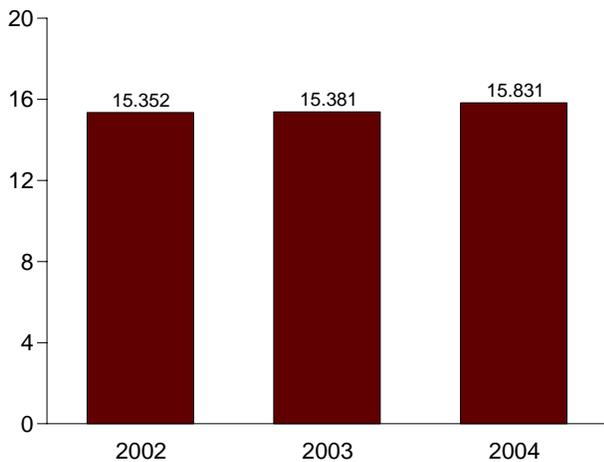
By Major Sources, 1973-2003



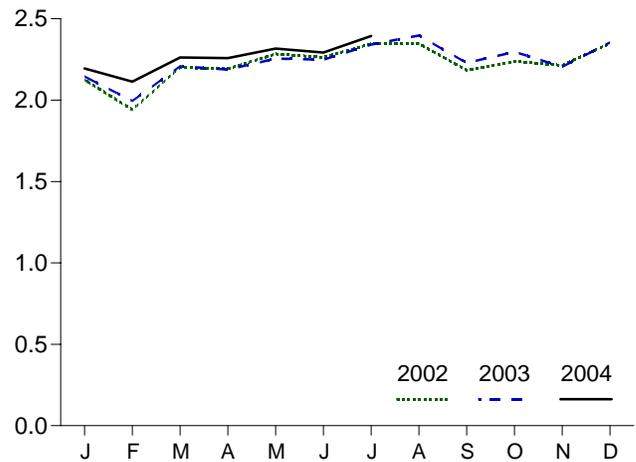
By Major Sources, Monthly



Total, January-July



Total, Monthly



Note: Because vertical scales differ, graphs should not be compared.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>
Source: Table 2.5.

Table 2.5 Transportation Sector Energy Consumption
(Quadrillion Btu)

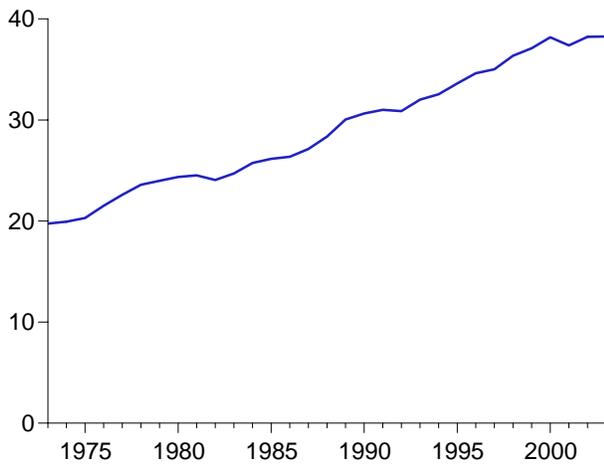
	Primary Consumption						Electricity Retail Sales ^f	Electrical System Energy Losses ^g	Total ^d
	Fossil Fuels				Renewable Energy ^a	Total Primary ^d			
	Coal	Natural Gas ^b	Petroleum ^{c,d}	Total	Alcohol Fuels ^{d,e}				
1973 Total	0.003	0.743	17.831	18.576	NA	18.576	0.011	0.025	18.612
1974 Total	.002	.685	17.399	18.086	NA	18.086	.010	.024	18.119
1975 Total	.001	.595	17.614	18.209	NA	18.209	.010	.024	18.244
1976 Total	(s)	.559	18.506	19.065	NA	19.065	.010	.024	19.099
1977 Total	(s)	.543	19.241	19.784	NA	19.784	.010	.025	19.820
1978 Total	(h)	.539	20.041	20.580	NA	20.580	.010	.024	20.615
1979 Total	(h)	.612	19.825	20.436	NA	20.436	.010	.024	20.471
1980 Total	(h)	.650	19.008	19.658	NA	19.658	.011	.027	19.696
1981 Total	(h)	.658	18.811	19.469	.007	19.476	.011	.026	19.513
1982 Total	(h)	.612	18.420	19.032	.019	19.051	.011	.026	19.088
1983 Total	(h)	.505	18.593	19.098	.035	19.133	.013	.030	19.176
1984 Total	(h)	.545	19.216	19.761	.043	19.804	.014	.033	19.851
1985 Total	(h)	.519	19.504	20.023	.052	20.075	.014	.033	20.122
1986 Total	(h)	.499	20.269	20.768	.060	20.828	.015	.034	20.877
1987 Total	(h)	.535	20.870	21.405	.069	21.474	.016	.035	21.524
1988 Total	(h)	.632	21.629	22.261	.070	22.331	.016	.035	22.382
1989 Total	(h)	.649	21.848	22.497	.071	22.568	.016	.038	22.622
1990 Total	(h)	.680	21.792	22.472	.063	22.535	.016	.037	22.589
1991 Total	(h)	.620	21.448	22.069	.073	22.142	.016	.037	22.195
1992 Total	(h)	.608	21.798	22.406	.083	22.489	.016	.037	22.542
1993 Total	(h)	.645	22.185	22.830	.097	22.830	.016	.037	22.883
1994 Total	(h)	.709	22.739	23.448	.109	23.448	.017	.038	23.503
1995 Total	(h)	.724	23.181	23.905	.117	23.905	.017	.039	23.960
1996 Total	(h)	.737	23.719	24.456	.084	24.456	.017	.038	24.511
1997 Total	(h)	.780	23.973	24.753	.106	24.753	.017	.038	24.808
1998 Total	(h)	.666	24.635	25.301	.117	25.301	.017	.038	25.357
1999 Total	(h)	.675	25.375	26.050	.122	26.050	.017	.040	26.108
2000 Total	(h)	.672	25.973	26.645	.139	26.645	.018	.042	26.705
2001 Total	(h)	.659	25.556	26.215	.147	26.215	.019	.042	26.276
2002 January	(h)	.076	2.044	2.120	.013	2.120	.001	.003	2.124
February	(h)	.069	1.869	1.938	.012	1.938	.001	.003	1.942
March	(h)	.069	2.127	2.196	.012	2.196	.001	.003	2.200
April	(h)	.057	2.131	2.188	.012	2.188	.001	.003	2.193
May	(h)	.049	2.230	2.279	.014	2.279	.001	.003	2.284
June	(h)	.048	2.210	2.258	.012	2.258	.002	.004	2.263
July	(h)	.053	2.287	2.340	.015	2.340	.002	.004	2.346
August	(h)	.052	2.290	2.342	.014	2.342	.002	.004	2.347
September	(h)	.047	2.131	2.178	.015	2.178	.002	.004	2.183
October	(h)	.050	2.183	2.233	.017	2.233	.002	.003	2.238
November	(h)	.058	2.151	2.209	.020	2.209	.001	.003	2.214
December	(h)	.073	2.272	2.345	.019	2.345	.001	.003	2.349
Total	(h)	.702	25.924	26.626	.174	26.626	.018	.039	26.683
2003 January	(h)	.081	2.059	2.140	.017	2.140	.001	.003	2.144
February	(h)	.075	1.916	1.991	.020	1.991	.001	.003	1.996
March	(h)	.066	2.138	2.204	.017	2.204	.001	.003	2.208
April	(h)	.052	2.131	2.184	.020	2.184	.001	.003	2.188
May	(h)	.046	2.205	2.251	.019	2.251	.001	.003	2.255
June	(h)	.041	2.202	2.243	.019	2.243	.002	.004	2.248
July	(h)	.048	2.288	2.336	.020	2.336	.002	.004	2.341
August	(h)	.049	2.342	2.391	.021	2.391	.002	.004	2.397
September	(h)	.043	2.182	2.224	.018	2.224	.002	.003	2.229
October	(h)	.047	2.245	2.292	.021	2.292	.002	.003	2.297
November	(h)	.053	2.148	2.201	.024	2.201	.001	.003	2.206
December	(h)	.068	2.280	2.349	.025	2.349	.002	.003	2.354
Total	(h)	.671	26.135	26.805	.239	26.805	.018	.040	26.863
2004 January	(h)	E .080	2.108	2.188	.024	2.188	R .002	R .005	R 2.195
February	(h)	E .075	2.031	2.106	.022	2.106	R .002	R .005	R 2.113
March	(h)	E .063	2.193	2.257	.024	2.257	R .002	R .004	R 2.262
April	(h)	E .052	2.199	2.252	.024	2.252	R .002	R .004	R 2.258
May	(h)	E .047	2.263	2.310	.025	2.310	R .002	R .004	R 2.316
June	(h)	RE .044	2.242	2.286	.025	2.286	.002	R .004	R 2.292
July	(h)	E .047	2.341	2.388	.025	2.388	.002	.005	2.394
7-Month Total	(h)	E .410	15.377	15.787	.169	15.787	.014	.031	15.831
2003 7-Month Total	(h)	.411	14.938	15.349	.130	15.349	.010	.022	15.381
2002 7-Month Total	(h)	.422	14.898	15.320	.089	15.320	.010	.022	15.352

^a All values are estimated; see Table 10.2b.
^b Natural gas consumed in the operation of pipelines (primarily in compressors) and small amounts consumed as vehicle fuel. See Table 4.4.
^c Beginning in 1993, includes ethanol blended into motor gasoline.
^d Beginning in 1993, ethanol blended into motor gasoline is included in both "Petroleum" and "Alcohol Fuels," but is counted only once in both total primary consumption and total consumption.
^e "Alcohol Fuels" is ethanol blended into motor gasoline.
^f Electricity retail sales to ultimate customers reported by electric utilities and,

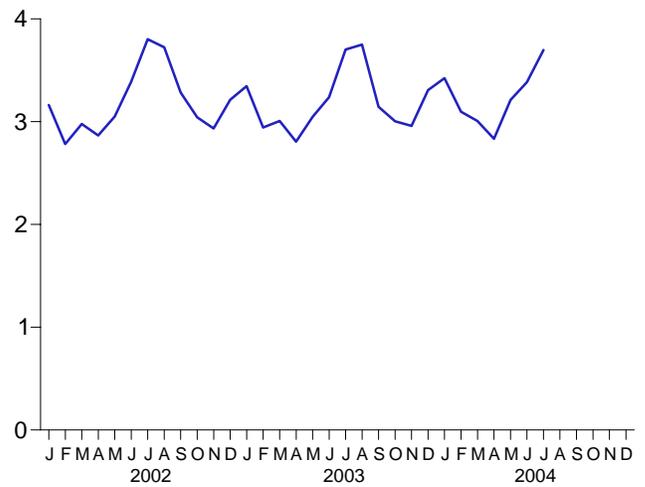
beginning in 1996, other energy service providers.
^g See Note 12 at end of Section.
^h Since 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.
R=Revised. E=Estimate. NA=Not available. (s)=Less than 0.5 trillion Btu.
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 States and the District of Columbia.
Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Additional Notes and Sources: See end of section.

Figure 2.6 Electric Power Sector Energy Consumption
(Quadrillion Btu)

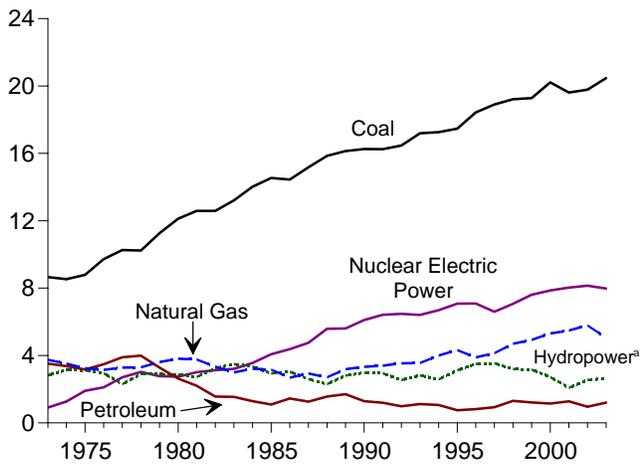
Total, 1973-2003



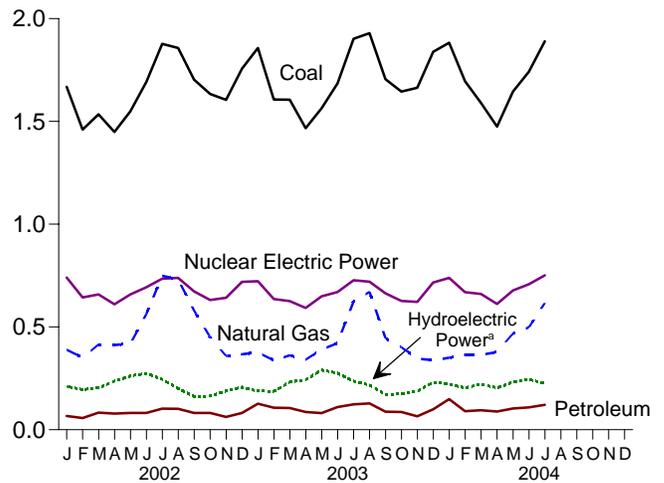
Total, Monthly



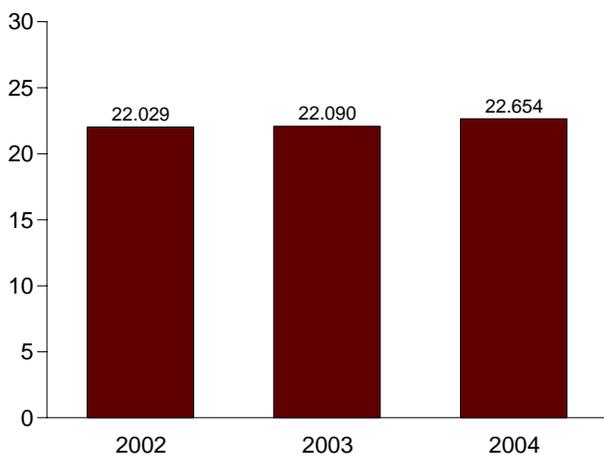
By Major Sources, 1973-2003



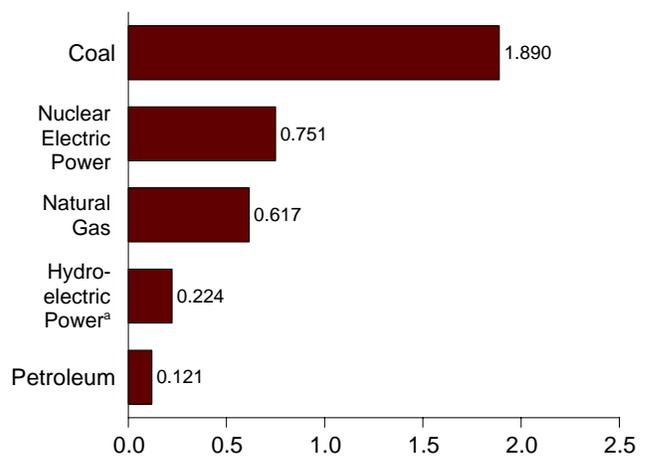
By Major Sources, Monthly



Total, January-July



By Major Sources, July 2004



^aConventional and pumped storage hydroelectric power.
Note: Because vertical scales differ, graphs should not be compared.

Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.
Source: Table 2.6.

Table 2.6 Electric Power Sector Energy Consumption
(Quadrillion Btu)

	Primary Consumption												Electricity Net Imports	Total Primary
	Fossil Fuels				Nuclear Electric Power	Hydro-electric Pumped Storage ^b	Renewable Energy							
	Coal	Natural Gas ^a	Petroleum	Total			Conventional Hydroelectric Power	Wood ^c and Waste ^d	Geo-thermal ^e	Solar ^f and Wind ^g	Total			
1973 Total	8.658	3.748	3.515	15.921	0.910	(h)	2.827	0.003	0.043	NA	2.873	0.049	19.753	
1974 Total	8.534	3.519	3.365	15.418	1.272	(h)	3.143	.003	.053	NA	3.199	.043	19.933	
1975 Total	8.786	3.240	3.166	15.191	1.900	(h)	3.122	.002	.070	NA	3.194	.021	20.307	
1976 Total	9.720	3.152	3.477	16.349	2.111	(h)	2.943	.003	.078	NA	3.024	.029	21.513	
1977 Total	10.262	3.284	3.901	17.446	2.702	(h)	2.301	.005	.077	NA	2.383	.059	22.591	
1978 Total	10.238	3.297	3.987	17.522	3.024	(h)	2.905	.003	.064	NA	2.973	.067	23.587	
1979 Total	11.260	3.613	3.283	18.156	2.776	(h)	2.897	.005	.084	NA	2.986	.069	23.987	
1980 Total	12.123	3.810	2.634	18.567	2.739	(h)	2.867	.005	.110	NA	2.982	.071	24.359	
1981 Total	12.583	3.768	2.202	18.553	3.008	(h)	2.725	.004	.123	NA	2.852	.113	24.525	
1982 Total	12.582	3.342	1.568	17.491	3.131	(h)	3.233	.003	.105	NA	3.341	.100	24.063	
1983 Total	13.213	2.998	1.544	17.754	3.203	(h)	3.494	.004	.129	(s)	3.627	.121	24.705	
1984 Total	14.019	3.220	1.286	18.526	3.553	(h)	3.353	.009	.165	(s)	3.527	.135	25.741	
1985 Total	14.542	3.160	1.090	18.792	4.076	(h)	2.937	.014	.198	(s)	3.150	.140	26.158	
1986 Total	14.444	2.691	1.452	18.586	4.380	(h)	3.038	.012	.219	(s)	3.270	.122	26.359	
1987 Total	15.173	2.935	1.257	19.365	4.754	(h)	2.602	.015	.229	(s)	2.846	.158	27.124	
1988 Total	15.850	2.709	1.563	20.123	5.587	(h)	2.302	.017	.217	(s)	2.536	.108	28.354	
1989 Total	16.137	3.192	1.703	21.032	5.602	(h)	2.808	.232	.308	.025	3.372	.037	30.044	
1990 Total	16.261	3.332	1.289	20.883	6.104	-.036	3.014	.317	.326	.033	3.689	.008	30.647	
1991 Total	16.250	3.399	1.198	20.847	6.422	-.047	2.985	.354	.335	.036	3.710	.067	30.999	
1992 Total	16.466	3.534	.991	20.990	6.479	-.043	2.586	.402	.338	.034	3.360	.087	30.873	
1993 Total	17.196	3.560	1.124	21.880	6.410	-.042	2.861	.415	.351	.036	3.662	.095	32.006	
1994 Total	17.261	4.000	1.059	22.320	6.694	-.035	2.620	.434	.325	.041	3.420	.153	32.551	
1995 Total	17.466	4.325	.755	22.546	7.075	-.028	3.149	.422	.280	.038	3.889	.134	33.616	
1996 Total	18.429	3.883	.817	23.129	7.087	-.032	3.528	.438	.300	.039	4.305	.137	34.626	
1997 Total	18.905	4.146	.927	23.977	6.597	-.041	3.581	.446	.309	.039	4.375	.116	35.024	
1998 Total	19.216	4.698	1.306	25.220	7.068	-.046	3.241	.444	.311	.036	4.032	.088	36.363	
1999 Total	19.279	4.926	1.211	25.416	7.610	-.062	3.218	.453	.312	.051	4.034	.099	37.097	
2000 Total	20.220	5.316	1.144	26.680	7.862	-.057	2.768	.453	.296	.062	3.579	.115	38.180	
2001 Total	19.614	5.481	1.277	26.371	8.033	-.090	2.169	.450	.289	.074	2.982	.075	37.372	
2002 January	1.668	.389	.067	2.124	.740	-.008	.218	.043	.027	.008	.296	.009	3.162	
February	1.460	.351	.057	1.868	.644	-.006	.201	.037	.024	.007	.270	.007	2.782	
March	1.535	.415	.084	2.033	.658	-.007	.210	.043	.026	.009	.288	.006	2.978	
April	1.448	.412	.079	1.939	.610	-.006	.242	.040	.023	.011	.316	.006	2.866	
May	1.549	.418	.082	2.049	.658	-.005	.267	.041	.026	.011	.345	.003	3.050	
June	1.691	.562	.082	2.335	.693	-.009	.283	.043	.024	.012	.362	.007	3.388	
July	1.877	.749	.102	2.728	.735	-.010	.255	.046	.027	.010	.337	.012	3.803	
August	1.857	.732	.102	2.691	.739	-.009	.211	.046	.026	.011	.293	.010	3.724	
September	1.703	.580	.082	2.365	.673	-.008	.170	.045	.025	.008	.248	.006	3.284	
October	1.633	.451	.081	2.166	.631	-.007	.170	.043	.026	.008	.247	.005	3.042	
November	1.605	.359	.062	2.026	.642	-.007	.195	.043	.025	.007	.270	.004	2.935	
December	1.756	.367	.081	2.205	.719	-.007	.214	.046	.026	.008	.293	.003	3.214	
Total	19.783	5.785	.961	26.529	8.143	-.088	2.636	.516	.305	.110	3.567	.078	38.228	
2003 January	1.857	.376	.126	2.360	.722	-.008	.195	.042	.024	.006	.267	.005	3.346	
February	1.607	.337	.107	2.051	.636	-.008	.195	.036	.022	.007	.260	.004	2.943	
March	1.605	.362	.105	2.073	.626	-.008	.241	.042	.023	.011	.317	-.001	3.006	
April	1.467	.341	.086	1.894	.593	-.006	.248	.040	.022	.012	.322	.003	2.806	
May	1.563	.391	.081	2.035	.649	-.006	.297	.039	.022	.010	.368	.001	3.047	
June	1.685	.421	.110	2.216	.670	-.008	.283	.041	.023	.011	.358	.001	3.238	
July	1.902	.624	.124	2.650	.727	-.008	.244	.046	.023	.010	.323	.010	3.702	
August	1.929	.670	.128	2.728	.721	-.008	.226	.045	.023	.009	.302	.008	3.750	
September	1.706	.445	.088	2.239	.664	-.008	.180	.040	.023	.009	.251	-.002	3.144	
October	1.645	.401	.087	2.133	.627	-.006	.181	.044	.023	.010	.258	-.006	3.004	
November	1.663	.346	.066	2.075	.622	-.007	.195	.044	.023	.010	.272	-.003	2.960	
December	1.838	.338	.099	2.275	.716	-.007	.238	.047	.026	.011	.322	.001	3.307	
Total	20.468	5.053	1.207	26.729	7.973	-.088	2.722	.507	.276	.114	3.619	.022	38.255	
2004 January	1.883	.350	.149	2.382	.739	-.008	.230	.045	.026	.009	.310	(s)	3.424	
February	1.695	.365	.091	2.151	.669	-.006	.209	.040	.025	.010	.284	.000	3.097	
March	1.590	.364	.095	2.049	.661	-.007	.228	.042	.025	.013	.309	-.003	3.008	
April	1.475	.378	.089	1.941	.612	-.007	.210	.040	.024	.013	.286	(s)	2.833	
May	1.645	.468	.104	2.217	.678	-.007	.239	.043	.025	.017	.323	.001	3.211	
June	R 1.742	R .498	R .108	R 2.348	.708	-.007	.252	R .041	.025	R .015	.333	.002	R 3.384	
July	1.890	.617	.121	2.627	.751	-.007	.231	.046	.026	.012	.315	.010	3.697	
7-Month Total	11.920	3.039	.756	15.715	4.818	-.048	1.598	.297	.176	.089	2.159	.010	22.654	
2003 7-Month Total	11.687	2.852	.740	15.279	4.623	-.051	1.703	.287	.159	.066	2.214	.024	22.090	
2002 7-Month Total	11.228	3.296	.552	15.077	4.738	-.051	1.676	.293	.177	.069	2.215	.050	22.029	

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

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

^c Wood, black liquor, and other wood waste.

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

^e Geothermal electricity net generation.

^f Solar thermal and photovoltaic electricity net generation.

^g Wind electricity net generation.

^h Included in conventional hydroelectric power.

ⁱ Through 1988, data are for consumption at electric utilities only. Beginning in

1989, data also include consumption at independent power producers.

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

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

• Geographic coverage is the 50 States and the District of Columbia. Web Page: <http://www.eia.doe.gov/emeu/mer/consump.html>.

Additional Notes and Sources: See end of section.

Energy Consumption by Sector

Most of the data in this section of the *Monthly Energy Review (MER)* is developed from a group of energy-related surveys, typically called "supply surveys," conducted by the Energy Information Administration (EIA). Supply surveys are directed to suppliers and marketers of specific energy sources. They measure the quantities of specific energy sources produced, or the quantities supplied to the market, or both. The data obtained from EIA's supply surveys are integrated to yield the summary consumption statistics published in this section (and in Section 1) of the *MER*.

Users of EIA's energy consumption statistics should be aware of a second group of energy-related surveys, typically called "consumption surveys." Consumption surveys gather information on the types of energy consumed by end users of energy, along with the characteristics of those end users that can be associated with energy use. For example, the Manufacturing Energy Consumption Survey belongs to the consumption survey group because it collects information directly from end users (the manufacturing establishments). There are important differences between the supply and consumption surveys that need to be taken into account in any analysis that uses both data sources. For information on those differences, see *Energy Consumption by End-Use Sector, A Comparison of Measures by Consumption and Supply Surveys*, DOE/EIA-0533, Energy Information Administration, Washington, DC, April 6, 1990.

Note 1. Energy Consumption:

Primary Consumption: Consumption in the five energy-use sectors (residential, commercial, industrial, transportation, and electric power) consists of fossil fuels (coal, natural gas, and petroleum), some secondary energy derived from fossil fuels (supplemental gaseous fuels and coal coke net imports), nuclear electric power, pumped-storage hydroelectric power, renewable energy, and net imports of electricity. Renewable energy consumption is the end-use consumption of wood, waste, alcohol fuels, geothermal heat pump and direct use energy, solar thermal direct use and photovoltaic energy and net electricity generation from conventional hydroelectric power, wood, waste, geothermal, solar, and wind.

Total Consumption: In addition to primary consumption in the four end-use sectors (residential, commercial, industrial, and transportation), total consumption also includes retail sales of electricity and electrical system energy losses (see Note 12).

Note 2. Energy-Use Sectors: The five major economic sectors—residential, commercial, industrial, transportation, and electric power—are called energy-use sectors in this report. The first four sectors comprise the end-use sectors, that is, the point of final consumption of the energy. Energy

consumption is assigned to the five energy-use sectors, as closely as possible, by the following definitions:

Residential Sector—An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters. For further explanation see:

<http://www.eia.doe.gov/neic/datadefinitions/Guideforwebres.htm>.

Commercial Sector—An energy-consuming sector that consists of service-providing facilities and equipment of: businesses; Federal, State, and local governments; and other private and public organizations, such as religious, social, or fraternal groups. The commercial sector includes institutional living quarters. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment. *Note:* This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments.

Industrial Sector—An energy-consuming sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing (NAICS (North American Industry Classification System) codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); natural gas distribution (NAICS code 2212); and construction (NAICS code 23). Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. *Note:* This sector includes generators that produce electricity and/or useful thermal output primarily to support the above-mentioned industrial activities.

Transportation Sector—An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use. *Note:* Various EIA programs differ in sectoral coverage. For further information see:

<http://www.eia.doe.gov/neic/datadefinitions/Guideforwebtrans.htm>.

Electric Power Sector—An energy-consuming sector that consists of electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or

electricity and heat, to the public—i.e., North American Industry Classification System 22 plants.

Although the energy-use allocations are made according to these aggregations as closely as possible, some data are collected by using different classifications. For example, electric power facilities may classify commercial and industrial users by the quantity of electricity purchased rather than by the business activity of the purchaser. Natural gas used in agriculture, forestry, and fisheries was collected and reported in the commercial sector through 1995. Beginning with 1996 data, deliveries of natural gas for agriculture, forestry, fishing, and hunting are reported in the industrial sector instead. Another example is master-metered condominiums and apartments, and buildings with a combination of residential and commercial units. In many cases, the metering and billing practices cause residential energy usage of electricity, natural gas, or fuel oil to be included in the commercial sector. No adjustments for these discrepancies were made.

Note 3. Conversion Factors: See Appendix A.

Note 4. Coal: See Tables 6.2 and A5.

Note 5. Coal Coke Net Imports: Net imports means imports minus exports, and a minus sign indicates that exports are greater than imports. Coal coke net imports are included in the industrial sector.

Sources :

1973-1975: DOI, BOM, *Minerals Yearbook*, "Coke and Coal Chemicals" chapter.

1976-1980: EIA, *Energy Data Report*, "Coke and Coal Chemicals" annual.

1981: EIA, *Energy Data Report*, "Coke Plant Report," quarterly.

1982 forward: EIA, *Quarterly Coal Report*.

Note 6. Natural Gas: See Tables 4.4 and A4. For Section 2 calculations, lease and plant fuel consumption are included in the industrial sector, and pipeline fuel use of natural gas is included in the transportation sector. For 1973-1979, annual values for residential and commercial natural gas consumption are allocated to the months in proportion to the monthly sales data from the American Gas Association, "Monthly Gas Utility Statistical Report."

Note 7. Petroleum: Petroleum consumption in this section of the *Monthly Energy Review (MER)* is the series called "petroleum product supplied" from Section 3.

The sources for petroleum product supplied by product are:

1973-1975: DOI, BOM, *Mineral Industry Surveys*, "Petroleum Statement, Annual."

1976-1980: EIA, *Energy Data Reports*, "Petroleum Statement, Annual."

1981-2003: EIA, *Petroleum Supply Annual*.

2004 forward: EIA, *Petroleum Supply Monthly*.

Energy-use allocation procedures by individual product are as follows:

Aviation Gasoline—All consumption of aviation gasoline is assigned to the transportation sector.

Asphalt—All consumption of asphalt is assigned to the industrial sector.

Distillate Fuel—Distillate fuel consumption is assigned to the sectors as follows:

Distillate Fuel Consumed by the Electric Power Sector, All Time Periods—For 1973-1979, consumption of distillate fuel is assumed to be the amount of petroleum (minus small amounts of kerosene and kerosene-type jet fuel deliveries) consumed in gas turbine and internal combustion plants. For 1980 forward, consumption of distillate fuel is assumed to be the amount of light oil (minus small amounts of kerosene deliveries through 1982) consumed by the electric power sector. See Table 7.3e.

Distillate Fuel Consumed by End-Use Sectors, Annually Through 2000—The aggregate end-use amount is total distillate fuel supplied minus the amount consumed for electric power. The end-use total consumed annually is allocated into the individual end-use sectors (residential, commercial, industrial, and transportation) in proportion to each sector's share of "adjusted sales" as reported in EIA's *Fuel Oil and Kerosene Sales (Sales)* report series (DOE/EIA-0535), which is based primarily on data collected by Form EIA-821, previously Form EIA-172. "Adjusted sales" are sales that have been adjusted to equal EIA distillate fuel product supplied.

Following are notes on the individual sector groupings:

Since 1979, the residential sector adjusted sales total is directly from the *Sales* reports. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

Since 1979, the commercial sector adjusted sales total is directly from the *Sales* reports. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

Since 1979, the industrial sector adjusted sales total is the sum of the adjusted sales for industrial, farm, oil company, off-highway diesel, and all other uses. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares, and this estimated industrial portion is added to oil company, off-highway diesel, and all other uses.

The transportation sector adjusted sales total is the sum of the adjusted sales for railroad, vessel bunkering, on-highway diesel, and military uses for all years.

Distillate Fuel Consumed by End-Use Sectors, Monthly Through 2000—Residential and commercial monthly consumption is estimated by allocating the annual estimates, which are described above, into the months in proportion to each month's share of the year's sales of No. 2 heating oil. The years' sales totals are from the following sources: for 1973-1980, the Ethyl Corporation, *Monthly Report of Heating Oil Sales*; for 1981 and 1982, the American Petroleum Institute, *Monthly Report of Heating Oil Sales*; and for 1983 forward, EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.

The transportation highway use portion is allocated into the months in proportion to each month's share of the year's total sales for highway use as reported by the Federal Highway Administration's Table MF-25, "Private and Commercial Highway Use of Special Fuels by Months." After 1993, the sales-for-highway-use data are no longer available as a monthly series; the 1993 data are used for allocating succeeding year's totals into months. The remaining transportation use of distillate fuel (i.e., for railroads, vessel bunkering, and military use) is evenly distributed over the months, adjusted for the number of days per month.

Industrial monthly estimates are calculated as the difference between the sum of the estimates for residential, commercial, transportation, and electric power sectors and total distillate fuel consumption.

Distillate Fuel Consumed by End-Use Sectors, 2001 Forward—Each month's end-use consumption total is disaggregated into the individual sectors in proportion to the share that each sector held of the total in the same month in 2000. Annual values are the sum of the monthly values.

Jet Fuel—Through 1982, small amounts of kerosene-type jet fuel were consumed by the electric power sector. Kerosene-type jet fuel deliveries to the electric power sector as reported on the Form FERC-423 (formerly Form FPC-423) were used as estimates of this consumption. All remaining jet fuel (kerosene-type and naphtha-type) is consumed by the transportation sector.

Kerosene—Kerosene product supplied is allocated into the individual end-use sectors (residential, commercial, and industrial) in proportion to each sector's share of "sales" as reported in EIA's *Fuel Oil and Kerosene Sales (Sales)* report series (DOE/EIA-0535), which is based primarily on data collected by Form EIA-821, previously Form EIA-172.

Since 1979, the residential sector sales total is directly from the *Sales* reports. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

Since 1979, the commercial sector sales total is directly from the *Sales* reports. Prior to 1979, each year's sales category called "heating" is split into residential, commercial, and industrial in proportion to the 1979 shares.

Since 1979, the industrial sector sales total is the sum of the adjusted sales for industrial, farm, and all other uses. Prior to 1979, each year's sales category called "heating" is split into residential, commercial and industrial in proportion to the 1979 shares, and this estimated industrial (including farm) portion is added to all other uses.

Liquefied Petroleum Gases (LPG)—The annual shares of LPG's total consumption that are estimated to be used by each sector are applied to each month's total LPG consumption to create monthly sector consumption estimates. The annual sector shares are calculated as described below.

Sales of LPG to the residential and commercial sector are converted from thousand gallons per year to thousand barrels per year and are assumed to be the annual consumption of LPG by the sector.

The quantity of LPG sold each year for consumption in internal combustion engines is allocated between the transportation and industrial sectors on the basis of data for special fuels used on highways published by the U.S. Department of Transportation, Federal Highway Administration, in *Highway Statistics*. The allocations of LPG sold for internal combustion engine use to the transportation sector range from a low of 20 percent (in 2001) to a high of 73 percent (in 1994).

LPG consumed annually by the industrial sector is estimated as the difference between LPG total supplied and the estimated consumption of LPG by the sum of the residential and commercial sector and the transportation sector. The industrial sector includes LPG used by chemical plants as raw materials or solvents and used in the production of synthetic rubber; refinery fuel use; use as synthetic natural gas feedstock and use in secondary recovery projects; all farm use; LPG sold to gas utility companies for distribution through the mains; and a portion of the use of LPG as an internal combustion engine fuel.

Sources of the annual sales data for creating annual energy shares are:

1973-1982: EIA's "Sales of Liquefied Petroleum Gases and Ethane" reports, based primarily on data collected by Form EIA-174.

1983: End-use consumption estimates for 1983 are based on 1982 end-use consumption because the collection of data under Form EIA-174 was discontinued after data year 1982. 1984-forward: American Petroleum Institute (API), "Sales of Natural Gas Liquids and Liquefied Refinery Gases," which is based on an LPG sales survey jointly sponsored by API, the Gas Processors Association, and the National Liquefied Petroleum Gas Association. EIA adjusts the data

to remove quantities of pentanes plus and to estimate withheld values.

Lubricants—The consumption of lubricants is allocated to the industrial and transportation sectors for all months according to proportions developed from annual sales of lubricants to the two sectors from U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports*, "Sales of Lubricating and Industrial Oils and Greases." The 1973 shares are applied to 1973 and 1974; the 1975 shares are applied to 1975 and 1976; and the 1977 shares are applied to 1977 forward.

Motor Gasoline—The total monthly consumption of motor gasoline is allocated to the sectors in proportion to aggregations of annual sales categories created on the basis of the U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics*, Tables MF-21, MF-24, and MF-25, as follows:

Commercial sales are the sum of sales for public non-highway use and miscellaneous and unclassified uses.

Industrial sales are the sum of sales for agriculture, construction, and industrial and commercial use as classified in the *Highway Statistics*.

Transportation sales are the sum of sales for highway use (minus the sales of special fuels, which are primarily diesel fuel and are accounted for in the transportation sector of distillate fuel) and sales for marine use.

Petroleum Coke—A portion of petroleum coke is consumed by electric utilities, as reported on Form EIA-759, "Monthly Power Plant Report" (formerly Form FPC-4). The remaining petroleum coke is assigned to the industrial sector.

Residual Fuel—Residual fuel consumption is assigned to the sectors as follows:

Residual Fuel Consumed by the Electric Power Sector, All Time Periods—For 1973-1979, consumption of residual fuel is assumed to be the amount of petroleum consumed in steam-electric power plants. For 1980 forward, consumption of residual fuel is assumed to be the amount of heavy oil consumed by the electric power sector. Source: Table 7.3e

Residual Fuel Consumed by End-Use Sectors, Annually Through 2000—The aggregate end-use amount is total residual fuel supplied minus the amount consumed for electric power. The end-use total consumed annually is allocated into the individual end-use sectors (commercial, industrial, and transportation) in proportion to each sector's share of "adjusted sales" as reported in EIA's *Fuel Oil and Kerosene Sales (Sales)* report series (DOE/EIA-535), which is based primarily on data collected by Form EIA-821, previously Form EIA-172). "Adjusted sales" are sales that have been adjusted to equal EIA residual fuel product supplied.

Following are notes on the individual sector groupings:

Since 1979, commercial sales data are directly from the *Sales* reports. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares.

Since 1979, industrial sales data are the sum of sales for industrial, oil company, and all other uses. Prior to 1979, each year's sales subtotal of the heating plus industrial category is split into commercial and industrial in proportion to the 1979 shares, and this estimated industrial portion is added to oil company and all other uses.

Transportation sales are the sum of sales for railroad, vessel bunkering, and military uses for all years.

Residual Fuel Consumed by End-Use Sectors, Monthly Through 2000—Commercial monthly consumption is estimated by allocating the annual estimates, which are described above, into the months in proportion to each month's share of the year's sales of No. 2 heating oil. The years' sales totals are from the following sources: for 1973-1980, the Ethyl Corporation, *Monthly Report of Heating Oil Sales*; for 1981 and 1982, the American Petroleum Institute, *Monthly Report of Heating Oil Sales*; and for 1983-1996, EIA, Form EIA-782A, "Refiners/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.

Transportation monthly estimates are made by evenly distributing the annual sector estimate over the months, adjusting for the number of days per month.

Industrial monthly estimates are calculated as the difference between the sum of the estimates for commercial, transportation, and electric power sectors and total residual fuel consumption.

Residual Fuel Consumption by End-Use Sectors, 2001 Forward—Each month's end-use consumption total is disaggregated into the individual sectors in proportion to the share that each sector held of the total in the same month in 2000. Annual values are the sum of the monthly values.

Road Oil—All consumption of road oil is assigned to the industrial sector.

All Other Petroleum Products—Consumption of all remaining petroleum products is assigned to the industrial sector.

Note 8. Nuclear Electric Power: See Tables 8.1 and A6. Nuclear electric power is included in the electric power sector.

Note 9. Hydroelectric Pumped Storage: See Tables 7.2a and A6. Pumped-storage hydroelectric power is included in the electric power sector.

Note 10. Renewable Energy: See Tables 10.2a-10.2c. End-use consumption of wood, waste, alcohol fuels, geothermal heat pump and direct use energy, and solar thermal direct use and photovoltaic energy is included in the end-use sectors. Included in the electric power sector are: net electricity generation from conventional hydroelectric power, wood, waste, geothermal, solar, and wind.

Note 11. Electricity: End-use consumption of electricity is based on retail sales of electricity in Table 7.5. "Other," which is primarily for use in government buildings, is added to the commercial sector, except for approximately 5 percent used by railroads and railways and attributed to the transportation sector. Kilowatthours are converted to Btu at the rate of 3,412 Btu per kilowatthour.

Note 12. Electrical System Energy Losses: Electrical system energy losses are calculated as the difference between total primary consumption by the electric power sector-see Table 2.6-and the total energy content of the retail sales of electricity-see Tables 7.5 and A6. Most of these losses occur at steam-electric power plants (conventional

and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output losses is a result of imputing fossil energy equivalent inputs for hydroelectric and other energy sources, since there is no generally accepted practice for measuring those thermal conversion rates. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called "line losses"), and unaccounted for electricity. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales. Overall, approximately 67 percent of total energy input is lost in conversion; of electricity generated, approximately 5 percent is lost in plant use and 9 percent is lost in transmission and distribution. Calculated electrical system energy losses may be less than actual losses, because primary consumption does not include the energy equivalent of utility purchases of electricity from non-electric utilities and from Canada and Mexico, although they are included in electricity sales.