

September 2013

Monthly Energy Review



Independent Statistics & Analysis
U.S. Energy Information
Administration

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Monthly Energy Review

The *Monthly Energy Review (MER)* is the U.S. Energy Information Administration's (EIA) primary report of recent and historical energy statistics. Included are statistics on total energy production, consumption, trade, and energy prices; overviews of petroleum, natural gas, coal, electricity, nuclear energy, renewable energy, and international petroleum; carbon dioxide emissions; and data unit conversions.

Release of the MER is in keeping with responsibilities given to EIA in Public Law 95-91 (Department of Energy Organization Act), which states, in part, in Section 205(a)(2):

"The Administrator shall be responsible for carrying out a central, comprehensive, and unified energy data and information program which will collect, evaluate, assemble, analyze, and disseminate data and information...."

The MER is intended for use by Members of Congress, federal and state agencies, energy analysts, and the general public. EIA welcomes suggestions from readers regarding the content of the MER and other EIA publications.

Related Monthly Publications: Other monthly EIA reports are *Petroleum Supply Monthly*, *Petroleum Marketing Monthly*, *Natural Gas Monthly*, *Electric Power Monthly*, and *International Petroleum Monthly*. For more information, contact EIA's Office of Communications via email at infoctr@eia.gov.

Important Notes About the Data

Data Displayed: For tables beginning in 1973, some annual data (usually 1974, 1976-1979, 1981-1984, 1986-1989, and 1991-1994) are not shown in the tables in Portable Document Format (PDF) files; however, all annual data are shown in the Excel and comma-separated values (CSV) files. Also, only two to three years of monthly data are displayed in the PDF files; however, for many series, monthly data beginning with January 1973 are available in the Excel and CSV files.

Comprehensive Changes: Each month, most MER tables and figures carry a new month of data, which is usually preliminary (and sometimes estimated or even forecast) and likely to be revised in the succeeding month.

Annual Data From 1949: The emphasis of the MER is on recent monthly and annual data trends. Analysts may wish to use the data in this report in conjunction with EIA's *Annual Energy Review (AER)* that offers annual data beginning in 1949 for many of the data series found in the MER. The AER is available at <http://www.eia.gov/totalenergy/data/annual>.

Electronic Access

The MER is available on EIA's website in a variety of formats at <http://www.eia.gov/totalenergy/data/monthly>.

- Full report and sections: PDF files
- Report tables: PDF files
- Table data (unrounded): Excel and CSV files
- Graphs: PDF files

Note: PDF files display selected annual and monthly data; Excel and CSV files display all available annual and monthly data, often at a greater level of precision than the PDF files.

Timing of Release: The MER is posted on the EIA website by the last work day of the month at <http://www.eia.gov/totalenergy/data/monthly>.

Monthly Energy Review

September 2013

U.S. Energy Information Administration
Office of Energy Statistics
U.S. Department of Energy
Washington, DC 20585

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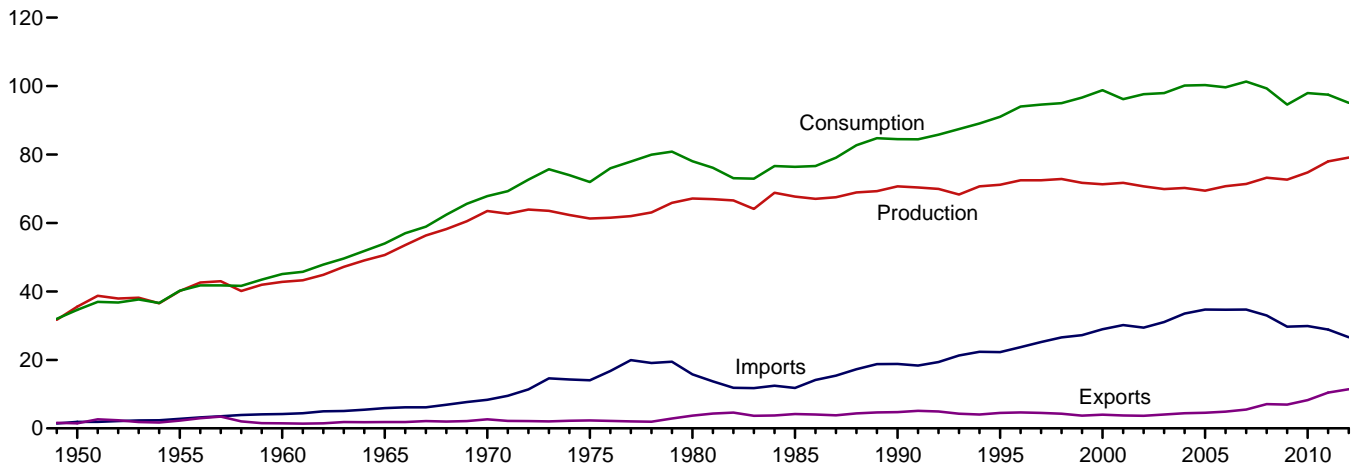
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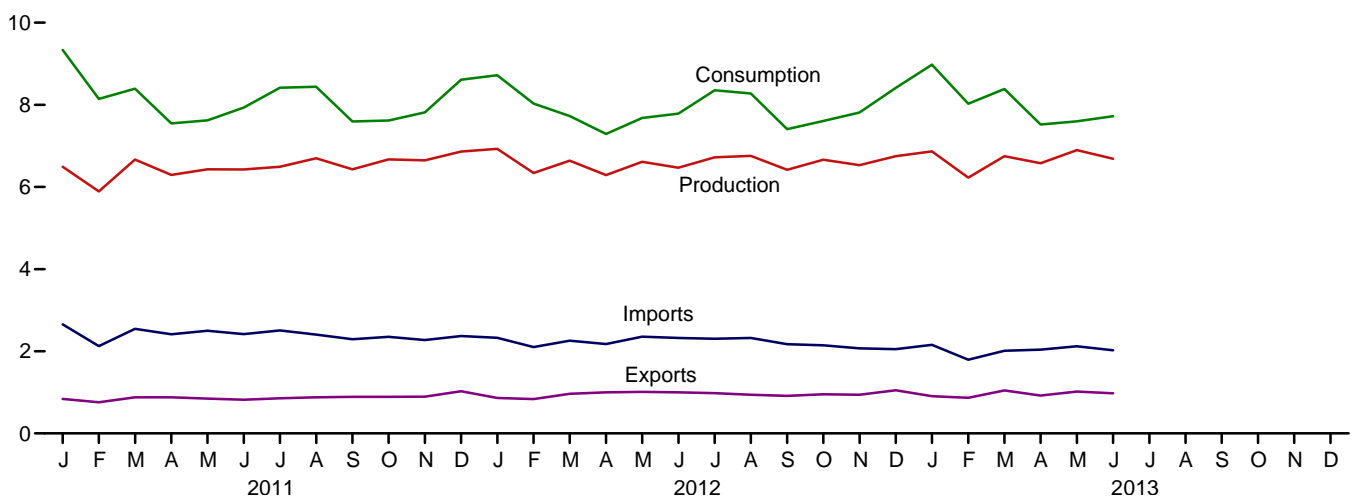
1. Energy Overview

Figure 1.1 Primary Energy Overview
(Quadrillion Btu)

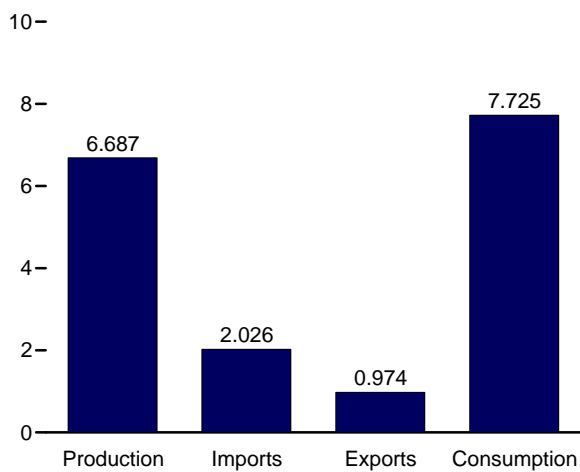
Overview, 1949–2012



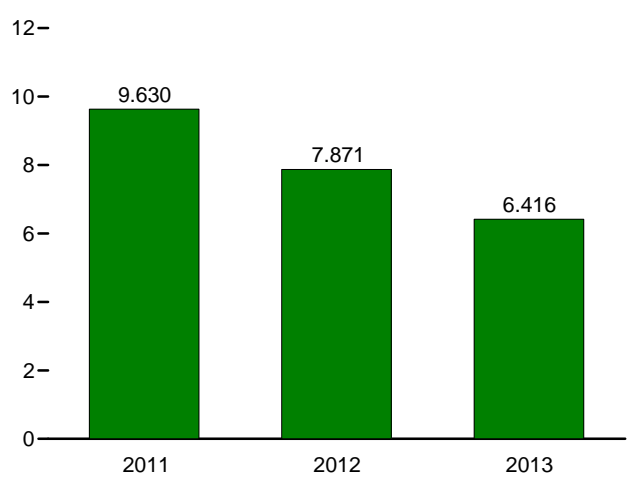
Overview, Monthly



Overview, June 2013



Net Imports, January–June



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.1.

Table 1.1 Primary Energy Overview
(Quadrillion Btu)

	Production				Trade			Stock Change and Other ^d	Consumption			
	Fossil Fuels ^a	Nuclear Electric Power	Renewable Energy ^b	Total	Imports	Exports	Net Imports ^c		Fossil Fuels ^e	Nuclear Electric Power	Renewable Energy ^b	Total ^f
1950 Total	32.563	0.000	2.978	35.540	1.913	1.465	0.448	-1.372	31.632	0.000	2.978	34.616
1955 Total	37.364	.000	2.784	40.148	2.790	2.286	.504	-.444	37.410	.000	2.784	40.208
1960 Total	39.869	.006	2.928	42.803	4.188	1.477	2.710	-.427	42.137	.006	2.928	45.086
1965 Total	47.235	.043	3.396	50.674	5.892	1.829	4.063	-.722	50.577	.043	3.396	54.015
1970 Total	59.186	.239	4.070	63.495	8.342	2.632	5.709	-1.367	63.522	.239	4.070	67.838
1975 Total	54.733	1.900	4.687	61.320	14.032	2.323	11.709	-1.065	65.357	1.900	4.687	71.965
1980 Total	59.008	2.739	5.428	67.175	15.796	3.695	12.101	-1.210	69.828	2.739	5.428	78.067
1985 Total	57.539	4.076	6.084	67.698	11.781	4.196	7.584	1.110	66.093	4.076	6.084	76.392
1990 Total	58.560	6.104	6.041	70.705	18.817	4.752	14.065	-.284	72.332	6.104	6.041	84.485
1995 Total	57.540	7.075	6.558	71.174	22.260	4.511	17.750	2.105	77.259	7.075	6.560	91.029
2000 Total	57.366	7.862	6.104	71.332	28.973	4.006	24.967	2.515	84.731	7.862	6.106	98.814
2001 Total	58.541	8.029	5.164	71.735	30.157	3.771	26.386	-1.953	82.902	8.029	5.163	96.168
2002 Total	56.834	8.145	5.734	70.713	29.408	3.669	25.739	1.193	83.699	8.145	5.729	97.645
2003 Total	56.022	7.959	5.947	69.927	31.061	4.054	27.007	1.009	84.014	7.959	5.948	97.943
2004 Total	55.930	8.222	6.069	70.220	33.544	4.434	29.110	.830	85.819	8.222	6.081	100.160
2005 Total	55.053	8.161	6.229	69.443	34.709	4.560	30.149	.689	85.794	8.161	6.242	100.282
2006 Total	55.940	8.215	6.599	70.754	34.679	4.872	29.806	-.930	84.702	8.215	6.649	99.629
2007 Total	56.435	8.455	6.528	71.419	34.703	5.482	29.221	.675	86.211	8.455	6.541	101.315
2008 Total	57.588	8.427	7.219	73.235	32.992	7.060	25.932	.125	83.549	8.427	7.204	99.929
2009 Total	56.669	8.356	7.655	72.680	29.706	6.965	22.741	-.822	78.488	8.356	7.639	94.598
2010 Total	58.224	8.434	8.128	74.786	29.877	8.234	21.643	1.544	81.369	8.434	8.082	97.974
2011 January	4.985	.761	.747	6.494	2.656	.841	1.815	1.028	7.835	.761	.731	9.337
February	4.504	.678	.710	5.892	2.126	.759	1.367	.884	6.754	.678	.703	8.143
March	5.163	.687	.816	6.667	2.545	.880	1.664	.062	6.892	.687	.806	8.393
April	4.911	.571	.813	6.294	2.411	.878	1.533	-.281	6.164	.571	.804	7.546
May	5.000	.597	.832	6.429	2.497	.847	1.651	-.460	6.185	.597	.826	7.620
June	4.917	.683	.825	6.425	2.418	.818	1.600	-.091	6.416	.683	.824	7.934
July	4.941	.757	.792	6.490	2.505	.854	1.652	.275	6.861	.757	.782	8.417
August	5.208	.746	.742	6.697	2.406	.879	1.527	.215	6.935	.746	.741	8.439
September	5.054	.700	.677	6.430	2.292	.892	1.400	-.236	6.214	.700	.670	7.594
October	5.301	.663	.708	6.672	2.352	.891	1.461	-.516	6.246	.663	.699	7.618
November	5.237	.675	.738	6.649	2.274	.894	1.380	-.214	6.406	.675	.727	7.816
December	5.339	.752	.770	6.861	2.372	1.026	1.347	.405	7.089	.752	.761	8.612
Total	60.562	8.269	9.170	78.001	28.855	10.458	18.397	1.071	79.999	8.269	9.074	97.469
2012 January	R 5.388	.757	.783	6.929	2.329	.863	1.466	R .326	7.191	.757	.760	8.720
February	R 4.974	.668	.699	6.341	2.102	.837	1.265	R .425	6.665	.668	.688	8.031
March	R 5.201	.646	.792	6.639	2.258	.963	1.295	R -.208	6.285	.646	.784	7.725
April	R 4.936	.585	.768	6.289	2.176	.999	1.177	R -.176	5.928	.585	.765	7.290
May	R 5.147	.650	.814	R 6.611	2.353	1.010	1.343	R -.272	6.204	.650	.814	7.682
June	R 5.009	.682	.778	R 6.468	2.324	.998	1.326	R -.010	6.312	.682	.777	7.784
July	R 5.248	.723	.749	R 6.720	2.305	.981	1.324	R .309	6.860	.723	.750	8.353
August	R 5.317	.728	.711	R 6.756	2.324	.941	1.383	R .135	6.812	.728	.716	8.275
September	R 5.100	.675	.643	R 6.418	2.172	.914	1.258	R -.268	6.077	.675	.642	7.408
October	R 5.363	.625	.674	R 6.663	2.146	.954	1.192	R -.248	6.290	.625	.679	7.607
November	R 5.252	.593	.685	R 6.530	2.070	.940	1.130	R .151	6.519	.593	.685	7.811
December	R 5.263	.718	.769	R 6.750	2.052	1.052	1.000	R .663	6.920	.718	.765	8.414
Total	R 62.197	8.050	8.867	R 79.115	26.611	11.452	15.159	R .826	78.063	8.050	8.825	95.100
2013 January	R 5.331	.747	.789	R 6.867	2.158	.905	1.253	R .859	7.431	.747	.787	8.979
February	R 4.883	.643	.700	R 6.227	1.796	.867	.929	R .873	6.670	.643	.701	8.028
March	R 5.326	.659	.763	R 6.748	2.013	1.046	.967	R .670	6.948	.659	.764	8.385
April	R 5.177	.594	.805	R 6.576	2.040	.923	1.117	R -.171	6.110	.594	.806	7.522
May	R 5.385	.658	.854	R 6.896	R 2.120	1.020	R 1.100	R -.397	R 6.072	.658	.854	R 7.600
June	R 5.176	.695	.816	R 6.687	2.026	.974	1.051	R -.013	6.195	.695	.817	7.725
6-Month Total	31.278	3.996	4.728	40.002	12.151	5.735	6.416	1.820	39.427	3.996	4.730	48.238
2012 6-Month Total	30.654	3.987	4.635	39.277	13.542	5.670	7.871	.084	38.586	3.987	4.587	47.232
2011 6-Month Total	29.482	3.977	4.743	38.201	14.654	5.023	9.630	1.142	40.247	3.977	4.694	48.974

^a Coal, natural gas (dry), crude oil, and natural gas plant liquids.

^b See Tables 10.1–10.2c for notes on series components and estimation; and see Note, "Renewable Energy Production and Consumption," at end of Section 10.

^c Net imports equal imports minus exports.

^d Includes petroleum stock change and adjustments; natural gas net storage withdrawals and balancing item; coal stock change, losses, and unaccounted for; fuel ethanol stock change; and biodiesel stock change and balancing item.

^e Coal, coal coke net imports, natural gas, and petroleum.

^f Also includes electricity net imports.

R=Revised.

Notes: • See "Primary Energy," "Primary Energy Production," and "Primary

Energy Consumption," in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

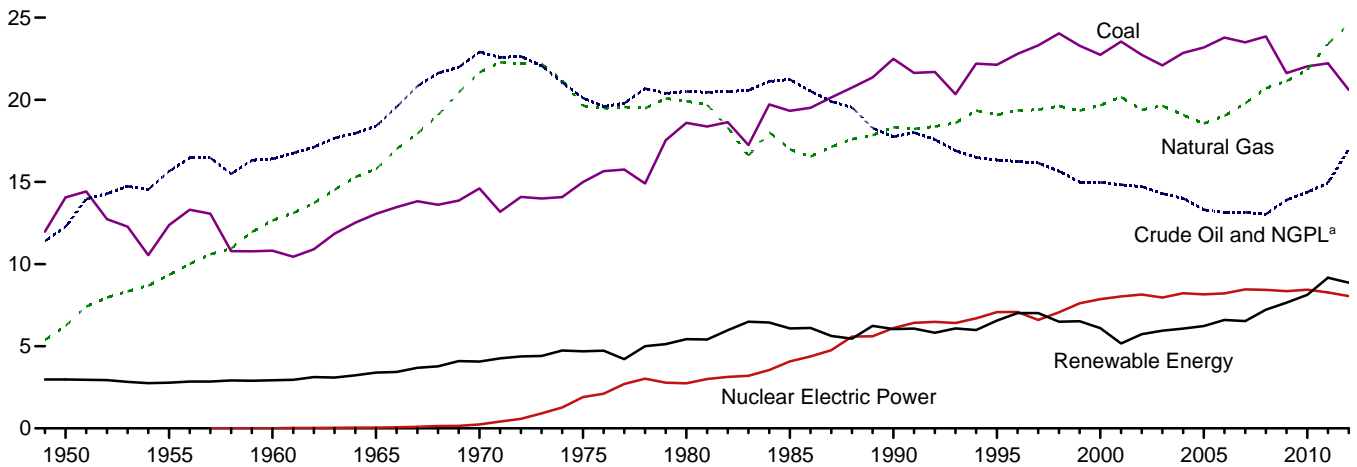
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#summary> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#summary> for all available monthly and annual data beginning in 1973.

Sources: • **Production:** Table 1.2. • **Trade:** Tables 1.4a and 1.4b. • **Stock Change and Other:** Calculated as consumption minus production and net imports. • **Consumption:** Table 1.3.

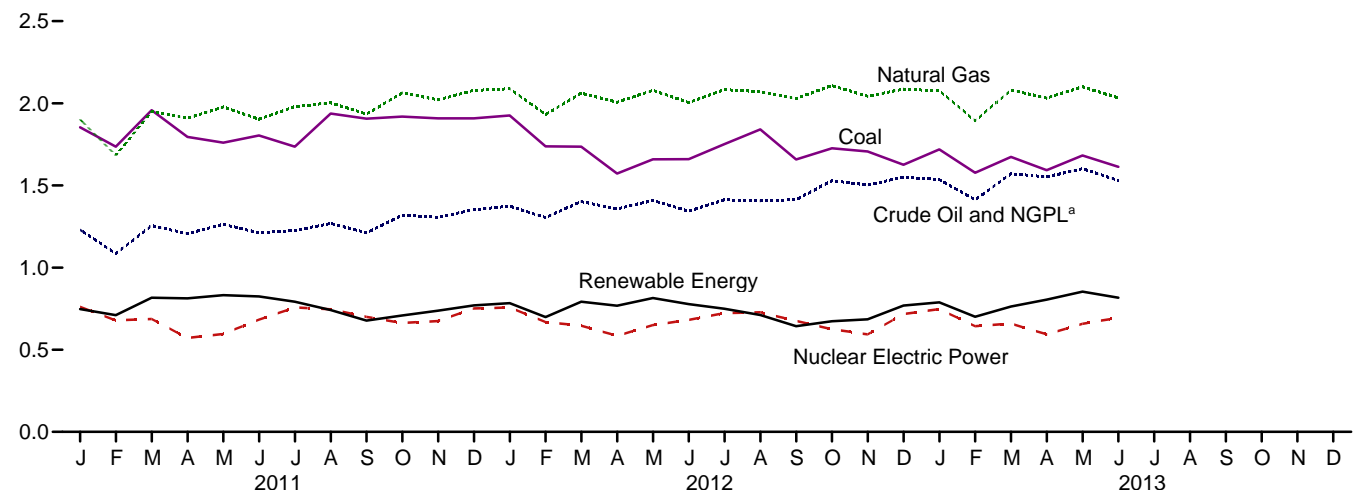
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 1.2 Primary Energy Production
(Quadrillion Btu)

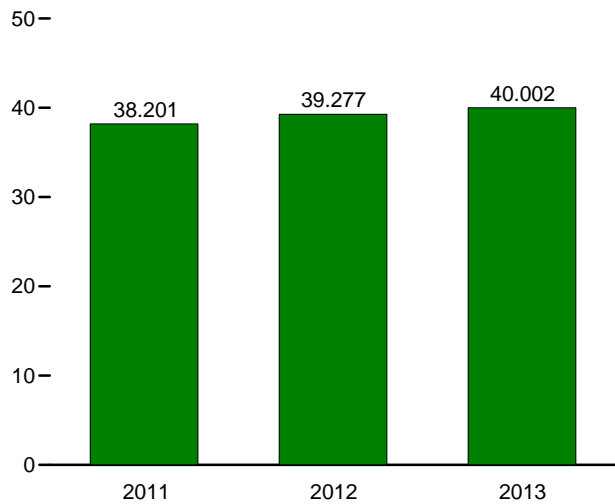
By Source, 1949–2012



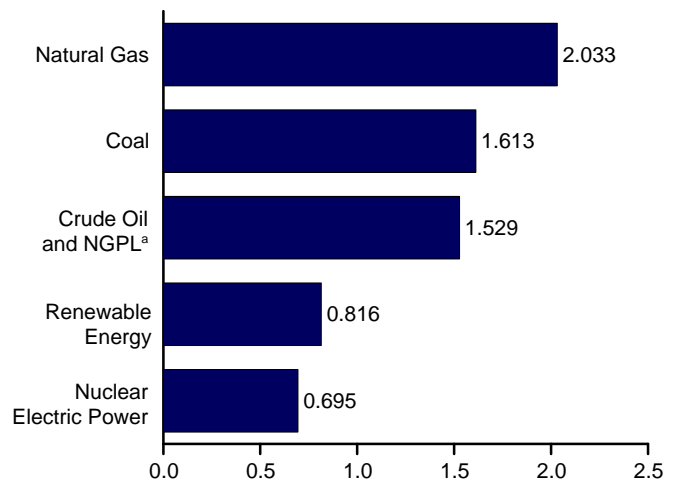
By Source, Monthly



Total, January–June



By Source, June 2013



^a Natural gas plant liquids.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.

Source: Table 1.2.

Table 1.2 Primary Energy Production by Source
(Quadrillion Btu)

	Fossil Fuels					Nuclear Electric Power	Renewable Energy ^a						Total
	Coal ^b	Natural Gas (Dry)	Crude Oil ^c	NGPL ^d	Total		Hydroelectric Power ^e	Geo-thermal	Solar/PV	Wind	Bio-mass	Total	
1950 Total	14.060	6.233	11.447	0.823	32.563	0.000	1.415	NA	NA	NA	1.562	2.978	35.540
1955 Total	12.370	9.345	14.410	1.240	37.364	.000	1.360	NA	NA	NA	1.424	2.784	40.148
1960 Total	10.817	12.656	14.935	1.461	39.869	.006	1.608	(s)	NA	NA	1.320	2.928	42.803
1965 Total	13.055	15.775	16.521	1.883	47.235	.043	2.059	.002	NA	NA	1.335	3.396	50.674
1970 Total	14.607	21.666	20.401	2.512	59.186	.239	2.634	.006	NA	NA	1.431	4.070	63.495
1975 Total	14.989	19.640	17.729	2.374	54.733	1.900	3.155	.034	NA	NA	1.499	4.687	61.320
1980 Total	18.598	19.908	18.249	2.254	59.008	2.739	2.900	.053	NA	NA	2.475	5.428	67.175
1985 Total	19.325	16.980	18.992	2.241	57.539	4.076	2.970	.097	(s)	(s)	3.016	6.084	67.698
1990 Total	22.488	18.326	15.571	2.175	58.560	6.104	3.046	.171	.059	.029	2.735	6.041	70.705
1995 Total	22.130	19.082	13.887	2.442	57.540	7.075	3.205	.152	.069	.033	3.099	6.558	71.174
2000 Total	22.735	19.662	12.358	2.611	57.366	7.862	2.811	.164	.066	.057	3.006	6.104	71.332
2001 Total	23.547	20.166	12.282	2.547	58.541	8.029	2.242	.164	.064	.070	2.624	5.164	71.735
2002 Total	22.732	19.382	12.160	2.559	56.834	8.145	2.689	.171	.063	.105	2.705	5.734	70.713
2003 Total	22.094	19.633	11.948	2.346	56.022	7.959	2.793	.173	.062	.113	2.805	5.947	69.927
2004 Total	22.852	19.074	11.538	2.466	55.930	8.222	2.688	.178	.063	.142	2.998	6.069	70.220
2005 Total	23.185	18.556	10.978	2.334	55.053	8.161	2.703	.181	.063	.178	3.104	6.229	69.443
2006 Total	23.790	19.022	10.772	2.356	55.940	8.215	2.869	.181	.068	.264	3.216	6.599	70.754
2007 Total	23.493	19.786	10.748	2.409	56.435	8.455	2.446	.186	.076	.341	3.480	6.528	71.419
2008 Total	23.851	20.703	10.615	2.419	57.588	8.427	2.511	.192	.089	.546	3.881	7.219	73.235
2009 Total	21.624	21.139	11.332	2.574	56.669	8.356	2.669	.200	.098	.721	3.967	7.655	72.680
2010 Total	22.038	21.806	11.598	2.781	58.224	8.434	2.539	.208	.126	.923	4.332	8.128	74.786
2011 January	1.854	1.901	.989	.241	4.985	.761	.248	.018	.013	.083	.384	.747	6.494
February	1.736	1.684	.879	.207	4.504	.678	.234	.017	.013	.102	.345	.710	5.892
March	1.958	1.950	1.006	.250	5.163	.687	.303	.018	.014	.102	.379	.816	6.667
April	1.795	1.909	.965	.241	4.911	.571	.303	.017	.014	.121	.358	.813	6.294
May	1.760	1.977	1.009	.254	5.000	.597	.317	.018	.015	.114	.368	.832	6.429
June	1.804	1.903	.970	.241	4.917	.683	.312	.017	.015	.107	.374	.825	6.425
July	1.736	1.979	.975	.251	4.941	.757	.304	.018	.015	.073	.383	.792	6.490
August	1.937	2.003	1.015	.254	5.208	.746	.250	.018	.015	.073	.386	.742	6.697
September	1.907	1.935	.973	.239	5.054	.700	.208	.017	.014	.067	.371	.677	6.430
October	1.919	2.063	1.056	.263	5.301	.663	.192	.018	.015	.102	.381	.708	6.672
November	1.909	2.022	1.045	.261	5.237	.675	.201	.018	.014	.121	.385	.738	6.649
December	1.908	2.079	1.084	.268	5.339	.752	.231	.018	.014	.104	.404	.770	6.861
Total	22.221	23.406	11.965	2.970	60.562	8.269	3.103	.212	.171	1.168	4.516	9.170	78.001
2012 January	1.925	E 2.089	E 1.103	.271	R 5.388	.757	.227	.019	.017	.134	.386	.783	6.929
February	1.738	E 1.931	E 1.049	.255	R 4.974	.668	.198	.018	.017	.108	.358	.699	6.341
March	1.736	E 2.062	RE 1.131	.271	R 5.201	.646	.250	.019	.019	.135	.369	.792	6.639
April	1.572	E 2.007	E 1.094	.263	R 4.936	.585	.254	.018	.019	.124	.352	.768	6.289
May	1.659	E 2.079	RE 1.138	.271	R 5.147	.650	.277	.019	.021	.122	.374	.814	R 6.611
June	1.660	E 2.005	RE 1.085	.258	R 5.009	.682	.259	.019	.021	.116	.364	.778	R 6.468
July	1.751	E 2.084	RE 1.148	.265	R 5.248	.723	.260	.019	.021	.085	.364	.749	R 6.720
August	1.841	E 2.070	RE 1.135	.270	R 5.317	.728	.225	.019	.021	.081	.366	.711	6.756
September	1.658	E 2.029	RE 1.142	.272	R 5.100	.675	.171	.019	.020	.084	.349	.643	R 6.418
October	1.726	E 2.108	RE 1.246	.284	R 5.363	.625	.157	.019	.021	.122	.355	.674	R 6.663
November	1.707	E 2.043	RE 1.224	.278	R 5.252	.593	.183	.019	.019	.112	.352	.685	R 6.530
December	1.626	E 2.086	E 1.275	.276	R 5.263	.718	.226	.020	.019	.138	.367	.769	R 6.750
Total	20.600	E 24.592	RE 13.769	3.235	R 62.197	8.050	2.687	.227	.235	1.361	4.357	8.867	R 79.115
2013 January	1.720	E 2.076	RE 1.266	.270	R 5.331	.747	.244	.019	.023	.141	.361	.789	R 6.867
February	1.577	E 1.894	E 1.159	.253	R 4.883	.643	.199	.018	.022	.135	.327	.700	R 6.227
March	1.674	E 2.081	RE 1.289	.283	R 5.326	.659	.200	.019	.026	.152	.367	.763	R 6.748
April	1.593	E 2.032	RE 1.279	.273	R 5.177	.594	.241	.019	.026	.168	.352	.805	R 6.576
May	1.682	RE 2.100	RE 1.320	.283	R 5.385	.658	.277	.019	.027	.159	.371	.854	R 6.896
June	1.613	E 2.033	E 1.253	.276	R 5.176	.695	.266	.019	.028	.134	.370	.816	6.687
6-Month Total	9.860	E 12.216	E 7.566	1.637	31.278	3.996	1.427	.113	.151	.889	2.148	4.728	40.002
2012 6-Month Total	10.291	E 12.172	E 6.600	1.590	30.654	3.987	1.465	.112	.114	.740	2.203	4.635	39.277
2011 6-Month Total	10.906	11.325	5.817	1.433	29.482	3.977	1.717	.106	.084	.629	2.207	4.743	38.201

^a Most data are estimates. See Tables 10.1–10.2c for notes on series components and estimation; and see Note, "Renewable Energy Production and Consumption," at end of Section 10.

^b Beginning in 1989, includes waste coal supplied. Beginning in 2001, also includes a small amount of refuse recovery. See Table 6.1.

^c Includes lease condensate.

^d Natural gas plant liquids.

^e Conventional hydroelectric power.

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

Notes: • See "Primary Energy Production" in Glossary. • Totals may not equal

sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

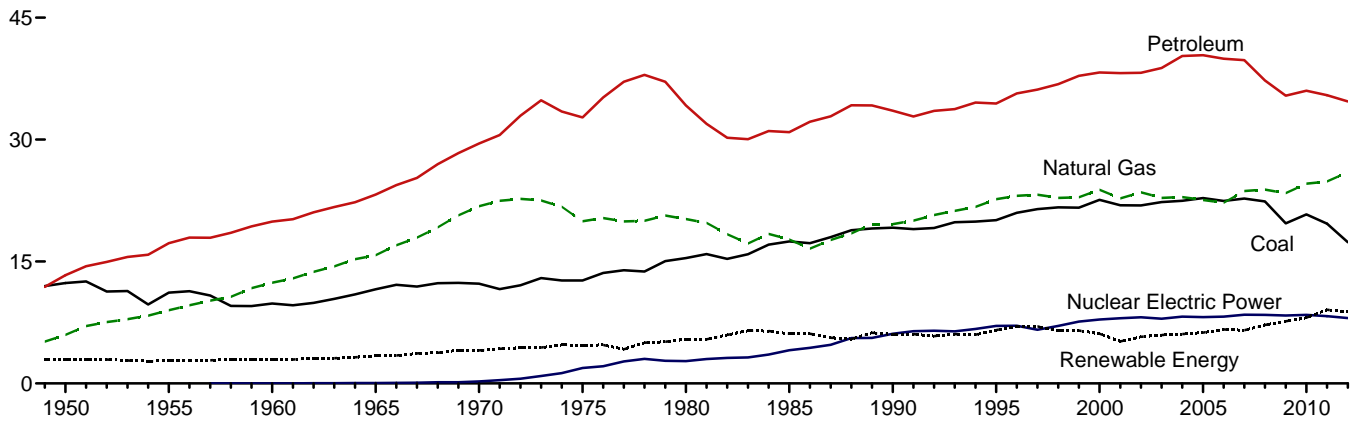
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#summary> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#summary> for all available monthly and annual data beginning in 1973.

Sources: • Coal: Tables 6.1 and A5. • Natural Gas (Dry): Tables 4.1 and A4. • Crude Oil and Natural Gas Plant Liquids: Tables 3.1 and A2. • Nuclear Electric Power: Tables 7.2a and A6 ("Nuclear Plants" heat rate). • Renewable Energy: Table 10.1.

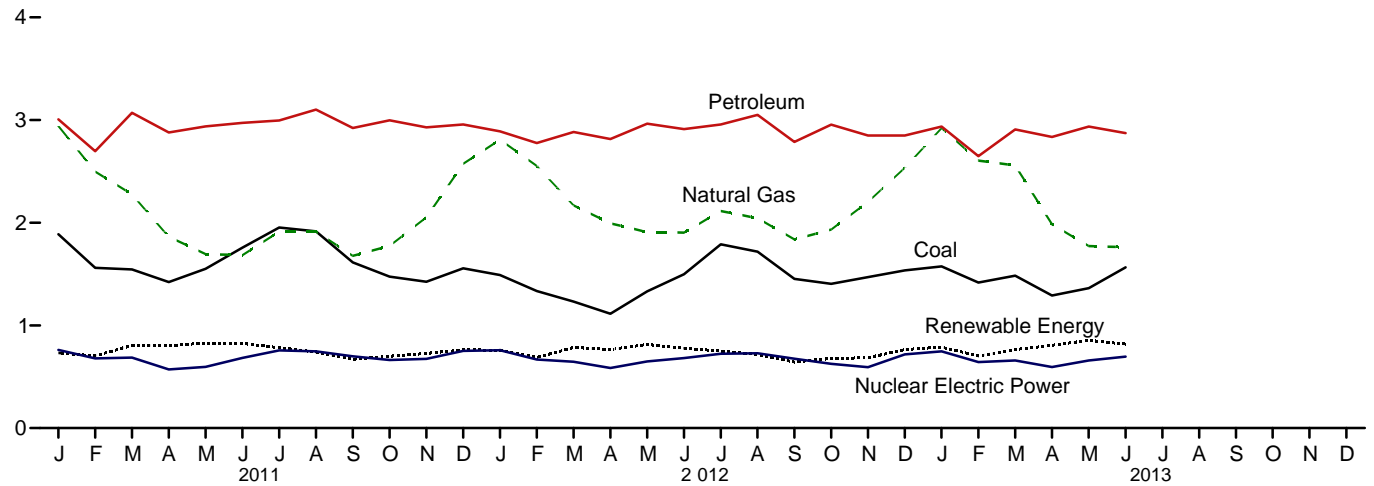
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 1.3 Primary Energy Consumption
(Quadrillion Btu)

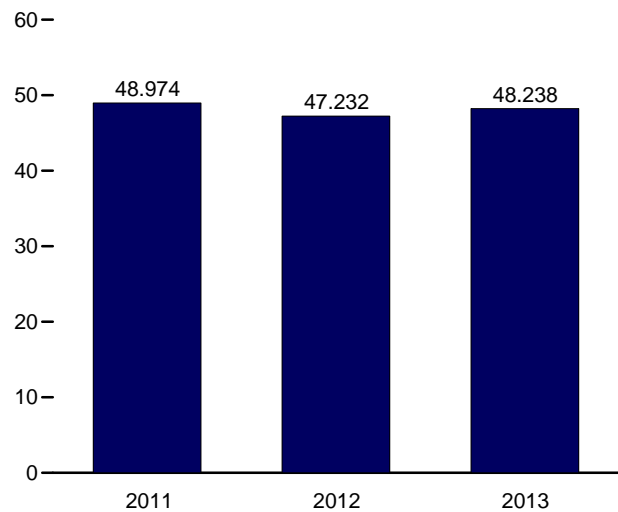
By Source,^a 1949–2012



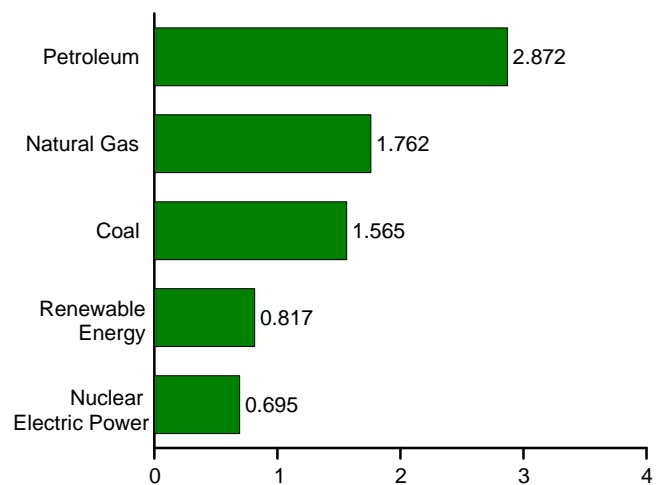
By Source,^a Monthly



Total, January–June



By Source,^a June 2013



^a Small quantities of net imports of coal coke and electricity are not shown.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.3.

Table 1.3 Primary Energy Consumption by Source
(Quadrillion Btu)

	Fossil Fuels				Nuclear Electric Power	Renewable Energy ^a						Total ^f
	Coal	Natural Gas ^b	Petro-leum ^c	Total ^d		Hydro-electric Power ^e	Geo-thermal	Solar/PV	Wind	Bio-mass	Total	
1950 Total	12.347	5.968	13.315	31.632	0.000	1.415	NA	NA	NA	1.562	2.978	34.616
1955 Total	11.167	8.998	17.255	37.410	.000	1.360	NA	NA	NA	1.424	2.784	40.208
1960 Total	9.838	12.385	19.919	42.137	.006	1.608	(s)	NA	NA	1.320	2.928	45.086
1965 Total	11.581	15.769	23.246	50.577	.043	2.059	.002	NA	NA	1.335	3.396	54.015
1970 Total	12.265	21.795	29.521	63.522	.239	2.634	.006	NA	NA	1.431	4.070	67.838
1975 Total	12.663	19.948	32.732	65.357	1.900	3.155	.034	NA	NA	1.499	4.687	71.965
1980 Total	15.423	20.235	34.205	69.828	2.739	2.900	.053	NA	NA	2.475	5.428	78.067
1985 Total	17.478	17.703	30.925	66.093	4.076	2.970	.097	(s)	(s)	3.016	6.084	76.392
1990 Total	19.173	19.603	33.552	72.332	6.104	3.046	.171	.059	.029	2.735	6.041	84.485
1995 Total	20.089	22.671	34.438	77.259	7.075	3.205	.152	.069	.033	3.101	6.560	91.029
2000 Total	22.580	23.824	38.262	84.731	7.862	2.811	.164	.066	.057	3.008	6.106	98.814
2001 Total	21.914	22.773	38.186	82.902	8.029	2.242	.164	.064	.070	2.622	5.163	96.168
2002 Total	21.904	23.510	38.224	83.699	8.145	2.689	.171	.063	.105	2.701	5.729	97.645
2003 Total	22.321	22.831	38.811	84.014	7.959	2.793	.173	.062	.113	2.807	5.948	97.943
2004 Total	22.466	22.923	40.292	85.819	8.222	2.688	.178	.063	.142	3.010	6.081	100.160
2005 Total	22.797	22.565	40.388	85.794	8.161	2.703	.181	.063	.178	3.117	6.242	100.282
2006 Total	22.447	22.239	39.955	84.702	8.215	2.869	.181	.068	.264	3.267	6.649	99.629
2007 Total	22.749	23.663	39.774	86.211	8.455	2.446	.186	.076	.341	3.493	6.541	101.315
2008 Total	22.385	23.843	37.280	83.549	8.427	2.511	.192	.089	.546	3.866	7.204	99.292
2009 Total	19.692	23.416	35.403	78.488	8.356	2.669	.200	.098	.721	3.951	7.639	94.598
2010 Total	20.791	24.575	36.010	81.369	8.434	2.539	.208	.126	.923	4.286	8.082	97.974
2011 January	1.888	2.940	3.006	7.835	.761	.248	.018	.013	.083	.368	.731	9.337
February	1.560	2.497	2.696	6.754	.678	.234	.017	.013	.102	.338	.703	8.143
March	1.544	2.276	3.070	6.892	.687	.303	.018	.014	.102	.368	.806	8.393
April	1.421	1.863	2.879	6.164	.571	.303	.017	.014	.121	.349	.804	7.546
May	1.551	1.695	2.938	6.185	.597	.317	.018	.015	.114	.362	.826	7.620
June	1.758	1.684	2.973	6.416	.683	.312	.017	.015	.107	.373	.824	7.934
July	1.953	1.913	2.995	6.861	.757	.304	.018	.015	.073	.373	.782	8.417
August	1.917	1.914	3.101	6.935	.746	.250	.018	.015	.073	.385	.741	8.439
September	1.614	1.677	2.923	6.214	.700	.208	.017	.014	.067	.364	.670	7.594
October	1.475	1.773	2.998	6.246	.663	.192	.018	.015	.102	.372	.699	7.618
November	1.425	2.053	2.929	6.406	.675	.201	.018	.014	.121	.374	.727	7.816
December	1.556	2.574	2.957	7.089	.752	.231	.018	.014	.104	.394	.761	8.612
Total	19.663	24.860	35.465	79.999	8.269	3.103	.212	.171	1.168	4.421	9.074	97.469
2012 January	1.491	2.809	2.889	7.191	.757	.227	.019	.017	.134	.363	.760	8.720
February	1.335	2.553	2.777	6.665	.668	.198	.018	.017	.108	.347	.688	8.031
March	1.232	2.168	2.883	6.285	.646	.250	.019	.019	.135	.361	.784	7.725
April	1.113	1.994	2.815	5.928	.585	.254	.018	.019	.124	.349	.765	7.290
May	1.331	1.907	2.964	6.204	.650	.277	.019	.021	.122	.374	.814	7.682
June	1.498	1.903	2.911	6.312	.682	.259	.019	.021	.116	.362	.777	7.784
July	1.789	2.114	2.957	6.860	.723	.260	.019	.021	.085	.365	.750	8.353
August	1.718	2.043	3.051	6.812	.728	.225	.019	.021	.081	.371	.716	8.275
September	1.453	1.838	2.788	6.077	.675	.171	.019	.020	.084	.348	.642	7.408
October	1.405	1.933	2.955	6.290	.625	.157	.019	.021	.122	.360	.679	7.607
November	1.471	2.202	2.849	6.519	.593	.183	.019	.019	.112	.352	.685	7.811
December	1.536	2.535	2.849	6.920	.718	.226	.020	.019	.138	.363	.765	8.414
Total	17.372	26.000	34.688	78.063	8.050	2.687	.227	.235	1.361	4.316	8.825	95.100
2013 January	1.575	2.921	2.936	7.431	.747	.244	.019	.023	.141	.360	.787	8.979
February	1.418	2.604	2.648	6.670	.643	.199	.018	.022	.135	.327	.701	8.028
March	1.484	2.557	2.909	6.948	.659	.200	.019	.026	.152	.367	.764	8.385
April	1.291	1.985	2.836	6.110	.594	.241	.019	.026	.168	.353	.806	7.522
May	1.363	^R 1.773	2.937	^R 6.072	.658	.277	.019	.027	.159	.372	.854	^R 7.600
June	1.565	1.762	2.872	6.195	.695	.266	.019	.028	.134	.371	.817	7.725
6-Month Total	8.695	13.602	17.137	39.427	3.996	1.427	.113	.151	.889	2.151	4.730	48.238
2012 6-Month Total	8.000	13.334	17.240	38.586	3.987	1.465	.112	.114	.740	2.155	4.587	47.232
2011 6-Month Total	9.722	12.956	17.563	40.247	3.977	1.717	.106	.084	.629	2.158	4.694	48.974

^a Most data are estimates. See Tables 10.1–10.2c for notes on series components and estimation; and see Note, "Renewable Energy Production and Consumption," at end of Section 10.

^b Natural gas only; excludes supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

^c Petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel. Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

^d Includes coal coke net imports. See Tables 1.4a and 1.4b.

^e Conventional hydroelectric power.

^f Includes coal coke net imports and electricity net imports, which are not separately displayed. See Tables 1.4a and 1.4b.

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

Notes: • See "Primary Energy Consumption" in Glossary.

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

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

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#summary>

for all available annual data from 1949–1972. • See

<http://www.eia.gov/totalenergy/data/monthly/#summary> for all available monthly and

annual data beginning in 1973.

Sources: • Coal: Tables 6.1 and A5. • Natural Gas: Tables 4.1 and A4.

• Petroleum: Table 3.6. • Nuclear Electric Power: Tables 7.2a and A6

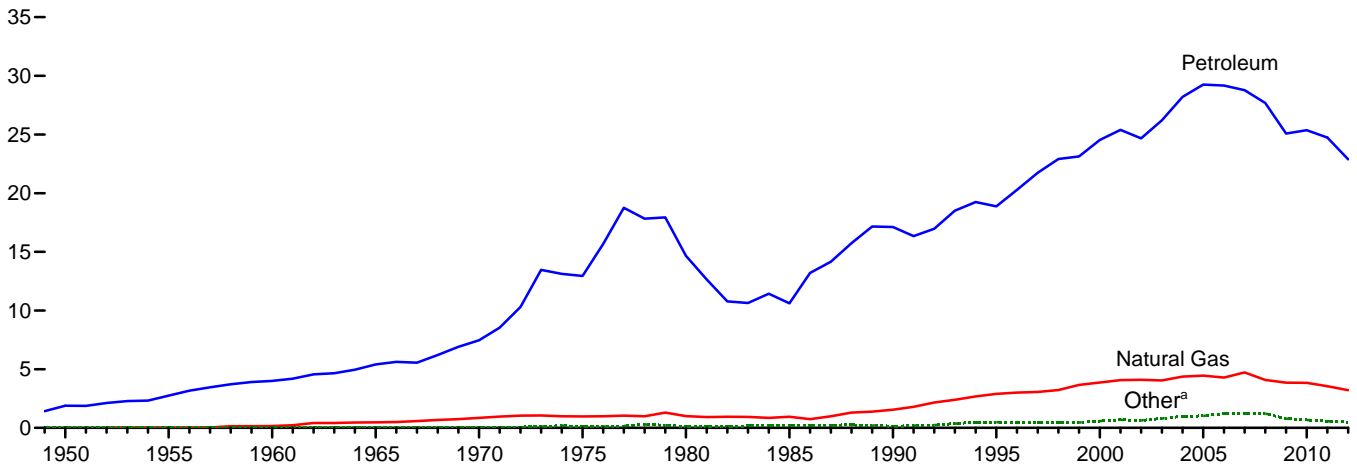
("Nuclear Plants" heat rate). • Renewable Energy: Table 10.1. • Net Imports of

Coal Coke and Electricity: Tables 1.4a and 1.4b.

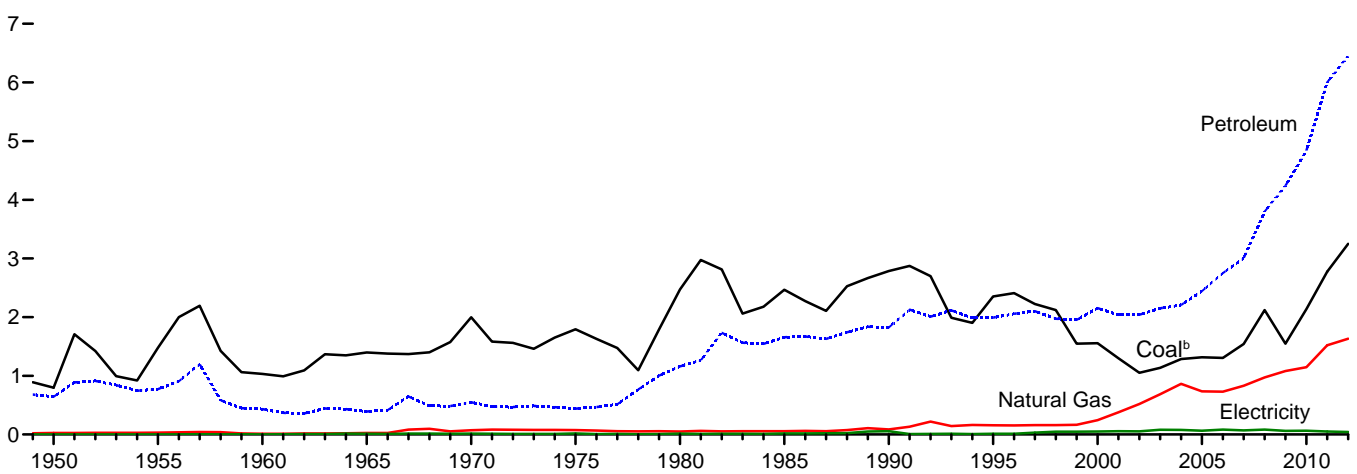
Selected years of data from 1949 through 1972 have been added to this table.
For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 1.4a Primary Energy Imports and Exports
(Quadrillion Btu)

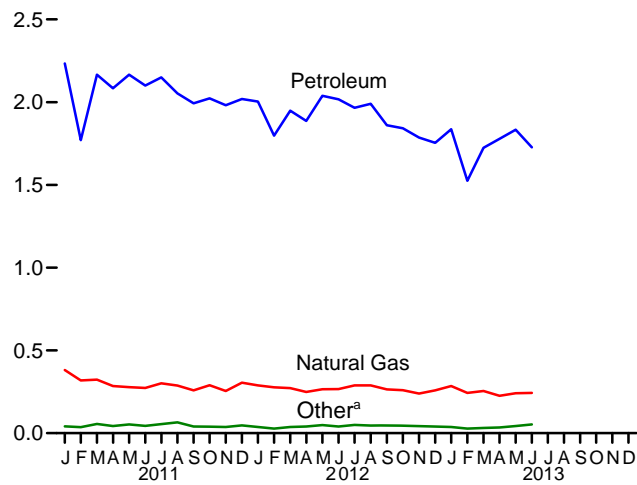
Imports by Source, 1949–2012



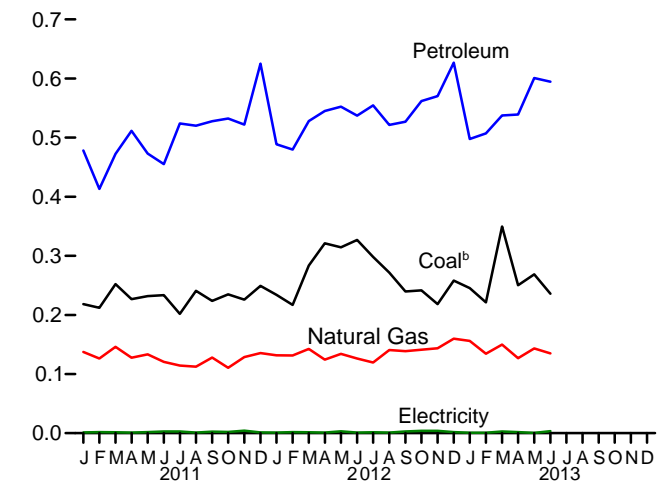
Exports by Source, 1949–2012



Imports by Source, Monthly



Exports by Major Source, Monthly

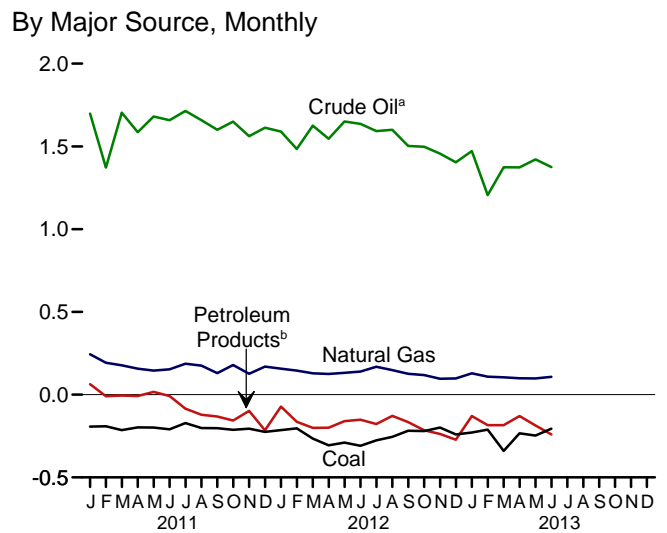
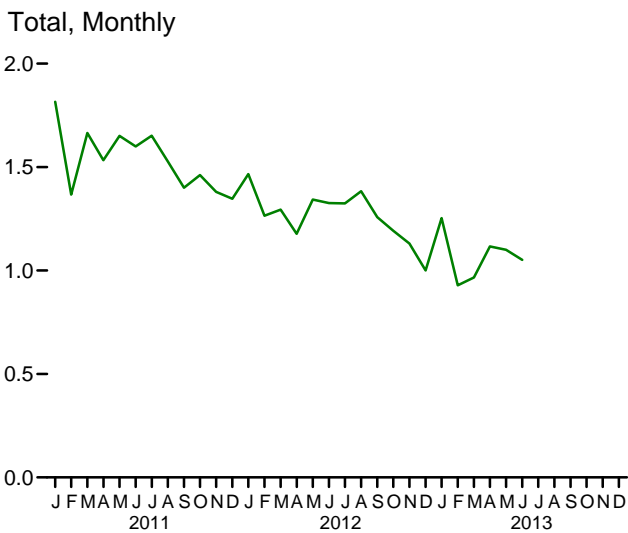
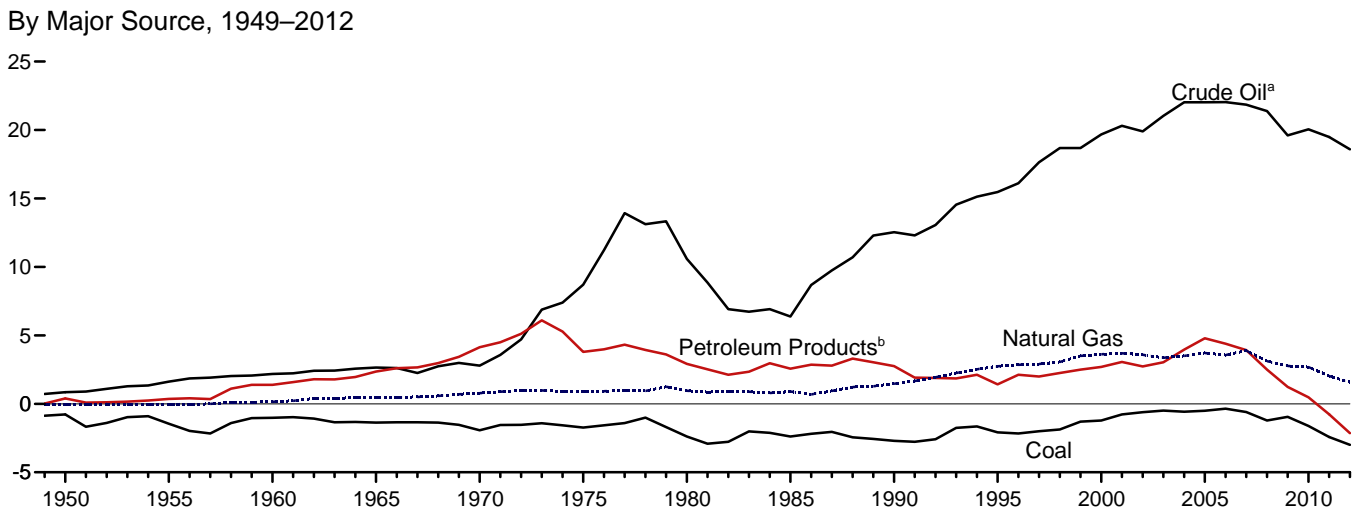
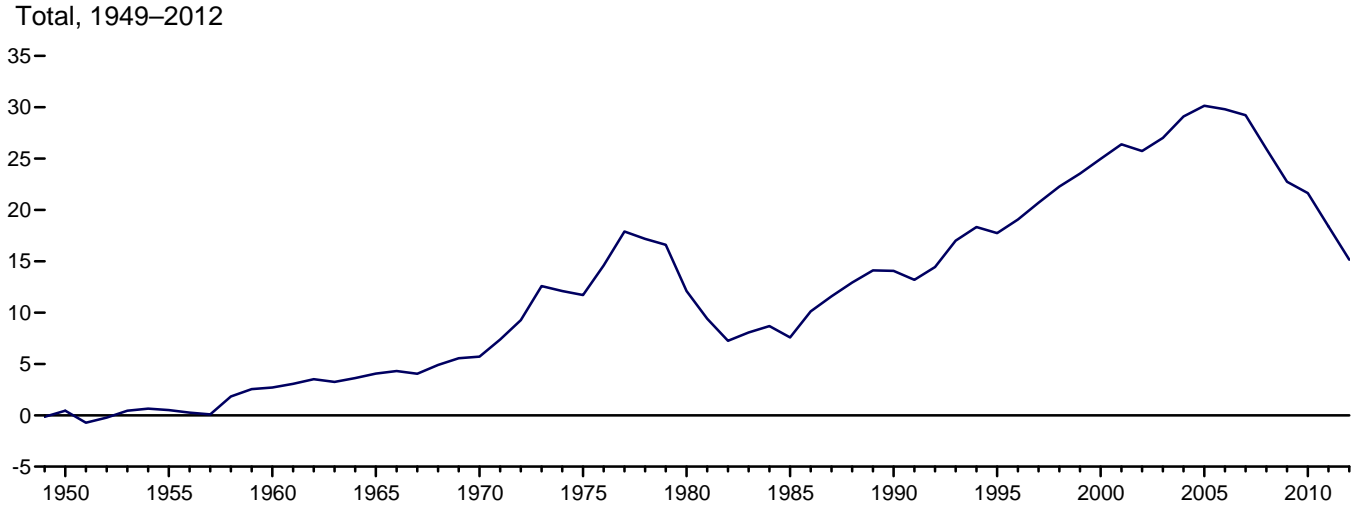


^a Coal, coal coke, biofuels, and electricity.

^b Includes coal coke.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Sources: Tables 1.4a and 1.4b.

Figure 1.4b Primary Energy Net Imports
(Quadrillion Btu, Except as noted)



^a Crude oil and lease condensate. Includes imports into the Strategic Petroleum Reserve, which began in 1977.
^b Petroleum products, unfinished oils, pentanes plus, and gasoline

blending components. Does not include biofuels.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Sources: Tables 1.4a, and 1.4b.

Table 1.4a Primary Energy Imports by Source
(Quadrillion Btu)

	Imports								
	Coal	Coal Coke	Natural Gas	Petroleum			Biofuels ^c	Electricity	Total
				Crude Oil ^a	Petroleum Products ^b	Total			
1950 Total	0.009	0.011	0.000	1.056	0.830	1.886	NA	0.007	1.913
1955 Total .....	.008	.003	.011	1.691	1.061	2.752	NA	.016	2.790
1960 Total .....	.007	.003	.161	2.196	1.802	3.999	NA	.018	4.188
1965 Total .....	.005	.002	.471	2.654	2.748	5.402	NA	.012	5.892
1970 Total .....	.001	.004	.846	2.814	4.656	7.470	NA	.021	8.342
1975 Total .....	.024	.045	.978	8.721	4.227	12.948	NA	.038	14.032
1980 Total .....	.030	.016	1.006	11.195	3.463	14.658	NA	.085	15.796
1985 Total .....	.049	.014	.952	6.814	3.796	10.609	NA	.157	11.781
1990 Total .....	.067	.019	1.551	12.766	4.351	17.117	NA	.063	18.817
1995 Total .....	.237	.095	2.901	15.669	3.211	18.881	.001	.146	22.260
2000 Total .....	.313	.094	3.869	19.783	4.749	24.531	(s)	.166	28.973
2001 Total .....	.495	.063	4.068	20.348	5.051	25.398	.002	.131	30.157
2002 Total .....	.422	.080	4.104	19.920	4.754	24.674	.002	.125	29.408
2003 Total .....	.626	.068	4.042	21.060	5.159	26.219	.002	.104	31.061
2004 Total .....	.682	.170	4.365	22.082	6.114	28.197	.013	.117	33.544
2005 Total .....	.762	.088	4.450	22.091	7.157	29.248	.012	.150	34.709
2006 Total .....	.906	.101	4.291	22.085	7.084	29.169	.066	.146	34.679
2007 Total .....	.909	.061	4.723	21.914	6.868	28.781	.054	.175	34.703
2008 Total .....	.855	.089	4.084	21.448	6.237	27.685	.084	.195	32.992
2009 Total .....	.566	.009	3.845	19.699	5.383	25.082	.026	.178	29.706
2010 Total .....	.484	.030	3.834	20.140	5.231	25.371	.004	.154	29.877
2011 January .....	.025	.001	.381	1.710	.523	2.233	(s)	.015	2.656
February .....	.021	.002	.319	1.377	.394	1.771	(s)	.013	2.126
March .....	.038	.004	.323	1.710	.455	2.166	(s)	.014	2.545
April .....	.028	.001	.285	1.593	.490	2.084	(s)	.013	2.411
May .....	.033	.004	.278	1.687	.479	2.166	(s)	.017	2.497
June .....	.024	.004	.273	1.665	.436	2.101	.001	.015	2.418
July .....	.030	.003	.301	1.728	.422	2.150	.001	.021	2.505
August .....	.039	.005	.287	1.664	.389	2.053	.002	.019	2.406
September .....	.021	.003	.258	1.607	.386	1.993	.003	.014	2.292
October .....	.023	.002	.289	1.659	.364	2.023	.002	.013	2.352
November .....	.020	.002	.255	1.572	.409	1.981	.003	.012	2.274
December .....	.024	.004	.305	1.622	.397	2.019	.005	.015	2.372
Total .....	.327	.035	3.555	19.595	5.145	24.740	.019	.178	28.855
2012 January .....	.020	.003	.288	1.600	.403	2.003	(s)	.014	2.329
February .....	.013	.002	.277	1.494	.303	1.797	(s)	.012	2.102
March .....	.017	.004	.272	1.636	.312	1.948	.002	.014	2.258
April .....	.016	.007	.249	1.552	.335	1.887	.001	.017	2.176
May .....	.025	.004	.265	1.663	.376	2.039	.002	.019	2.353
June .....	.018	.001	.266	1.644	.373	2.017	.003	.018	2.324
July .....	.022	.001	.288	1.606	.360	1.966	.004	.023	2.305
August .....	.017	.001	.288	1.611	.379	1.990	.007	.022	2.324
September .....	.021	.002	.264	1.513	.348	1.861	.007	.017	2.172
October .....	.022	.001	.260	1.510	.332	1.842	.007	.015	2.146
November .....	.020	.001	.240	1.468	.317	1.786	.007	.016	2.070
December .....	.018	.002	.258	1.414	.340	1.754	.005	.015	2.052
Total .....	.229	.028	3.216	18.712	4.178	22.891	.045	.202	26.611
2013 January .....	.016	(s)	.285	1.484	.352	1.836	.004	.017	2.158
February .....	.010	.001	.243	1.226	.299	1.525	.001	.016	1.796
March .....	.010	(s)	.254	1.392	.332	1.725	.006	.018	2.013
April .....	.017	(s)	.226	1.396	.382	1.778	.003	.016	2.040
May .....	.022	.001	.241	1.444	.389	1.833	.004	.019	^R 2.120
June .....	.030	(s)	.243	1.396	.330	1.727	.006	.020	2.026
6-Month Total .....	.105	.002	1.492	8.338	2.085	10.424	.024	.105	12.151
2012 6-Month Total .....	.109	.021	1.617	9.589	2.102	11.692	.008	.095	13.542
2011 6-Month Total .....	.170	.016	1.860	9.742	2.778	12.520	.002	.086	14.654

^a Crude oil and lease condensate. Includes imports into the Strategic Petroleum Reserve, which began in 1977.

^b Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.

^c Fuel ethanol (minus denaturant) and biodiesel.

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

Notes: • See "Primary Energy" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#summary>

for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#summary> for all available monthly and annual data beginning in 1973.

Sources: • **Coal**: Tables 6.1 and A5. • **Coal Coke**: 1949–1975—U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook*. 1976–1980—U.S. Energy Information Administration (EIA), Form EIA-5/5A, "Coke and Coal Chemicals—Monthly/Annual." 1981 forward—EIA, *Quarterly Coal Report*, quarterly reports and Table A5. • **Natural Gas**: Tables 4.1 and A4. • **Crude Oil and Petroleum Products**: Tables 3.3b, 10.3, 10.4, and A2. • **Biofuels**: Tables 10.3, 10.4 and A3. • **Electricity**: Tables 7.1 and A6.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 1.4b Primary Energy Exports by Source and Total Net Imports
(Quadrillion Btu)

	Exports									Net Imports ^a
	Coal	Coal Coke	Natural Gas	Petroleum			Biofuels ^d	Electricity	Total	
				Crude Oil ^b	Petroleum Products ^c	Total				
1950 Total	0.786	0.010	0.027	0.202	0.440	0.642	NA	0.001	1.465	0.448
1955 Total	1.465	.013	.032	.067	.707	.774	NA	.002	2.286	.504
1960 Total	1.023	.009	.012	.018	.413	.431	NA	.003	1.477	2.710
1965 Total	1.376	.021	.027	.006	.386	.392	NA	.013	1.829	4.063
1970 Total	1.936	.061	.072	.029	.520	.549	NA	.014	2.632	5.709
1975 Total	1.761	.032	.074	.012	.427	.439	NA	.017	2.323	11.709
1980 Total	2.421	.051	.049	.609	.551	1.160	NA	.014	3.695	12.101
1985 Total	2.438	.028	.056	.432	1.225	1.657	NA	.017	4.196	7.584
1990 Total	2.772	.014	.087	.230	1.594	1.824	NA	.055	4.752	14.065
1995 Total	2.318	.034	.156	.200	1.791	1.991	NA	.012	4.511	17.750
2000 Total	1.528	.028	.245	.106	2.048	2.154	NA	.051	4.006	24.967
2001 Total	1.265	.033	.377	.043	1.996	2.039	(s)	.056	3.771	26.386
2002 Total	1.032	.020	.520	.019	2.023	2.042	(s)	.054	3.669	25.739
2003 Total	1.117	.018	.686	.026	2.124	2.151	.001	.082	4.054	27.007
2004 Total	1.253	.033	.862	.057	2.151	2.208	.001	.078	4.434	29.110
2005 Total	1.273	.043	.735	.067	2.374	2.442	.001	.065	4.560	30.149
2006 Total	1.264	.040	.730	.052	2.699	2.751	.004	.083	4.872	29.806
2007 Total	1.507	.036	.830	.058	2.949	3.007	.035	.069	5.482	29.221
2008 Total	2.071	.049	.972	.061	3.739	3.800	.086	.083	7.060	25.932
2009 Total	1.515	.032	1.082	.093	4.147	4.240	.034	.062	6.965	22.741
2010 Total	2.101	.036	1.147	.088	4.750	4.838	.046	.065	8.234	21.643
2011 January .....	.218	.001	.137	.013	.460	.473	.006	.005	.841	1.815
February .....	.212	.002	.126	.005	.403	.408	.005	.005	.759	1.367
March .....	.252	.001	.146	.007	.461	.467	.008	.005	.880	1.664
April .....	.227	.001	.128	.007	.499	.506	.011	.005	.878	1.533
May .....	.232	.002	.133	.007	.462	.469	.007	.004	.847	1.651
June .....	.233	.003	.121	.006	.444	.451	.006	.004	.818	1.600
July .....	.202	.003	.114	.013	.506	.520	.011	.004	.854	1.652
August .....	.241	.001	.112	.006	.511	.517	.005	.003	.879	1.527
September .....	.224	.003	.128	.006	.518	.524	.010	.003	.892	1.400
October .....	.235	.002	.110	.009	.520	.529	.011	.003	.891	1.461
November .....	.226	.004	.129	.011	.507	.518	.013	.004	.894	1.380
December .....	.249	.001	.136	.010	.613	.622	.014	.003	1.026	1.347
Total	2.751	.024	1.521	.100	5.904	6.004	.108	.051	10.458	18.397
2012 January .....	.234	.001	.132	.010	.475	.486	.008	.003	.863	1.466
February .....	.217	.002	.131	.010	.467	.477	.007	.003	.837	1.265
March .....	.284	.002	.142	.011	.513	.524	.008	.004	.963	1.295
April .....	.321	.001	.124	.006	.535	.541	.007	.004	.999	1.177
May .....	.314	.003	.134	.012	.536	.548	.006	.004	1.010	1.343
June .....	.327	.001	.126	.008	.525	.533	.007	.004	.998	1.326
July .....	.298	.001	.119	.014	.537	.551	.007	.003	.981	1.324
August .....	.272	.001	.141	.011	.508	.519	.006	.003	.941	1.383
September .....	.240	.003	.139	.010	.514	.524	.006	.003	.914	1.258
October .....	.242	.004	.141	.012	.547	.559	.006	.003	.954	1.192
November .....	.218	.004	.144	.013	.555	.567	.004	.003	.940	1.130
December .....	.258	.002	.160	.010	.613	.623	.005	.004	1.052	1.000
Total	3.225	.024	1.633	.127	6.325	6.452	.077	.041	11.452	15.159
2013 January .....	.245	.001	.156	.013	.481	.494	.005	.003	.905	1.253
February .....	.221	.001	.134	.020	.484	.504	.004	.003	.867	.929
March .....	.350	.003	.150	.018	.516	.534	.006	.003	1.046	.967
April .....	.250	.002	.127	.023	.512	.535	.005	.004	.923	1.117
May .....	.269	(s)	.143	.022	.575	.598	.006	.003	1.020	^R 1.100
June .....	.236	.003	.135	.021	.571	.592	.006	.003	.974	1.051
6-Month Total	1.571	.009	.845	.118	3.139	3.257	.033	.020	5.735	6.416
2012 6-Month Total	1.697	.009	.790	.057	3.051	3.108	.043	.023	5.670	7.871
2011 6-Month Total	1.375	.010	.791	.044	2.729	2.773	.044	.030	5.023	9.630

^a Net imports equal imports minus exports.

^b Crude oil and lease condensate.

^c Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.

^d Through 2010, data are for biodiesel only. Beginning in 2011, data are for fuel ethanol (minus denaturant) and biodiesel.

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

Notes: • See "Primary Energy" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#summary>

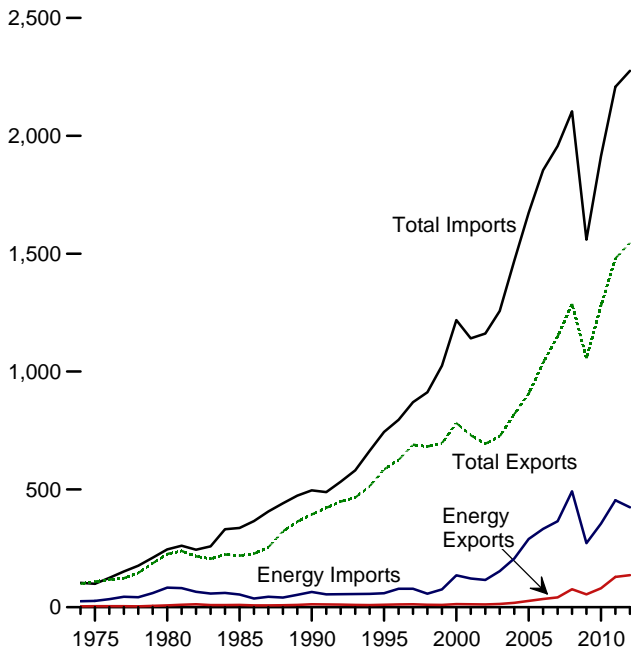
for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#summary> for all available monthly and annual data beginning in 1973.

Sources: • **Coal**: Tables 6.1 and A5. • **Coal Coke: 1949–1975**—U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook, 1976–1980*—U.S. Energy Information Administration (EIA), Form EIA-5/5A, "Coke and Coal Chemicals—Monthly/Annual." **1981 forward**—EIA, *Quarterly Coal Report*, quarterly reports and Table A5. • **Natural Gas**: Tables 4.1 and A4. • **Crude Oil and Petroleum Products**: Tables 3.3b, 10.4, and A2. • **Biofuels**: Tables 10.3, 10.4 and A3. • **Electricity**: Tables 7.1 and A6.

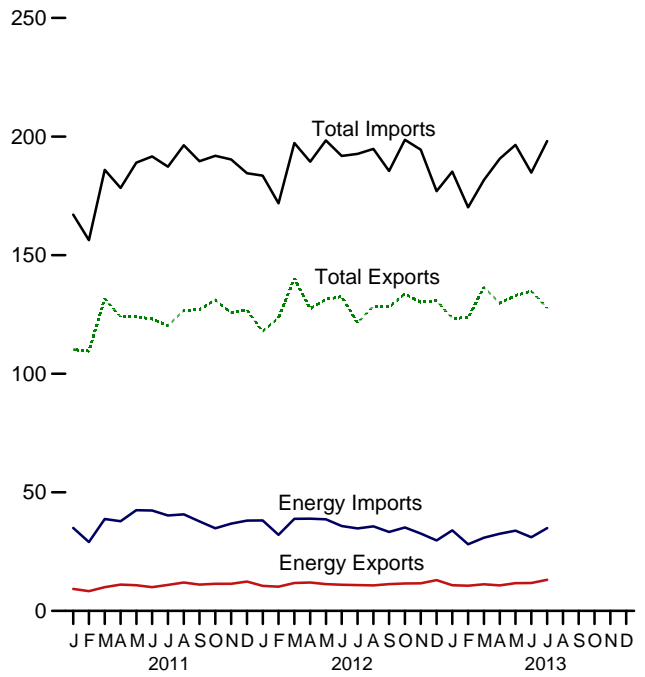
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 1.5 Merchandise Trade Value
(Billion Dollars^a)

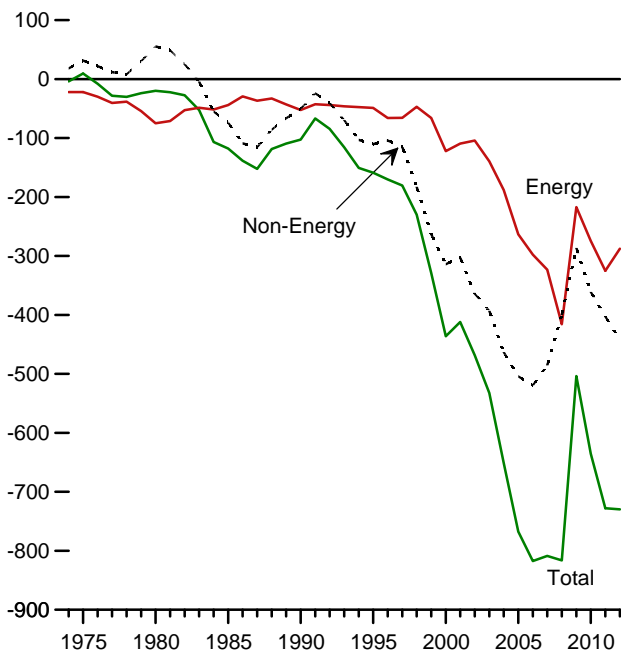
Imports and Exports, 1974–2012



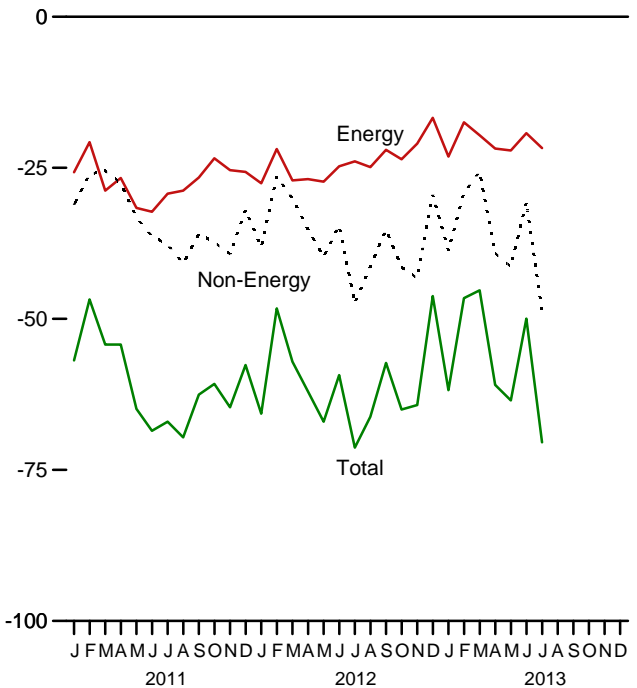
Imports and Exports, Monthly



Trade Balance, 1974–2012



Trade Balance, Monthly



^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
<http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.5.

Table 1.5 Merchandise Trade Value
(Million Dollars^a)

	Petroleum ^b			Energy ^c			Non-Energy Balance	Total Merchandise		
	Exports	Imports	Balance	Exports	Imports	Balance		Exports	Imports	Balance
1974 Total	792	24,668	-23,876	3,444	25,454	-22,010	18,126	99,437	103,321	-3,884
1975 Total	907	25,197	-24,289	4,470	26,476	-22,006	31,557	108,856	99,305	9,551
1980 Total	2,833	78,637	-75,803	7,982	82,924	-74,942	55,246	225,566	245,262	-19,696
1985 Total	4,707	50,475	-45,768	9,971	53,917	-43,946	-73,765	218,815	336,526	-117,712
1990 Total	6,901	61,583	-54,682	12,233	64,661	-52,428	-50,068	393,592	496,088	-102,496
1995 Total	6,321	54,368	-48,047	10,358	59,109	-48,751	-110,050	584,742	743,543	-158,801
2000 Total	10,192	119,251	-109,059	13,179	135,367	-122,188	-313,916	781,918	1,218,022	-436,104
2001 Total	8,868	102,747	-93,879	12,494	121,923	-109,429	-302,470	729,100	1,140,999	-411,899
2002 Total	8,569	102,663	-94,094	11,541	115,748	-104,207	-364,056	693,103	1,161,366	-468,263
2003 Total	10,209	132,433	-122,224	13,768	153,298	-139,530	-392,820	724,771	1,257,121	-532,350
2004 Total	13,130	179,266	-166,136	18,642	206,660	-188,018	-462,912	818,775	1,469,704	-650,930
2005 Total	19,155	250,068	-230,913	26,488	289,723	-263,235	-504,242	905,978	1,673,455	-767,477
2006 Total	28,171	299,714	-271,543	34,711	332,500	-297,789	-519,515	1,036,635	1,853,938	-817,304
2007 Total	33,293	327,620	-294,327	41,725	364,987	-323,262	-485,501	1,148,199	1,956,962	-808,763
2008 Total	61,695	449,847	-388,152	76,075	491,885	-415,810	-400,389	1,287,442	2,103,641	-816,199
2009 Total	44,509	251,833	-207,324	54,536	271,739	-217,203	-286,379	1,056,043	1,559,625	-503,582
2010 Total	64,753	333,472	-268,719	80,625	354,982	-274,357	-361,005	1,278,495	1,913,857	-635,362
2011 January	7,453	33,050	-25,597	9,281	35,010	-25,729	-31,133	110,186	167,048	-56,862
February	6,619	27,551	-20,932	8,307	29,062	-20,755	-26,021	109,539	156,315	-46,776
March	7,883	37,096	-29,213	10,000	38,763	-28,763	-25,491	131,724	185,978	-54,254
April	9,075	36,457	-27,382	11,117	37,803	-26,686	-27,561	124,047	178,294	-54,247
May	8,795	41,002	-32,207	10,823	42,470	-31,647	-33,241	124,066	188,954	-64,888
June	8,039	40,872	-32,833	10,040	42,305	-32,265	-36,271	123,047	191,582	-68,536
July	9,098	38,622	-29,524	10,935	40,224	-29,289	-37,730	120,245	187,265	-67,019
August	9,935	39,063	-29,128	11,962	40,732	-28,770	-40,843	126,734	196,347	-69,613
September	9,203	36,467	-27,264	11,129	37,741	-26,612	-35,927	127,031	189,570	-62,539
October	9,606	33,467	-23,861	11,436	34,857	-23,421	-37,352	131,088	191,861	-60,773
November	9,593	35,665	-26,072	11,447	36,821	-25,374	-39,256	125,693	190,323	-64,630
December	10,545	36,831	-26,286	12,396	38,084	-25,688	-31,940	126,891	184,519	-57,628
Total	105,844	436,145	-330,301	128,873	453,872	-324,999	-402,766	1,480,290	2,208,055	-727,765
2012 January	8,706	36,947	-28,241	10,583	38,146	-27,563	-38,120	117,839	183,522	-65,683
February	8,690	31,043	-22,353	10,203	32,092	-21,889	-26,368	123,609	171,866	-48,257
March	9,925	37,963	-28,038	11,766	38,832	-27,066	-30,011	140,233	197,310	-57,077
April	10,094	38,079	-27,985	12,004	38,861	-26,857	-35,155	127,405	189,417	-62,012
May	9,546	37,668	-28,122	11,304	38,603	-27,299	-39,729	131,342	198,370	-67,028
June	9,173	34,897	-25,724	11,019	35,777	-24,758	-34,546	132,547	191,851	-59,304
July	9,135	33,742	-24,607	10,876	34,797	-23,921	-47,375	121,412	192,707	-71,296
August	9,129	34,636	-25,507	10,793	35,672	-24,879	-41,303	128,587	194,769	-66,182
September	9,766	32,410	-22,644	11,283	33,313	-22,030	-35,259	128,198	185,488	-57,289
October	10,038	34,108	-24,070	11,567	35,159	-23,592	-41,423	133,600	198,614	-65,015
November	10,289	31,380	-21,091	11,627	32,611	-20,984	-43,264	130,182	194,431	-64,248
December	11,359	28,535	-17,176	12,998	29,729	-16,731	-29,488	130,756	176,975	-46,219
Total	115,848	411,409	-295,561	136,023	423,591	-287,568	-442,043	1,545,709	2,275,320	-729,611
2013 January	^b 8,881	^b 32,361	^b -23,480	10,825	33,967	-23,142	-38,655	123,390	185,187	-61,797
February	8,915	26,622	-17,707	10,634	28,106	-17,472	-29,099	123,606	170,177	-46,571
March	8,899	29,308	-20,409	11,224	30,844	-19,620	-25,653	136,414	181,687	-45,273
April	8,705	31,072	-22,367	10,737	32,544	-21,807	-39,116	129,728	190,651	-60,923
May	9,621	32,523	-22,902	11,720	33,856	-22,136	-41,350	133,003	196,488	-63,486
June	9,841	29,659	-19,818	11,772	31,036	-19,264	^R -30,691	^R 134,819	^R 184,774	^R -49,955
July	11,132	33,468	-22,336	13,153	34,894	-21,741	-48,703	127,616	198,060	-70,444
7-Month Total	65,993	215,012	-149,019	80,065	225,247	-145,182	-253,267	908,575	1,307,023	-398,449
2012 7-Month Total	65,269	250,339	-185,070	77,754	257,108	-179,354	-251,304	894,385	1,325,043	-430,658
2011 7-Month Total	56,962	254,650	-197,688	70,503	265,637	-195,134	-217,448	842,854	1,255,436	-412,582

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

^b Through 2012, data are for crude oil, petroleum preparations, liquefied propane and butane, and other mineral fuels. Beginning in 2013, data are for petroleum products and preparations.

^c Petroleum, coal, natural gas, and electricity.

^R=Revised.

Notes: • Monthly data are not adjusted for seasonal variations. • See Note, "Merchandise Trade Value," at end of section. • Totals may not equal sum of

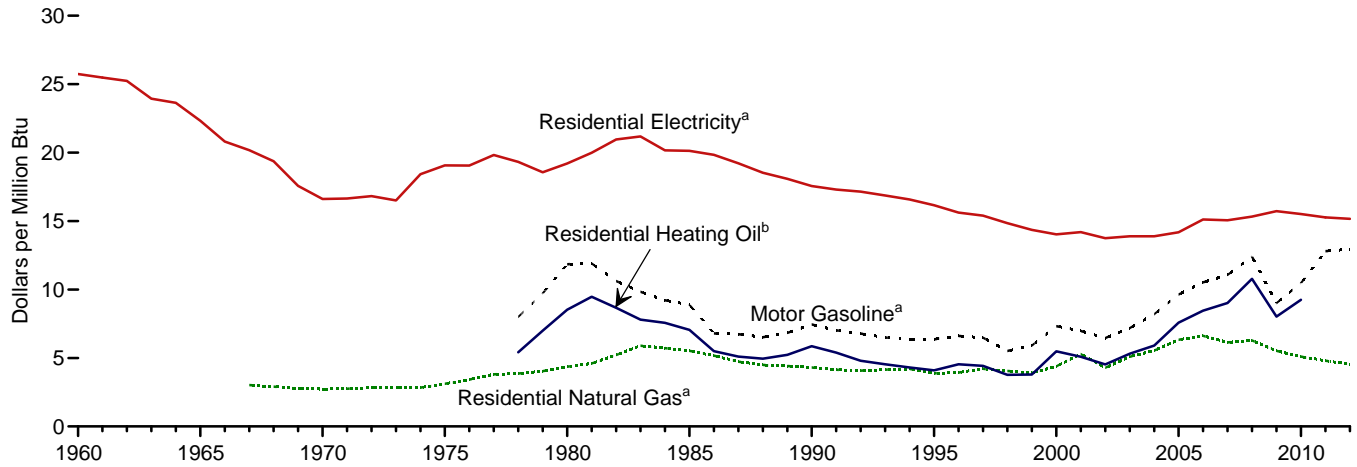
components due to independent rounding. • The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory, which comprises the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> for all available data beginning in 1974.

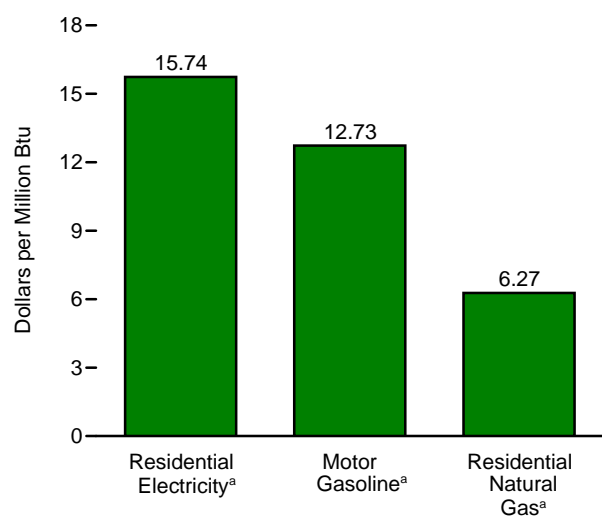
Sources: See end of section.

Figure 1.6 Cost of Fuels to End Users in Real (1982–1984) Dollars

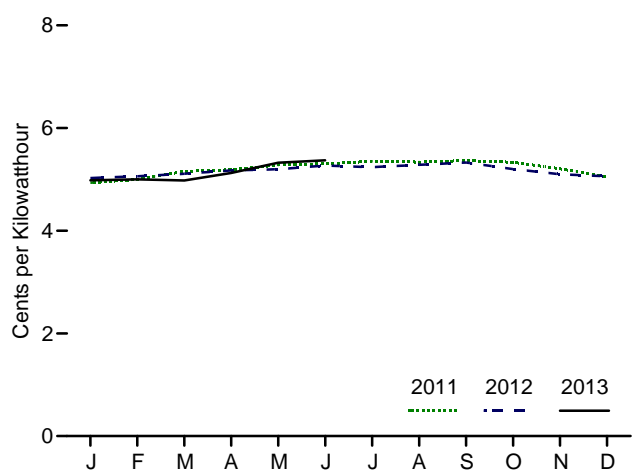
Costs, 1960–2012



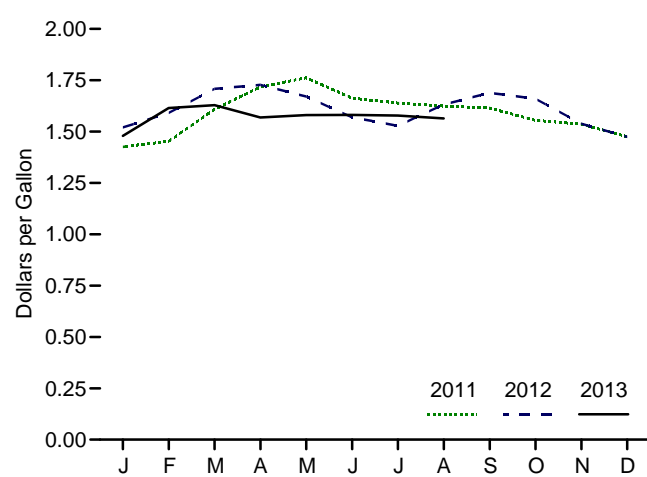
Costs, June 2013



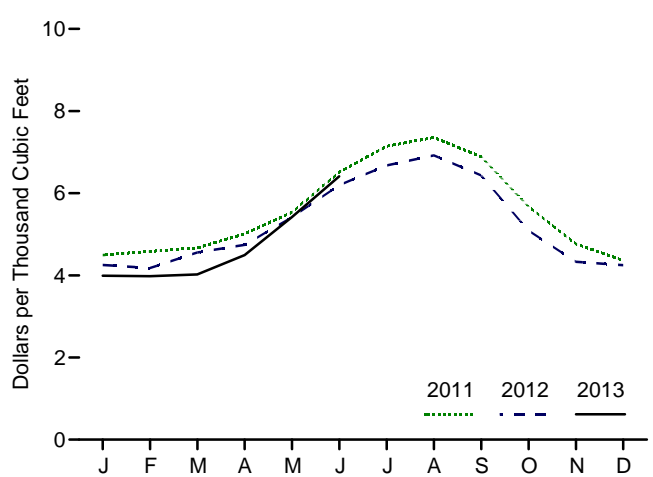
Residential Electricity,^a Monthly



Motor Gasoline,^a Monthly



Residential Natural Gas,^a Monthly



^a Includes taxes.
^b Excludes taxes.
 NA=Not available.

Note: See "Real Dollars" in Glossary.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
 Source: Table 1.6.

Table 1.6 Cost of Fuels to End Users in Real (1982–1984) Dollars

	Consumer Price Index, All Urban Consumers ^a	Motor Gasoline ^b		Residential Heating Oil ^c		Residential Natural Gas ^b		Residential Electricity ^b	
	Index 1982–1984=100	Dollars per Gallon	Dollars per Million Btu	Dollars per Gallon	Dollars per Million Btu	Dollars per Thousand Cubic Feet	Dollars per Million Btu	Cents per Kilowatt-hour	Dollars per Million Btu
1960 Average	29.6	NA	NA	NA	NA	NA	NA	8.8	25.74
1965 Average	31.5	NA	NA	NA	NA	NA	NA	7.6	22.33
1970 Average	38.8	NA	NA	NA	NA	2.81	2.72	5.7	16.62
1975 Average	53.8	NA	NA	NA	NA	3.18	3.12	6.5	19.07
1980 Average	82.4	1.482	11.85	1.182	8.52	4.47	4.36	6.6	19.21
1985 Average	107.6	1.112	8.89	0.979	7.06	5.69	5.52	6.87	20.13
1990 Average	130.7	0.931	7.44	0.813	5.86	4.44	4.31	5.99	17.56
1995 Average	152.4	0.791	6.37	0.569	4.10	3.98	3.87	5.51	16.15
2000 Average	172.2	0.908	7.32	0.761	5.49	4.51	4.39	4.79	14.02
2001 Average	177.1	0.864	6.97	0.706	5.09	5.44	5.28	4.84	14.20
2002 Average	179.9	0.801	6.46	0.628	4.52	4.39	4.28	4.69	13.75
2003 Average	184.0	0.890	7.18	0.736	5.31	5.23	5.09	4.74	13.89
2004 Average	188.9	1.018	8.20	0.819	5.91	5.69	5.55	4.74	13.89
2005 Average	195.3	1.197	9.64	1.051	7.58	6.50	6.33	4.84	14.18
2006 Average	201.6	1.307	10.52	1.173	8.46	6.81	6.63	5.16	15.12
2007 Average	207.342	1.374	11.06	1.250	9.01	6.31	6.14	5.14	15.05
2008 Average	215.303	1.541	12.40	1.495	10.78	6.45	6.28	5.23	15.33
2009 Average	214.537	1.119	9.01	1.112	8.02	5.66	5.52	5.37	15.72
2010 Average	218.056	1.301	10.47	1.283	9.25	5.22	5.11	5.29	15.51
2011 January	220.223	1.425	11.47	1.476	10.64	4.50	4.40	4.94	14.47
February	221.309	1.453	11.69	1.540	11.11	4.58	4.48	5.00	14.65
March	223.467	1.608	12.95	NA	NA	4.67	4.57	5.16	15.11
April	224.906	1.718	13.83	NA	NA	5.01	4.90	5.19	15.21
May	225.964	1.762	14.18	NA	NA	5.53	5.41	5.28	15.47
June	225.722	1.663	13.38	NA	NA	6.51	6.37	5.30	15.54
July	225.922	1.639	13.19	NA	NA	7.14	6.99	5.35	15.68
August	226.545	1.624	13.07	NA	NA	7.36	7.20	5.34	15.64
September	226.889	1.615	13.00	NA	NA	6.89	6.74	5.36	15.72
October	226.421	1.555	12.52	NA	NA	5.68	5.55	5.34	15.64
November	226.230	1.536	12.36	NA	NA	4.77	4.66	5.21	15.26
December	225.672	1.475	11.87	NA	NA	4.36	4.27	5.05	14.81
Average	224.939	1.590	12.80	NA	NA	4.90	4.80	5.21	15.27
2012 January	226.665	1.521	12.24	NA	NA	4.25	4.16	5.03	14.73
February	227.663	1.591	12.80	NA	NA	4.18	4.09	5.06	14.83
March	229.392	1.708	13.75	NA	NA	4.56	4.46	5.11	14.97
April	230.085	1.728	13.91	NA	NA	4.74	4.64	5.18	15.17
May	229.815	1.670	13.44	NA	NA	5.41	5.30	5.20	15.23
June	229.478	1.570	12.63	NA	NA	6.20	6.06	5.27	15.44
July	229.104	1.529	12.30	NA	NA	6.67	6.53	5.24	15.35
August	230.379	1.632	13.13	NA	NA	6.92	6.77	5.28	15.48
September	231.407	1.689	13.59	NA	NA	6.44	6.30	5.33	15.62
October	231.317	1.660	13.36	NA	NA	5.09	4.98	5.20	15.24
November	230.221	1.539	12.38	NA	NA	4.33	4.24	5.10	14.95
December	229.601	1.475	11.87	NA	NA	4.25	4.16	5.06	14.83
Average	229.594	1.609	12.95	NA	NA	4.65	4.55	5.17	15.17
2013 January	230.280	1.480	11.91	NA	NA	3.99	3.90	4.98	14.60
February	232.166	1.614	12.99	NA	NA	3.98	3.89	5.00	14.66
March	232.773	1.629	13.11	NA	NA	4.02	3.93	4.98	14.59
April	232.531	1.568	12.62	NA	NA	4.49	4.40	5.13	15.02
May	232.945	1.581	12.72	NA	NA	5.42	5.30	5.32	15.60
June	233.504	1.582	12.73	NA	NA	^R 6.41	^R 6.27	^R 5.37	^R 15.74
July	233.596	1.578	12.70	NA	NA	NA	NA	NA	NA
August	233.877	1.564	12.59	NA	NA	NA	NA	NA	NA

^a Data are U.S. city averages for all items, and are not seasonally adjusted.

^b Includes taxes.

^c Excludes taxes.

R=Revised. NA=Not available.

Notes: • See "Real Dollars" in Glossary. • Fuel costs are calculated by using the Urban Consumer Price Index (CPI) developed by the Bureau of Labor Statistics. • Annual averages may not equal average of months due to independent rounding. • Geographic coverage is the 50 states and the District of

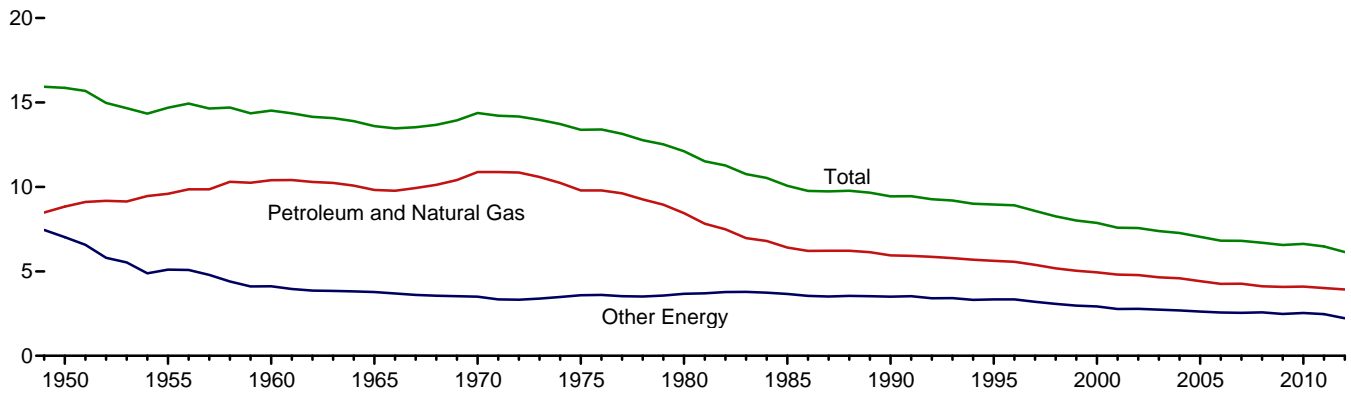
Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> for all available data beginning in 1973.

Sources: • **Fuel Prices:** Tables 9.4 (All Grades), 9.8, and 9.10, adjusted by the CPI; and *Monthly Energy Review*, September 2012, Table 9.8c. • **Consumer Price Index, All Urban Consumers:** U.S. Department of Labor, Bureau of Labor Statistics, series ID CUUR0000SA0. • **Conversion Factors:** Tables A1, A3, A4, and A6.

Selected years of data from 1960 through 1972 have been added to this table. For all years of data from 1973 through 2013, see the "Web Page" cited above.

Figure 1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product, 1949–2012
(Thousand Btu per Chained (2009) Dollar)



Note: See "Real Dollars" in Glossary.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.7.

Table 1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product

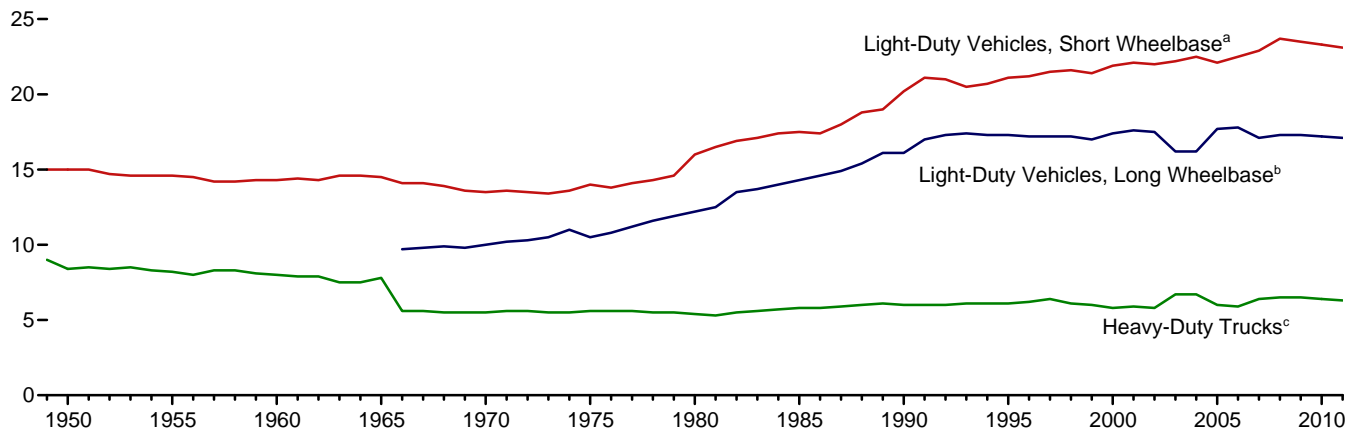
	Energy Consumption			Gross Domestic Product (GDP)	Energy Consumption per Real Dollar of GDP		
	Petroleum and Natural Gas	Other Energy ^a	Total		Petroleum and Natural Gas	Other Energy ^a	Total
	Quadrillion Btu				Billion Chained (2009) Dollars	Thousand Btu per Chained (2009) Dollar	
1950	19.284	15.332	34.616	2,181.9	8.84	7.03	15.86
1955	26.253	13.955	40.208	2,736.4	9.59	5.10	14.69
1960	32.305	12.782	45.086	3,105.8	10.40	4.12	14.52
1965	39.014	15.001	54.015	3,972.9	9.82	3.78	13.60
1970	51.315	16.523	67.838	4,717.7	10.88	3.50	14.38
1975	52.680	19.284	71.965	5,379.5	9.79	3.58	13.38
1980	54.440	23.627	78.067	6,443.4	8.45	3.67	12.12
1985	48.628	27.764	76.392	7,585.7	6.41	3.66	10.07
1990	53.155	31.330	84.485	8,945.4	5.94	3.50	9.44
1995	57.110	33.920	91.029	10,163.7	5.62	3.34	8.96
2000	62.086	36.729	98.814	12,565.2	4.94	2.92	7.86
2001	60.958	35.210	96.168	12,684.4	4.81	2.78	7.58
2002	61.734	35.911	97.645	12,909.7	4.78	2.78	7.56
2003	61.642	36.301	97.943	13,270.0	4.65	2.74	7.38
2004	63.215	36.945	100.160	13,774.0	4.59	2.68	7.27
2005	62.953	37.328	100.282	14,235.6	4.42	2.62	7.04
2006	62.194	37.435	99.629	14,615.2	4.26	2.56	6.82
2007	63.437	37.878	101.315	14,876.8	4.26	2.55	6.81
2008	61.123	38.169	99.292	14,833.6	4.12	2.57	6.69
2009	58.819	35.779	94.598	14,417.9	4.08	2.48	6.56
2010	60.584	37.389	97.974	14,779.4	4.10	2.53	6.63
2011	60.325	37.144	97.469	15,052.4	4.01	2.47	6.48
2012	60.688	34.412	95.100	15,470.7	3.92	2.22	6.15

^a Coal, coal coke net imports, nuclear electric power, renewable energy, and electricity net imports.
Notes: • See "Primary Energy Consumption" and "Real Dollars" in Glossary.
• Totals may not equal sum of components due to independent rounding.
• Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> for all available data beginning in 1973.
Sources: • **Energy Consumption:** Table 1.3. • **Gross Domestic Product:** U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts (August 29, 2013), Table 1.1.6.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1973 through 2013, see the "Web Page" cited above.

Figure 1.8 Motor Vehicle Fuel Economy, 1949–2011
(Miles per Gallon)



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.8.

Table 1.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Economy

	Light-Duty Vehicles, Short Wheelbase ^a			Light-Duty Vehicles, Long Wheelbase ^b			Heavy-Duty Trucks ^c			All Motor Vehicles ^d		
	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy
	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon
1950	9,060	603	15.0	(^e)	(^e)	(^e)	10,316	1,229	8.4	9,321	725	12.8
1955	9,447	645	14.6	(^e)	(^e)	(^e)	10,576	1,293	8.2	9,661	761	12.7
1960	9,518	668	14.3	(^e)	(^e)	(^e)	10,693	1,333	8.0	9,732	784	12.4
1965	9,603	661	14.5	(^e)	(^e)	(^e)	10,851	1,387	7.8	9,826	787	12.5
1970	9,989	737	13.5	8,676	866	10.0	13,565	2,467	5.5	9,976	830	12.0
1975	9,309	665	14.0	9,829	934	10.5	15,167	2,722	5.6	9,627	790	12.2
1980	8,813	551	16.0	10,437	854	12.2	18,736	3,447	5.4	9,458	712	13.3
1985	9,419	538	17.5	10,506	735	14.3	20,597	3,570	5.8	10,020	685	14.6
1990	10,504	520	20.2	11,902	738	16.1	23,603	3,953	6.0	11,107	677	16.4
1995	11,203	530	21.1	12,018	694	17.3	26,514	4,315	6.1	11,793	700	16.8
2000	11,976	547	21.9	11,672	669	17.4	25,617	4,391	5.8	12,164	720	16.9
2001	11,831	534	22.1	11,204	636	17.6	26,602	4,477	5.9	11,887	695	17.1
2002	12,202	555	22.0	11,364	650	17.5	27,071	4,642	5.8	12,171	719	16.9
2003	12,325	556	22.2	11,287	697	16.2	28,093	4,215	6.7	12,208	718	17.0
2004	12,460	553	22.5	11,184	690	16.2	27,023	4,057	6.7	12,200	714	17.1
2005	12,510	567	22.1	10,920	617	17.7	26,235	4,385	6.0	12,082	706	17.1
2006	12,485	554	22.5	10,920	612	17.8	25,231	4,304	5.9	12,017	698	17.2
2007	^a 10,710	^a 468	^a 22.9	^b 14,970	^b 877	^b 17.1	^c 28,290	^c 4,398	6.4	11,915	693	17.2
2008	10,290	435	23.7	15,256	880	17.3	28,573	4,387	6.5	11,631	667	17.4
2009	10,391	442	23.5	15,252	882	17.3	26,274	4,037	6.5	11,631	661	17.6
2010	10,650	456	23.3	15,474	901	17.2	26,604	4,180	6.4	11,866	681	17.4
2011 ^P	10,614	460	23.1	14,596	855	17.1	26,016	4,126	6.3	11,640	666	17.5

^a Through 1989, data are for passenger cars and motorcycles. For 1990–2006, data are for passenger cars only. Beginning in 2007, data are for light-duty vehicles (passenger cars, light trucks, vans, and sport utility vehicles) with a wheelbase less than or equal to 121 inches.

^b For 1966–2006, data are for vans, pickup trucks, and sport utility vehicles. Beginning in 2007, data are for light-duty vehicles (passenger cars, light trucks, vans, and sport utility vehicles) with a wheelbase greater than 121 inches.

^c For 1949–1965, data are for single-unit trucks with 2 axles and 6 or more tires, combination trucks, and other vehicles with 2 axles and 4 tires that are not passenger cars. For 1965–2006, data are for single-unit trucks with 2 axles and 6 or more tires, and combination trucks. Beginning in 2007, data are for single-unit trucks with 2 axles and 6 or more tires (or a gross vehicle weight rating exceeding 10,000 pounds), and combination trucks.

^d Includes buses and motorcycles, which are not separately displayed.

^e Included in "Heavy-Duty Trucks."

P=Preliminary.

Note: Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#consumption> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#summary> for all available annual data beginning in 1973.

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

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the “Web Pages” cited above.

Table 1.9 Heating Degree-Days by Census Division

Census Divisions	August					Cumulative July through August				
	Normal ^a	2012	2013	Percent Change		Normal ^a	2012	2013	Percent Change	
				Normal to 2013	2012 to 2013				Normal to 2013	2012 to 2013
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	26	9	21	NM	NM	37	13	27	NM	NM
Middle Atlantic New Jersey, New York, Pennsylvania	16	3	11	NM	NM	22	4	16	NM	NM
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	26	25	29	NM	NM	35	25	60	NM	NM
West North Central Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	29	25	21	NM	NM	44	25	42	NM	NM
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	1	0	2	NM	NM	1	0	2	NM	NM
East South Central Alabama, Kentucky, Mississippi, Tennessee	1	1	2	NM	NM	1	1	3	NM	NM
West South Central Arkansas, Louisiana, Oklahoma, Texas	0	0	0	NM	NM	0	0	0	NM	NM
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	30	4	2	NM	NM	49	4	2	NM	NM
Pacific^b California, Oregon, Washington	22	7	1	NM	NM	46	18	4	NM	NM
U.S. Average^b	15	8	10	NM	NM	24	10	18	NM	NM

^a "Normal" is based on calculations of data from 1971 through 2000.

^b Excludes Alaska and Hawaii.

NM=Not meaningful (because "Normal" is less than 100 or ratio is incalculable).

Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. Heating degree-days are the number of degrees that the daily average temperature falls below 65° F. Cooling degree-days are the number of degrees that the daily average temperature rises above 65° F. The daily average temperature is the mean of the maximum and minimum temperatures in a 24-hour period. For example, a weather station recording an average daily temperature of 40° F would report 25 heating degree-days for that day (and 0 cooling degree-days). If a weather station recorded an average daily temperature of 78° F, cooling degree-days for that station would be 13 (and 0 heating degree days).

Web Pages: • See <http://www.eia.gov/totalenergy/data/monthly/#summary>

for current data. • See <http://www.eia.gov/totalenergy/data/annual/#summary> for historical data.

Sources: There are several degree-day databases maintained by the National Oceanic and Atmospheric Administration. The information published here is developed by the National Weather Service Climate Prediction Center, Camp Springs, MD. The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at those weather stations is used to calculate statewide degree-day averages based on population. The state figures are then aggregated into Census Divisions and into the national average. The population weights currently used represent resident state population data estimated for the 2000 Census by the U.S. Department of Commerce, Bureau of the Census. The data provided here are available sooner than the Historical Climatology Series 5-1 (heating degree-days) developed by the National Climatic Data Center, Asheville, NC, which compiles data from some 8,000 weather stations.

Table 1.10 Cooling Degree-Days by Census Division

Census Divisions	August					Cumulative January through August				
	Normal ^a	2012	2013	Percent Change		Normal ^a	2012	2013	Percent Change	
				Normal to 2013	2012 to 2013				Normal to 2013	2012 to 2013
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	146	202	120	-18	-41	395	561	561	42	0
Middle Atlantic New Jersey, New York, Pennsylvania	205	253	178	-13	-30	592	806	727	23	-10
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	197	200	180	-9	-10	641	914	640	(s)	-30
West North Central Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	255	259	265	4	2	828	1,114	810	-2	-27
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	393	409	387	-2	-5	1,497	1,723	1,549	3	-10
East South Central Alabama, Kentucky, Mississippi, Tennessee	376	374	365	-3	-2	1,276	1,524	1,250	-2	-18
West South Central Arkansas, Louisiana, Oklahoma, Texas	527	575	566	7	-2	1,929	2,310	2,007	4	-13
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	302	374	370	23	-1	1,017	1,232	1,251	23	2
Pacific^b California, Oregon, Washington	193	304	242	25	-20	538	624	694	29	11
U.S. Average^b	290	330	297	2	-10	986	1,214	1,067	8	-12

^a "Normal" is based on calculations of data from 1971 through 2000.

^b Excludes Alaska and Hawaii.

(s)=Less than 0.5 percent and greater than -0.5 percent.

Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. Cooling degree-days are the number of degrees that the daily average temperature rises above 65° F. Heating degree-days are the number of degrees that the daily average temperature falls below 65° F. The daily average temperature is the mean of the maximum and minimum temperatures in a 24-hour period. For example, if a weather station recorded an average daily temperature of 78° F, cooling degree-days for that station would be 13 (and 0 heating degree-days). A weather station recording an average daily temperature of 40° F would report 25 heating degree-days for that day (and 0 cooling degree-days).

Web Pages: • See <http://www.eia.gov/totalenergy/data/monthly/#summary> for current data. • See <http://www.eia.gov/totalenergy/data/annual/#summary>

for historical data.

Sources: There are several degree-day databases maintained by the National Oceanic and Atmospheric Administration. The information published here is developed by the National Weather Service Climate Prediction Center, Camp Springs, MD. The data are available weekly with monthly summaries and are based on mean daily temperatures recorded at about 200 major weather stations around the country. The temperature information recorded at those weather stations is used to calculate statewide degree-day averages based on population. The state figures are then aggregated into Census Divisions and into the national average. The population weights currently used represent resident state population data estimated for the 2000 Census by the U.S. Department of Commerce, Bureau of the Census. The data provided here are available sooner than the Historical Climatology Series 5-2 (cooling degree-days) developed by the National Climatic Data Center, Asheville, NC, which compiles data from some 8,000 weather stations.

Energy Overview

Note. Merchandise Trade Value. Imports data presented are based on the customs values. Those values do not include insurance and freight and are consequently lower than the cost, insurance, and freight (CIF) values, which are also reported by the Bureau of the Census. All exports data, and imports data through 1980, are on a free alongside ship (f.a.s.) basis.

“Balance” is exports minus imports; a positive balance indicates a surplus trade value and a negative balance indicates a deficit trade value. “Energy” includes mineral fuels, lubricants, and related material. “Non-Energy Balance” and “Total Merchandise” include foreign exports (i.e., re-exports) and nonmonetary gold and U.S. Department of Defense Grant-Aid shipments. The “Non-Energy Balance” is calculated by subtracting the “Energy” from the “Total Merchandise Balance.”

“Imports” consist of government and nongovernment shipments of merchandise into the 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and the U.S. Foreign Trade Zones. They reflect the total arrival from foreign countries of merchandise that immediately entered consumption channels, warehouses, the Foreign Trade Zones, or the Strategic Petroleum Reserve. They exclude shipments between the United States, Puerto Rico, and U.S. possessions, shipments to U.S. Armed Forces and diplomatic missions abroad for their own use, U.S. goods returned to the United States by its Armed Forces, and in-transit shipments.

Table 1.5 Sources

U.S. Department of Commerce, Bureau of the Census, Foreign Trade Division:

Petroleum Exports

1974–1987: “U.S. Exports,” FT-410, December issues.
1988 and 1989: “Report on U.S. Merchandise Trade,” Final Revisions.
1990–1992: “U.S. Merchandise Trade,” Final Report.
1993–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.
2010–2012: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.
2013: “U.S. International Trade in Goods and Services,” FT-900, monthly.

Petroleum Imports

1974–1987: “U.S. Merchandise Trade,” FT-900, December issues, 1975-1988.
1988 and 1989: “Report on U.S. Merchandise Trade,” Final Revisions.
1990–1993: “U.S. Merchandise Trade,” Final Report.
1994–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.
2010–2012: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.
2013: “U.S. International Trade in Goods and Services,” FT-900, monthly.

Energy Exports and Imports

1974–1987: U.S. merchandise trade press releases and database printouts for adjustments.
1988: January–July, monthly FT-900 supplement, 1989 issues. August–December, monthly FT-900, 1989 issues.
1989: Monthly FT-900, 1990 issues.
1990–1992: “U.S. Merchandise Trade,” Final Report.
1993–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.
2010–2012: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.
2013: “U.S. International Trade in Goods and Services,” FT-900, monthly.

Petroleum, Energy, and Non-Energy Balances

Calculated by the U.S. Energy Information Administration.

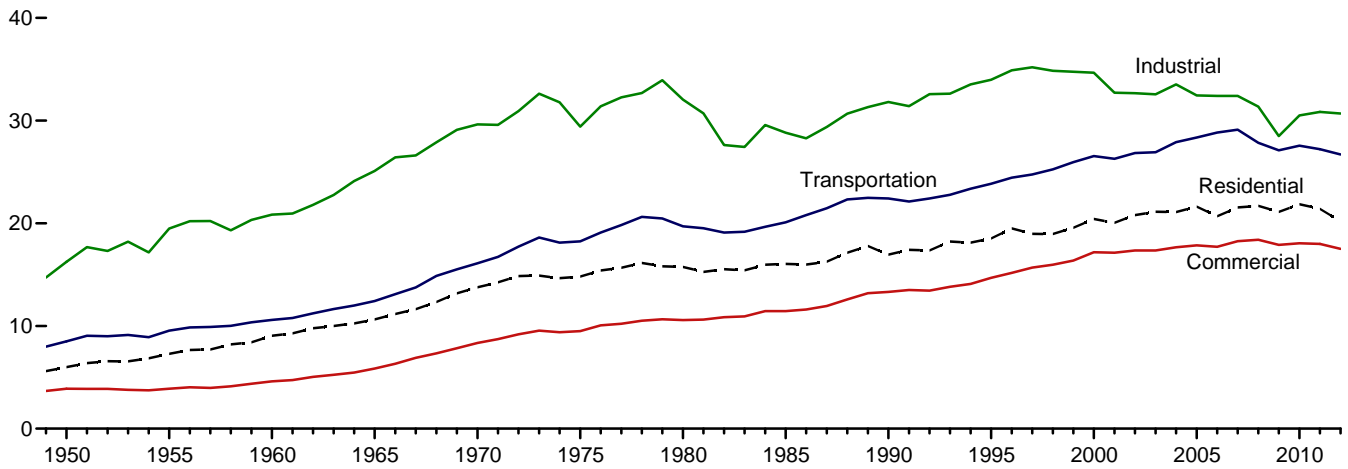
Total Merchandise

1974–1987: U.S. merchandise trade press releases and database printouts for adjustments.
1988: “Report on U.S. Merchandise Trade, 1988 Final Revisions,” August 18, 1989.
1989: “Report on U.S. Merchandise Trade, 1989 Revisions,” July 10, 1990.
1990: “U.S. Merchandise Trade, 1990 Final Report,” May 10, 1991, and “U.S. Merchandise Trade, December 1992,” February 18, 1993, page 3.
1991: “U.S. Merchandise Trade, 1992 Final Report,” May 12, 1993.
1992–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.
2010–2012: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.
2013: “U.S. International Trade in Goods and Services,” FT-900, monthly.

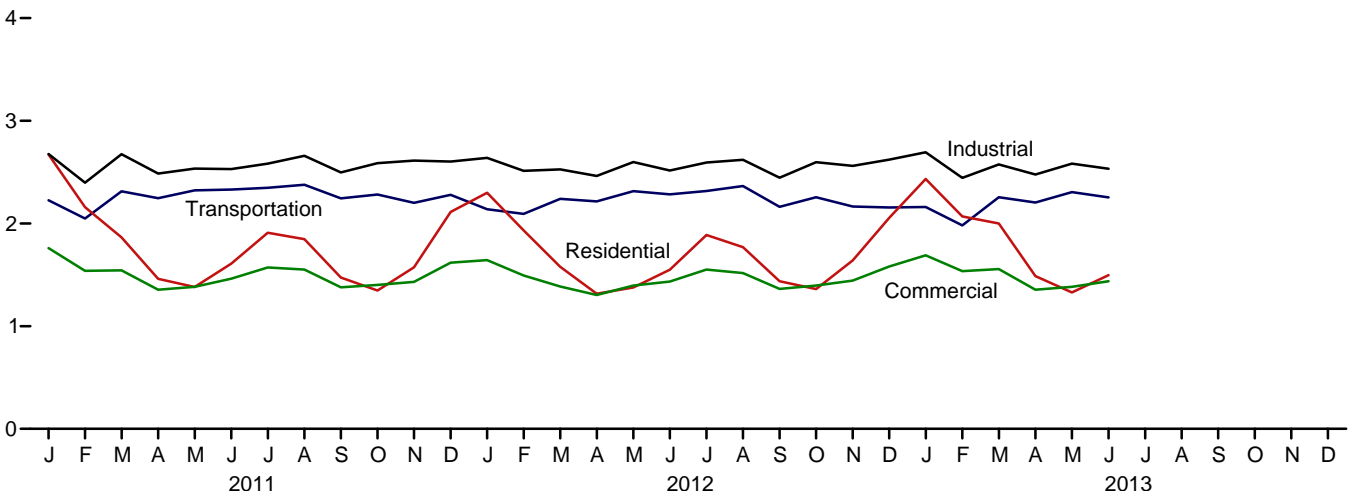
2. Energy Consumption by Sector

Figure 2.1 Energy Consumption by Sector
(Quadrillion Btu)

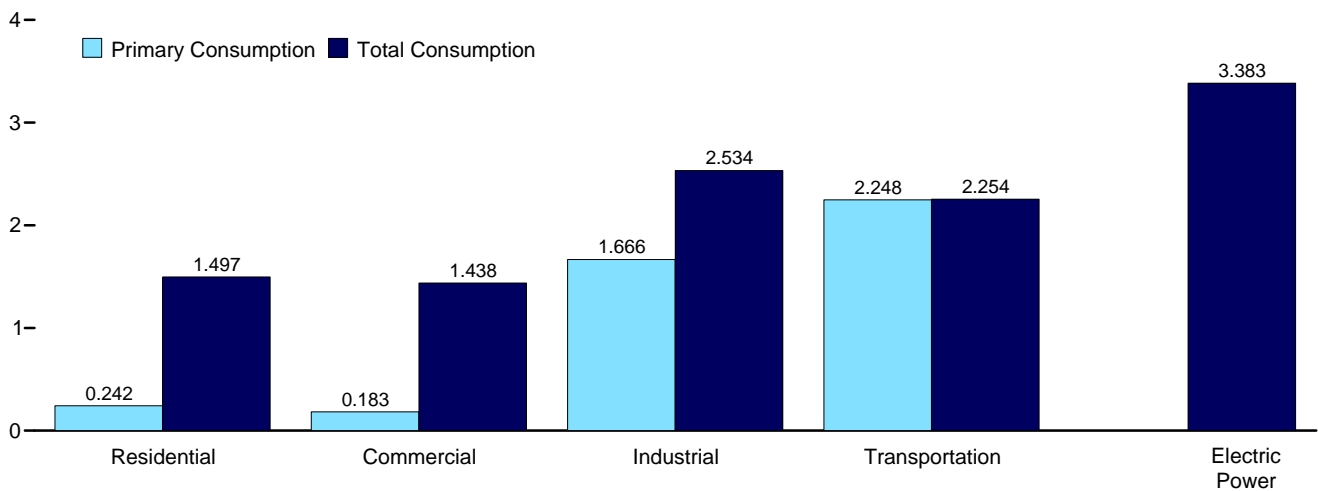
Total Consumption by End-Use Sector, 1949–2012



Total Consumption by End-Use Sector, Monthly



By Sector, June 2013



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.
Source: Table 2.1.

Table 2.1 Energy Consumption by Sector
(Trillion Btu)

	End-Use Sectors								Electric Power Sector ^{c,d}	Balancing Item ^g	Primary Total ^h
	Residential		Commercial ^a		Industrial ^b		Transportation				
	Primary ^e	Total ^f	Primary ^e	Total ^f	Primary ^e	Total ^f	Primary ^e	Total ^f			
1950 Total	4,829	5,989	2,834	3,893	13,890	16,241	8,383	8,492	4,679	(s)	34,616
1955 Total	5,608	7,278	2,561	3,895	16,103	19,485	9,474	9,550	6,461	(s)	40,208
1960 Total	6,651	9,039	2,723	4,609	16,996	20,842	10,560	10,596	8,158	(s)	45,086
1965 Total	7,279	10,639	3,177	5,845	20,148	25,098	12,399	12,432	11,012	(s)	54,015
1970 Total	8,322	13,766	4,237	8,346	22,964	29,628	16,062	16,098	16,253	(s)	67,838
1975 Total	7,990	14,813	4,059	9,492	21,434	29,413	18,210	18,245	20,270	1	71,965
1980 Total	7,439	15,753	4,105	10,578	22,595	32,039	19,659	19,697	24,269	-1	78,067
1985 Total	7,148	16,041	3,732	11,451	19,443	28,816	20,041	20,088	26,032	-4	76,392
1990 Total	6,557	16,945	3,896	13,320	21,180	31,810	22,366	22,420	^d 30,495	-9	84,485
1995 Total	6,936	18,519	4,101	14,690	22,719	33,971	23,791	23,846	33,479	3	91,029
2000 Total	7,159	20,425	4,278	17,175	22,824	34,664	26,489	26,548	38,062	2	98,814
2001 Total	6,868	20,042	4,084	17,137	21,794	32,720	26,213	26,275	37,215	-6	96,168
2002 Total	6,912	20,791	4,132	17,345	21,799	32,662	26,781	26,842	38,016	5	97,645
2003 Total	7,238	21,125	4,298	17,346	21,536	32,555	26,845	26,919	38,028	-1	97,943
2004 Total	6,993	21,092	4,232	17,659	22,412	33,519	27,817	27,895	38,712	-6	100,160
2005 Total	6,909	21,626	4,051	17,857	21,411	32,446	28,272	28,353	39,638	(s)	100,282
2006 Total	6,168	20,688	3,747	17,711	21,536	32,401	28,751	28,830	39,428	(s)	99,629
2007 Total	6,608	21,541	3,922	18,255	21,379	32,403	29,029	29,117	40,377	-1	101,315
2008 Total	6,916	21,695	4,094	18,402	20,555	31,364	27,748	27,831	39,978	(s)	99,292
2009 Total	6,666	21,111	4,051	17,889	18,779	28,491	27,025	27,108	38,077	(s)	94,598
2010 Total	6,595	21,853	4,011	18,050	20,254	30,502	27,479	27,561	39,627	8	97,974
2011											
January	1,162	2,672	633	1,760	1,844	2,677	2,218	2,225	3,477	3	9,337
February	943	2,159	529	1,539	1,625	2,397	2,042	2,048	3,006	(s)	8,143
March	761	1,864	447	1,543	1,811	2,675	2,306	2,313	3,069	-2	8,393
April	475	1,461	297	1,354	1,640	2,486	2,240	2,247	2,895	-1	7,546
May	326	1,381	220	1,383	1,648	2,535	2,316	2,323	3,111	-1	7,620
June	259	1,609	196	1,463	1,630	2,530	2,323	2,330	3,523	2	7,934
July	236	1,909	187	1,571	1,640	2,583	2,340	2,347	4,008	6	8,417
August	245	1,847	203	1,551	1,733	2,660	2,370	2,377	3,883	5	8,439
September	257	1,473	210	1,379	1,655	2,498	2,238	2,245	3,234	(s)	7,594
October	375	1,348	284	1,402	1,721	2,587	2,276	2,282	2,963	-2	7,618
November	586	1,573	366	1,431	1,755	2,612	2,195	2,201	2,916	-2	7,816
December	874	2,113	501	1,618	1,752	2,603	2,273	2,280	3,215	-1	8,612
Total	6,498	21,410	4,073	17,991	20,454	30,843	27,137	27,218	39,301	7	97,469
2012											
January	991	2,299	553	1,643	1,822	2,639	2,132	2,139	3,222	(s)	8,720
February	833	1,933	478	1,494	1,719	2,513	2,087	2,093	2,916	-2	8,031
March	561	1,577	341	1,386	1,697	2,527	2,234	2,241	2,897	-5	7,725
April	412	1,315	272	1,303	1,638	2,462	2,209	2,215	2,765	-5	7,290
May	297	1,377	212	1,395	1,693	2,598	2,308	2,314	3,174	-2	7,682
June	253	1,550	193	1,434	1,638	2,515	2,277	2,284	3,422	1	7,784
July	240	1,887	187	1,551	1,669	2,593	2,310	2,316	3,942	5	8,353
August	248	1,769	205	1,517	1,720	2,621	2,358	2,365	3,741	3	8,275
September	249	1,437	202	1,363	1,632	2,445	2,155	2,161	3,168	1	7,408
October	378	1,361	275	1,395	1,756	2,596	2,249	2,255	2,949	-1	7,607
November	631	1,640	379	1,444	1,742	2,561	2,159	2,166	2,899	(s)	7,811
December	838	2,055	473	1,580	1,791	2,622	2,149	2,156	3,162	(s)	8,414
Total	5,932	20,197	3,770	17,508	20,518	30,696	26,627	26,705	38,258	-5	95,100
2013											
January	1,068	2,434	572	1,690	1,880	2,694	2,154	2,161	3,304	(s)	8,979
February	925	2,068	516	1,536	1,691	2,444	1,975	1,981	2,922	-1	8,028
March	836	2,000	474	1,556	1,762	2,574	2,249	2,256	3,063	-1	8,385
April	509	1,488	314	1,355	1,680	2,477	2,197	2,204	2,825	-2	7,522
May	^R 318	^R 1,328	^R 222	^R 1,384	^R 1,706	^R 2,583	^R 2,299	^R 2,306	^R 3,054	-1	^R 7,600
June	242	1,497	183	1,438	1,666	2,534	2,248	2,254	3,383	2	7,725
6-Month Total	3,898	10,814	2,282	8,958	10,385	15,306	13,122	13,162	18,552	-1	48,238
2012 6-Month Total	3,347	10,052	2,049	8,654	10,207	15,255	13,246	13,285	18,396	-14	47,232
2011 6-Month Total	3,926	11,145	2,323	9,041	10,198	15,299	13,446	13,487	19,080	1	48,974

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

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

^c 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 electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

^e See "Primary Energy Consumption" in Glossary.

^f Total energy consumption in the end-use sectors consists of primary energy consumption, electricity retail sales, and electrical system energy losses. See Note 1, "Electrical System Energy Losses," at end of section.

^g 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.

^h Primary energy consumption total. See Table 1.3.

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

Notes: • Data are estimates, except for the electric power sector. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

• See Note 2, "Energy Consumption Data and Surveys," at end of section.

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

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

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#consumption>

for all available annual data from 1949-1972. • See

<http://www.eia.gov/totalenergy/data/monthly/#consumption> for all available monthly

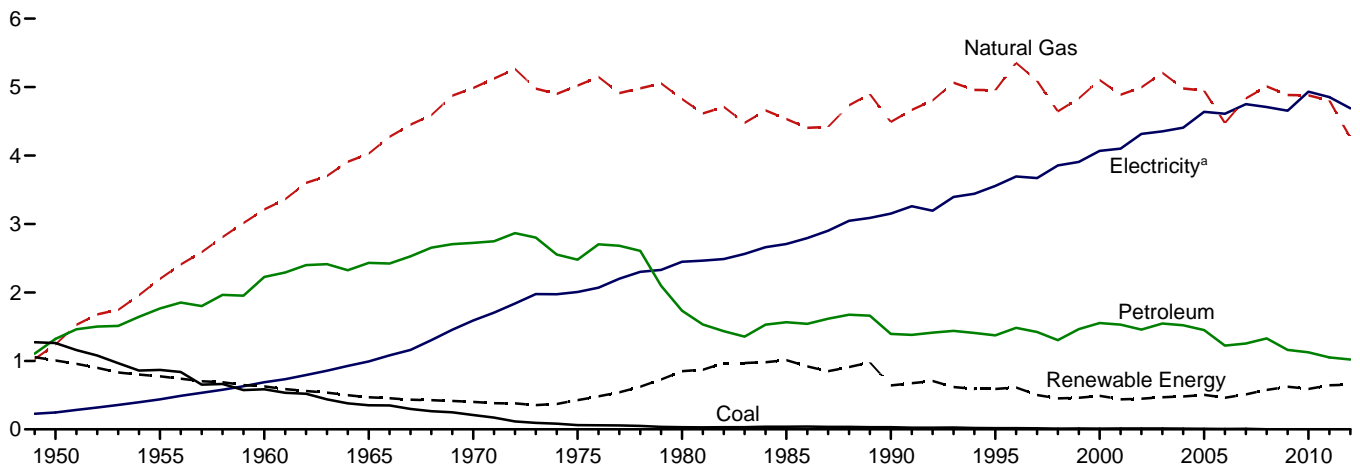
and annual data beginning in 1973.

Sources: Tables 1.3 and 2.2-2.6.

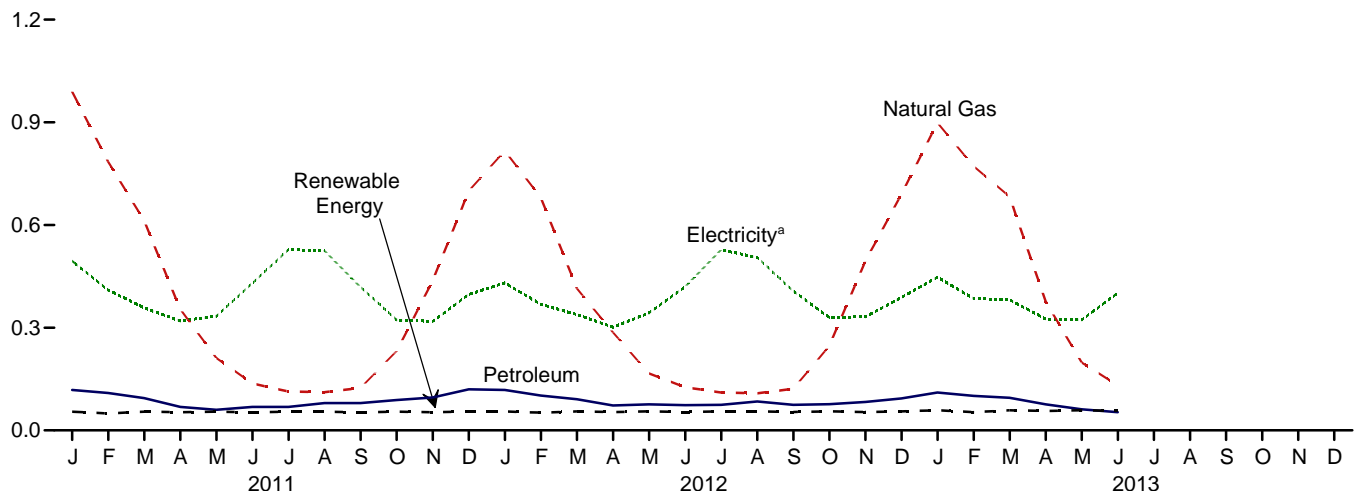
Selected years of data from 1949 through 1972 have been added to this table.
For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 2.2 Residential Sector Energy Consumption
(Quadrillion Btu)

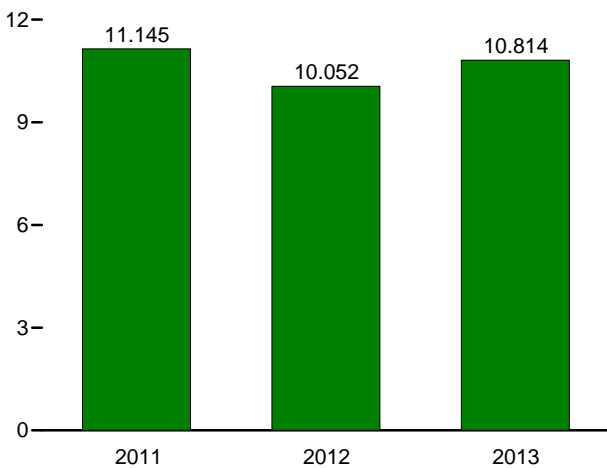
By Major Source, 1949–2012



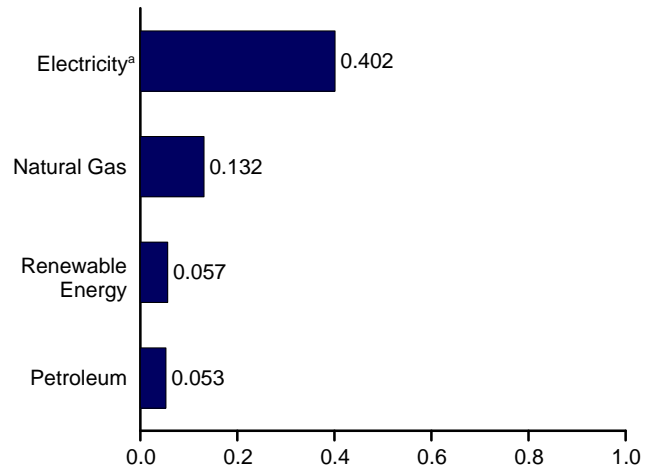
By Major Source, Monthly



Total, January–June



By Major Source, June 2013



^a Electricity retail sales.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.
Source: Table 2.2.

Table 2.2 Residential Sector Energy Consumption
(Trillion Btu)

	Primary Consumption ^a									Electricity Retail Sales ^d	Electrical System Energy Losses ^e	Total
	Fossil Fuels				Renewable Energy ^b				Total Primary			
	Coal	Natural Gas ^c	Petroleum	Total	Geo-thermal	Solar/PV	Bio-mass	Total				
1950 Total	1,261	1,240	1,322	3,824	NA	NA	1,006	1,006	4,829	246	913	5,989
1955 Total	867	2,198	1,767	4,833	NA	NA	775	775	5,608	438	1,232	7,278
1960 Total	585	3,212	2,227	6,024	NA	NA	627	627	6,651	687	1,701	9,039
1965 Total	352	4,028	2,432	6,811	NA	NA	468	468	7,279	993	2,367	10,639
1970 Total	209	4,987	2,725	7,922	NA	NA	401	401	8,322	1,591	3,852	13,766
1975 Total	63	5,023	2,479	7,564	NA	NA	425	425	7,990	2,007	4,817	14,813
1980 Total	31	4,825	1,734	6,589	NA	NA	850	850	7,439	2,448	5,866	15,753
1985 Total	39	4,534	1,565	6,138	NA	NA	1,010	1,010	7,148	2,709	6,184	16,041
1990 Total	31	4,491	1,394	5,916	6	56	580	641	6,557	3,153	7,235	16,945
1995 Total	17	4,954	1,374	6,345	7	64	520	591	6,936	3,557	8,026	18,519
2000 Total	11	5,105	1,554	6,670	9	61	420	489	7,159	4,069	9,197	20,425
2001 Total	12	4,889	1,529	6,430	9	59	370	438	6,868	4,100	9,074	20,042
2002 Total	12	4,995	1,457	6,464	10	57	380	448	6,912	4,317	9,562	20,791
2003 Total	12	5,209	1,547	6,768	13	57	400	470	7,238	4,353	9,534	21,125
2004 Total	11	4,981	1,520	6,513	14	57	410	481	6,993	4,408	9,690	21,092
2005 Total	8	4,946	1,451	6,406	16	58	430	504	6,909	4,638	10,079	21,626
2006 Total	6	4,476	1,224	5,706	18	63	380	462	6,168	4,611	9,909	20,688
2007 Total	8	4,835	1,254	6,097	22	70	420	512	6,608	4,750	10,182	21,541
2008 Total	NA	5,010	1,330	6,340	26	80	470	577	6,916	4,708	10,071	21,695
2009 Total	NA	4,883	1,161	6,044	33	89	500	622	6,666	4,656	9,789	21,111
2010 Total	NA	4,878	1,126	6,004	37	114	440	591	6,595	4,933	10,326	21,853
2011 January	NA	989	118	1,107	3	13	38	55	1,162	495	1,015	2,672
February	NA	785	109	894	3	12	35	49	943	410	806	2,159
March	NA	613	94	707	3	13	38	55	761	358	745	1,864
April	NA	354	69	422	3	13	37	53	475	320	666	1,461
May	NA	211	60	271	3	13	38	55	326	333	722	1,381
June	NA	137	69	206	3	13	37	53	259	430	920	1,609
July	NA	113	68	182	3	13	38	55	236	528	1,145	1,909
August	NA	111	80	191	3	13	38	55	245	525	1,077	1,847
September	NA	124	80	204	3	13	37	53	257	419	798	1,473
October	NA	232	89	320	3	13	38	55	375	323	650	1,348
November	NA	437	96	533	3	13	37	53	586	318	670	1,573
December	NA	699	120	819	3	13	38	55	874	397	842	2,113
Total	NA	4,804	1,051	5,855	40	153	450	643	6,498	4,855	10,057	21,410
2012 January	NA	817	118	935	3	16	36	55	991	431	878	2,299
February	NA	680	102	781	3	15	33	52	833	368	731	1,933
March	NA	414	91	506	3	16	36	55	561	338	678	1,577
April	NA	286	73	359	3	16	34	53	412	301	602	1,315
May	NA	166	76	242	3	16	36	55	297	343	737	1,377
June	NA	126	74	200	3	16	34	53	253	420	877	1,550
July	NA	111	75	185	3	16	36	55	240	528	1,119	1,887
August	NA	108	85	193	3	16	36	55	248	505	1,016	1,769
September	NA	121	75	196	3	16	34	53	249	407	781	1,437
October	NA	247	76	323	3	16	36	55	378	330	653	1,361
November	NA	495	83	578	3	16	34	53	631	332	678	1,640
December	NA	690	93	783	3	16	36	55	838	388	829	2,055
Total	NA	4,260	1,020	5,280	40	193	420	652	5,932	4,690	9,574	20,197
2013 January	NA	898	111	1,009	3	20	36	59	1,068	448	918	2,434
February	NA	772	101	872	3	18	32	53	925	385	757	2,068
March	NA	683	95	778	3	20	36	59	836	382	782	2,000
April	NA	376	76	452	3	19	35	57	509	325	654	1,488
May	NA	^R 198	^R 61	^R 259	3	20	36	59	^R 318	323	^R 687	^R 1,328
June	NA	132	53	185	3	19	35	57	242	402	853	1,497
6-Month Total	NA	3,058	497	3,555	20	115	208	343	3,898	2,264	4,652	10,814
2012 6-Month Total	NA	2,489	534	3,023	20	96	209	324	3,347	2,201	4,504	10,052
2011 6-Month Total	NA	3,089	518	3,607	20	76	223	319	3,926	2,346	4,874	11,145

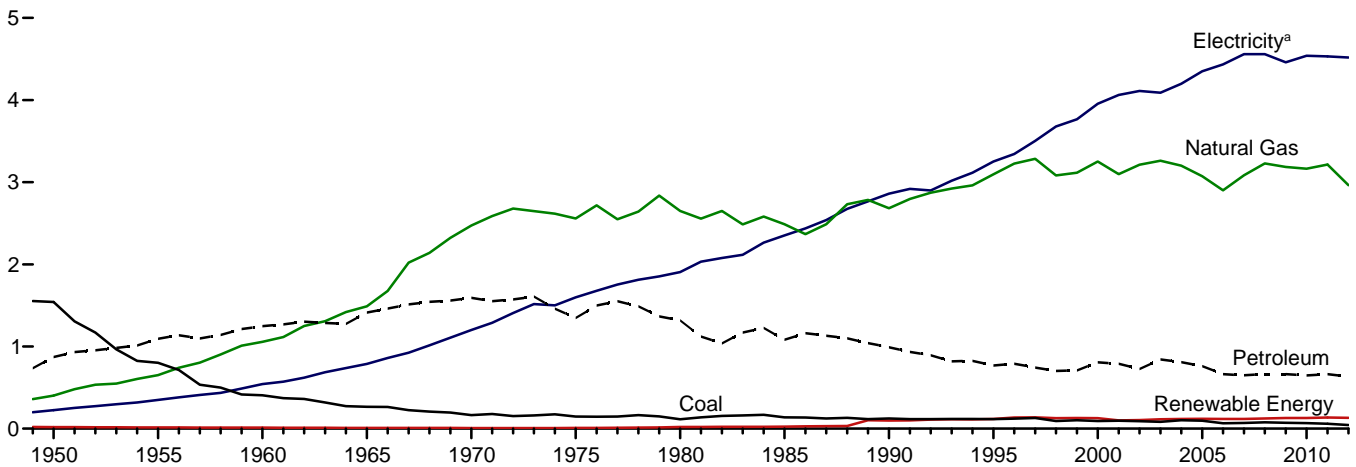
^a See "Primary Energy Consumption" in Glossary.
^b See Table 10.2a for notes on series components.
^c Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.
^d Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.
^e Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 1, "Electrical System Energy Losses," at end of section.

R=Revised. NA=Not available.
Notes: • Data are estimates, except for electricity retail sales. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#consumption> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#consumption> for all available monthly and annual data beginning in 1973.
Sources: Tables 2.6, 3.8a, 4.3, 6.2, 7.6, 10.2a, A4, A5, and A6.

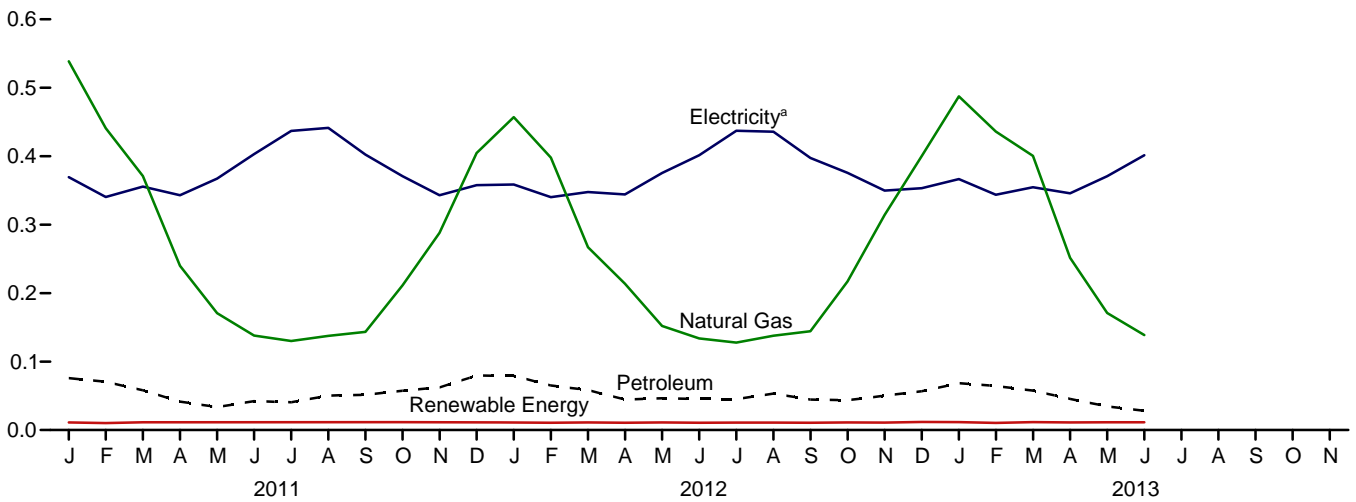
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 2.3 Commercial Sector Energy Consumption
(Quadrillion Btu)

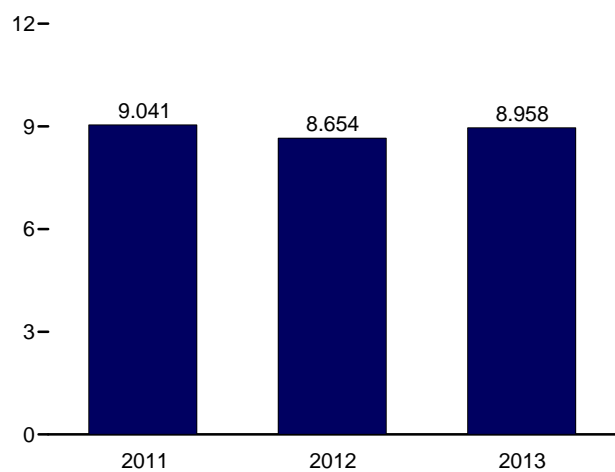
By Major Source, 1949–2012



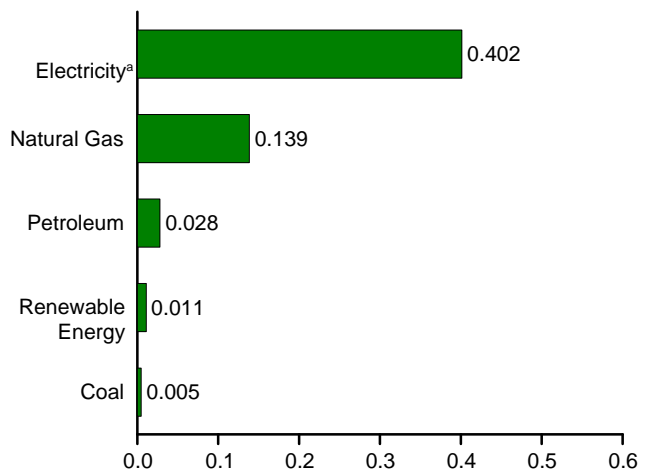
By Major Source, Monthly



Total, January–June



By Major Source, June 2013



^a Electricity retail sales.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.
Source: Table 2.3.

Table 2.3 Commercial Sector Energy Consumption
(Trillion Btu)

	Primary Consumption ^a											Elec- tricity Retail Sales ^f	Electrical System Energy Losses ^g	Total
	Fossil Fuels				Renewable Energy ^b									
	Coal	Natural Gas ^c	Petro- leum ^d	Total	Hydro- electric Power ^e	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total	Total Primary			
1950 Total	1,542	401	872	2,815	NA	NA	NA	NA	19	19	2,834	225	834	3,893
1955 Total	801	651	1,095	2,547	NA	NA	NA	NA	15	15	2,561	350	984	3,895
1960 Total	407	1,056	1,248	2,711	NA	NA	NA	NA	12	12	2,723	543	1,344	4,609
1965 Total	265	1,490	1,413	3,168	NA	NA	NA	NA	9	9	3,177	789	1,880	5,845
1970 Total	165	2,473	1,592	4,229	NA	NA	NA	NA	8	8	4,237	1,201	2,908	8,346
1975 Total	147	2,558	1,346	4,051	NA	NA	NA	NA	8	8	4,059	1,598	3,835	9,492
1980 Total	115	2,651	1,318	4,084	NA	NA	NA	NA	21	21	4,105	1,906	4,567	10,578
1985 Total	137	2,488	1,083	3,708	NA	NA	NA	NA	24	24	3,732	2,351	5,368	11,451
1990 Total	124	2,682	991	3,798	1	3	-	-	94	98	3,896	2,860	6,564	13,320
1995 Total	117	3,096	769	3,982	1	5	-	-	113	118	4,101	3,252	7,338	14,690
2000 Total	92	3,252	807	4,150	1	8	-	-	119	128	4,278	3,956	8,942	17,175
2001 Total	97	3,097	790	3,984	1	8	-	-	92	101	4,084	4,062	8,990	17,137
2002 Total	90	3,212	726	4,028	(s)	9	-	-	95	104	4,132	4,110	9,104	17,345
2003 Total	82	3,261	842	4,185	1	11	-	-	101	113	4,298	4,090	8,958	17,346
2004 Total	103	3,201	809	4,113	1	12	-	-	105	118	4,232	4,198	9,229	17,349
2005 Total	97	3,073	761	3,932	1	14	-	-	105	120	4,051	4,351	9,455	17,857
2006 Total	65	2,902	663	3,629	1	14	-	-	103	118	3,747	4,435	9,529	17,711
2007 Total	70	3,085	649	3,805	1	14	-	-	103	118	3,922	4,560	9,773	18,255
2008 Total	77	3,228	664	3,969	1	15	(s)	-	109	125	4,094	4,558	9,749	18,402
2009 Total	71	3,187	664	3,922	1	17	(s)	(s)	112	129	4,051	4,460	9,378	17,889
2010 Total	67	3,165	649	3,880	1	19	(s)	(s)	111	130	4,011	4,539	9,501	18,050
2011 January	8	539	76	622	(s)	2	(s)	(s)	9	11	633	369	757	1,760
February	7	441	70	518	(s)	2	(s)	(s)	9	10	529	340	670	1,539
March	7	371	58	436	(s)	2	(s)	(s)	10	11	447	356	740	1,543
April	4	240	42	286	(s)	2	(s)	(s)	9	11	297	343	714	1,354
May	4	171	33	209	(s)	2	(s)	(s)	10	12	220	367	795	1,383
June	5	138	42	185	(s)	2	(s)	(s)	10	11	196	403	863	1,463
July	4	130	41	175	(s)	2	(s)	(s)	10	12	187	437	948	1,571
August	4	138	50	191	(s)	2	(s)	(s)	10	12	203	441	906	1,551
September	3	143	52	198	(s)	2	(s)	(s)	9	11	210	402	767	1,379
October	4	212	57	273	(s)	2	(s)	(s)	10	11	284	371	747	1,402
November	4	288	62	355	(s)	2	(s)	(s)	10	11	366	343	722	1,431
December	5	405	80	489	(s)	2	(s)	(s)	10	12	501	358	759	1,618
Total	59	3,214	663	3,937	(s)	20	1	(s)	115	136	4,073	4,531	9,387	17,991
2012 January	5	457	79	542	(s)	2	(s)	(s)	9	11	553	359	731	1,643
February	5	398	65	468	(s)	2	(s)	(s)	9	11	478	340	675	1,494
March	4	267	58	330	(s)	2	(s)	(s)	9	11	341	348	697	1,386
April	3	214	45	261	(s)	2	(s)	(s)	9	11	272	344	687	1,303
May	3	152	46	201	(s)	2	(s)	(s)	9	11	212	376	807	1,395
June	3	134	46	182	(s)	2	(s)	(s)	9	11	193	401	839	1,434
July	3	128	45	176	(s)	2	(s)	(s)	9	11	187	437	927	1,551
August	3	138	53	194	(s)	2	(s)	(s)	9	11	205	436	877	1,517
September	3	144	44	192	(s)	2	(s)	(s)	9	11	202	397	763	1,363
October	3	217	43	264	(s)	2	(s)	(s)	9	11	275	376	744	1,395
November	4	314	50	368	(s)	2	(s)	(s)	9	11	379	350	715	1,444
December	4	400	57	461	(s)	2	(s)	(s)	10	12	473	353	754	1,580
Total	43	2,963	632	3,639	(s)	20	1	1	109	131	3,770	4,517	9,221	17,508
2013 January	5	487	68	561	(s)	2	(s)	(s)	10	12	572	366	751	1,690
February	5	436	64	505	(s)	2	(s)	(s)	9	10	516	344	676	1,536
March	5	400	58	463	(s)	2	(s)	(s)	10	12	474	355	727	1,556
April	6	252	45	303	(s)	2	(s)	(s)	9	11	314	346	695	1,355
May	6	R 171	R 34	R 211	(s)	2	(s)	(s)	9	11	R 222	371	R 790	R 1,384
June	5	139	28	172	(s)	2	(s)	(s)	9	11	183	402	853	1,438
6-Month Total	31	1,885	299	2,215	(s)	10	1	(s)	56	67	2,282	2,183	4,493	8,958
2012 6-Month Total	23	1,622	339	1,984	(s)	10	1	(s)	54	65	2,049	2,168	4,437	8,654
2011 6-Month Total	35	1,899	321	2,256	(s)	10	(s)	(s)	56	67	2,323	2,179	4,540	9,041

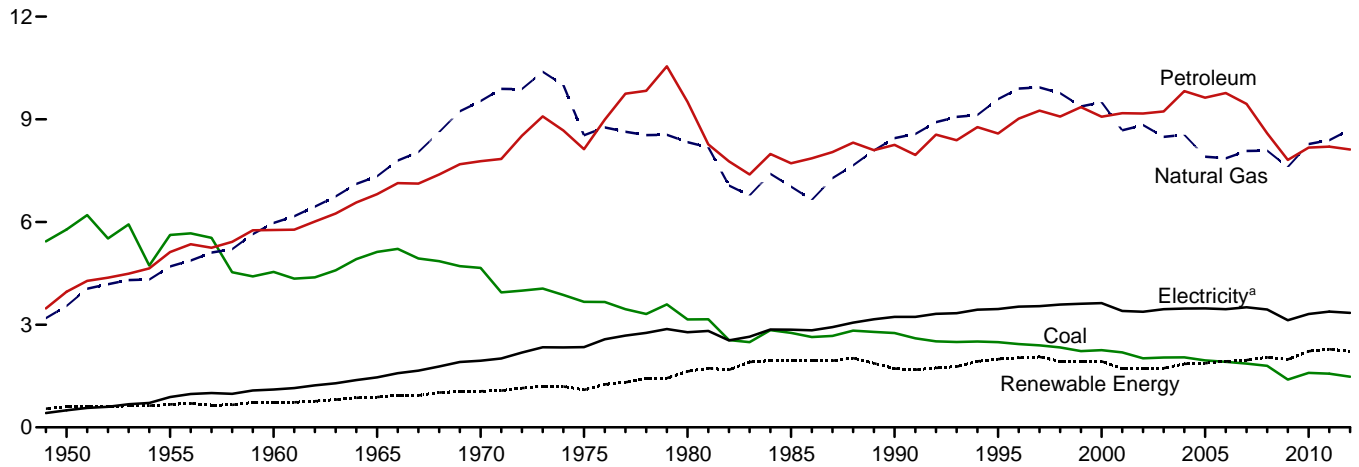
^a See "Primary Energy Consumption" in Glossary.
^b See Table 10.2a for notes on series components and estimation.
^c Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.
^d Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."
^e Conventional hydroelectric power.
^f Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.
^g Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 1, "Electrical System Energy Losses," at end of section.
R=Revised. NA=Not available. - =No data reported. (s)=Less than 0.5 trillion

Btu.
Notes: • Data are estimates, except for coal totals beginning in 2008; hydroelectric power; solar/PV; wind; and electricity retail sales beginning in 1979.
• The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#consumption> for all available annual data from 1949-1972. • See <http://www.eia.gov/totalenergy/data/monthly/#consumption> for all available monthly and annual data beginning in 1973.
Sources: Tables 2.6, 3.8a, 4.3, 6.2, 7.6, 10.2a, A4, A5, and A6.

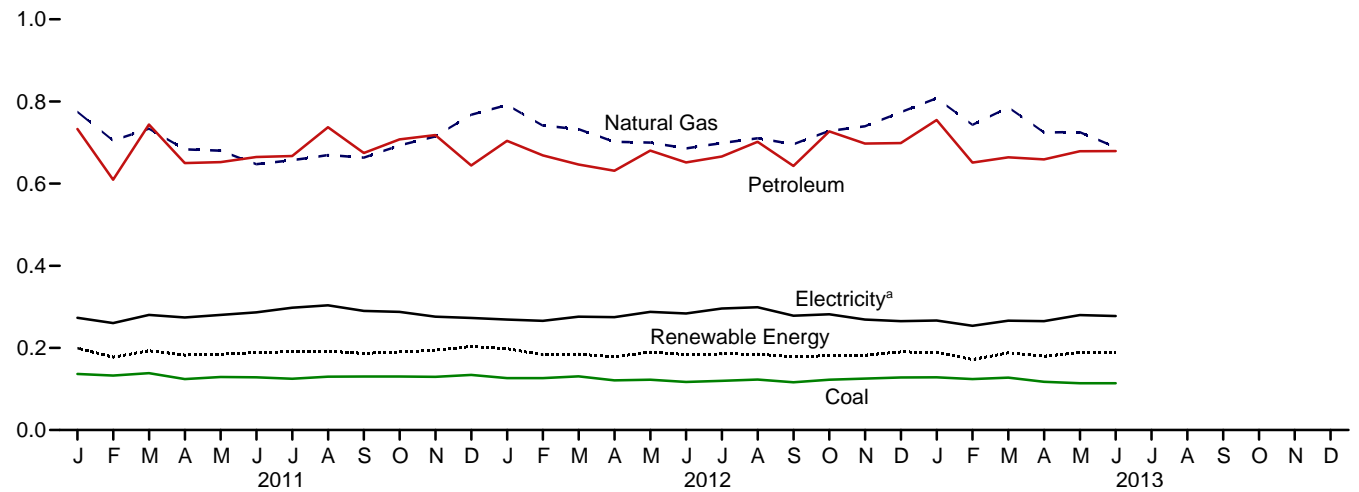
Selected years of data from 1949 through 1972 have been added to this table.
For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 2.4 Industrial Sector Energy Consumption
(Quadrillion Btu)

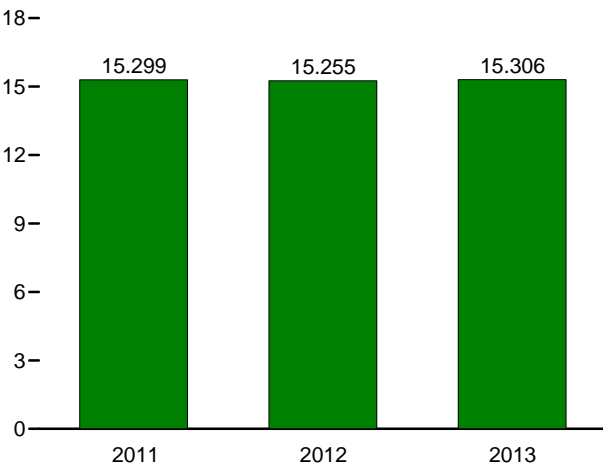
By Major Source, 1949–2012



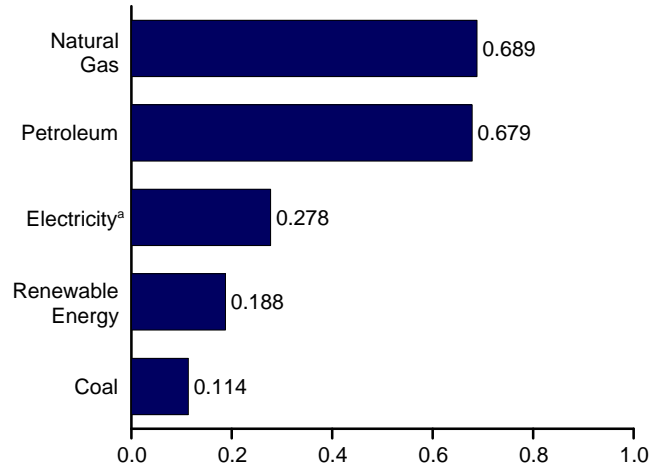
By Major Source, Monthly



Total, January–June



By Major Source, June 2013



^a Electricity retail sales.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.
Source: Table 2.4.

Table 2.4 Industrial Sector Energy Consumption
(Trillion Btu)

	Primary Consumption ^a										Total Primary	Elec- tricity Retail Sales ^g	Electrical System Energy Losses ^h	Total ^e
	Fossil Fuels				Renewable Energy ^b									
	Coal	Natural Gas ^c	Petroleum ^d	Total ^e	Hydro- electric Power ^f	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total				
1950 Total	5,781	3,546	3,960	13,288	69	NA	NA	NA	532	602	13,890	500	1,852	16,241
1955 Total	5,620	4,701	5,123	15,434	38	NA	NA	NA	631	669	16,103	887	2,495	19,485
1960 Total	4,543	5,973	5,766	16,277	39	NA	NA	NA	680	719	16,996	1,107	2,739	20,842
1965 Total	5,127	7,339	6,813	19,260	33	NA	NA	NA	855	888	20,148	1,463	3,487	25,098
1970 Total	4,656	9,536	7,776	21,911	34	NA	NA	NA	1,019	1,053	22,964	1,948	4,716	29,628
1975 Total	3,667	8,532	8,127	20,339	32	NA	NA	NA	1,063	1,096	21,434	2,346	5,632	29,413
1980 Total	3,155	8,333	9,509	20,962	33	NA	NA	NA	1,600	1,633	22,595	2,781	6,664	32,039
1985 Total	2,760	7,032	7,714	17,492	33	NA	NA	NA	1,918	1,951	19,443	2,855	6,518	28,816
1990 Total	2,756	8,451	8,251	19,463	31	2	-	-	1,684	1,717	21,180	3,226	7,404	31,810
1995 Total	2,488	9,592	8,586	20,727	55	3	-	-	1,934	1,992	22,719	3,455	7,796	33,971
2000 Total	2,256	9,500	9,075	20,896	42	4	-	-	1,881	1,928	22,824	3,631	8,208	34,664
2001 Total	2,192	8,676	9,178	20,075	33	5	-	-	1,681	1,719	21,794	3,400	7,526	32,720
2002 Total	2,019	8,832	9,168	20,079	39	5	-	-	1,676	1,720	21,799	3,379	7,484	32,662
2003 Total	2,041	8,488	9,230	19,811	43	3	-	-	1,679	1,725	21,536	3,454	7,565	32,555
2004 Total	2,047	8,550	9,825	20,559	33	4	-	-	1,817	1,853	22,412	3,473	7,634	33,519
2005 Total	1,954	7,907	9,633	19,538	32	4	-	-	1,837	1,873	21,411	3,477	7,537	32,446
2006 Total	1,914	7,861	9,770	19,606	29	4	-	-	1,897	1,930	21,536	3,451	7,415	32,401
2007 Total	1,865	8,074	9,451	19,414	16	5	-	-	1,944	1,965	21,379	3,507	7,517	32,403
2008 Total	1,796	8,083	8,588	18,508	17	5	-	-	2,026	2,047	20,555	3,444	7,365	31,364
2009 Total	1,396	7,609	7,813	16,794	18	4	-	-	1,963	1,985	18,779	3,130	6,582	28,491
2010 Total	1,590	8,278	8,172	18,033	16	4	(s)	-	2,201	2,221	20,254	3,313	6,934	30,502
2011 January	137	775	733	1,644	1	(s)	(s)	(s)	197	199	1,844	273	560	2,677
February	133	705	609	1,447	2	(s)	(s)	(s)	175	177	1,625	260	512	2,397
March	139	734	744	1,618	2	(s)	(s)	(s)	191	193	1,811	280	583	2,675
April	124	683	650	1,458	2	(s)	(s)	(s)	180	182	1,640	274	571	2,486
May	129	680	652	1,463	2	(s)	(s)	(s)	182	185	1,648	280	607	2,535
June	128	647	665	1,442	1	(s)	(s)	(s)	187	189	1,630	286	613	2,530
July	125	657	667	1,449	1	(s)	(s)	(s)	190	191	1,640	298	646	2,583
August	130	669	737	1,540	1	(s)	(s)	(s)	191	192	1,733	304	623	2,660
September	130	663	675	1,469	1	(s)	(s)	(s)	185	187	1,655	290	552	2,498
October	130	693	707	1,530	1	(s)	(s)	(s)	189	190	1,721	288	579	2,587
November	130	715	718	1,561	1	(s)	(s)	(s)	192	194	1,755	276	581	2,612
December	134	768	644	1,548	2	(s)	(s)	(s)	201	203	1,752	273	579	2,603
Total	1,569	8,389	8,201	18,171	17	4	(s)	(s)	2,261	2,283	20,454	3,382	7,007	30,843
2012 January	127	792	704	1,624	2	(s)	(s)	(s)	196	198	1,822	269	548	2,639
February	126	741	669	1,536	2	(s)	(s)	(s)	181	183	1,719	266	528	2,513
March	131	732	646	1,512	2	(s)	(s)	(s)	183	185	1,697	276	553	2,527
April	121	702	631	1,460	2	(s)	(s)	(s)	176	178	1,638	275	549	2,462
May	122	700	680	1,503	2	(s)	(s)	(s)	188	190	1,693	288	618	2,598
June	117	686	652	1,454	1	(s)	(s)	(s)	182	184	1,638	284	594	2,515
July	120	699	666	1,484	1	(s)	(s)	(s)	184	185	1,669	296	628	2,593
August	123	710	702	1,535	1	(s)	(s)	(s)	183	185	1,720	299	602	2,621
September	116	696	643	1,454	1	(s)	(s)	(s)	177	178	1,632	278	534	2,445
October	122	728	727	1,575	1	(s)	(s)	(s)	180	181	1,756	282	558	2,596
November	125	740	698	1,560	2	(s)	(s)	(s)	180	182	1,742	269	550	2,561
December	128	774	699	1,601	2	(s)	(s)	(s)	188	190	1,791	265	566	2,622
Total	1,479	8,699	8,116	18,298	18	4	(s)	(s)	2,197	2,219	20,518	3,347	6,832	30,696
2013 January	128	808	755	1,691	3	(s)	(s)	(s)	186	190	1,880	267	547	2,694
February	124	743	651	1,519	4	(s)	(s)	(s)	168	171	1,691	254	499	2,444
March	128	785	664	1,574	3	(s)	(s)	(s)	185	188	1,762	266	546	2,574
April	117	725	659	1,500	2	(s)	(s)	(s)	177	180	1,680	265	533	2,477
May	114	^R 725	^R 679	^R 1,518	3	(s)	(s)	(s)	185	188	^R 1,706	280	597	^R 2,583
June	114	689	679	1,478	3	(s)	(s)	(s)	185	188	1,666	278	590	2,534
6-Month Total	725	4,475	4,087	9,280	18	2	(s)	(s)	1,084	1,105	10,385	1,610	3,311	15,306
2012 6-Month Total	744	4,352	3,982	9,090	10	2	(s)	(s)	1,106	1,118	10,207	1,657	3,390	15,255
2011 6-Month Total	790	4,224	4,053	9,073	10	2	(s)	(s)	1,113	1,125	10,198	1,655	3,447	15,299

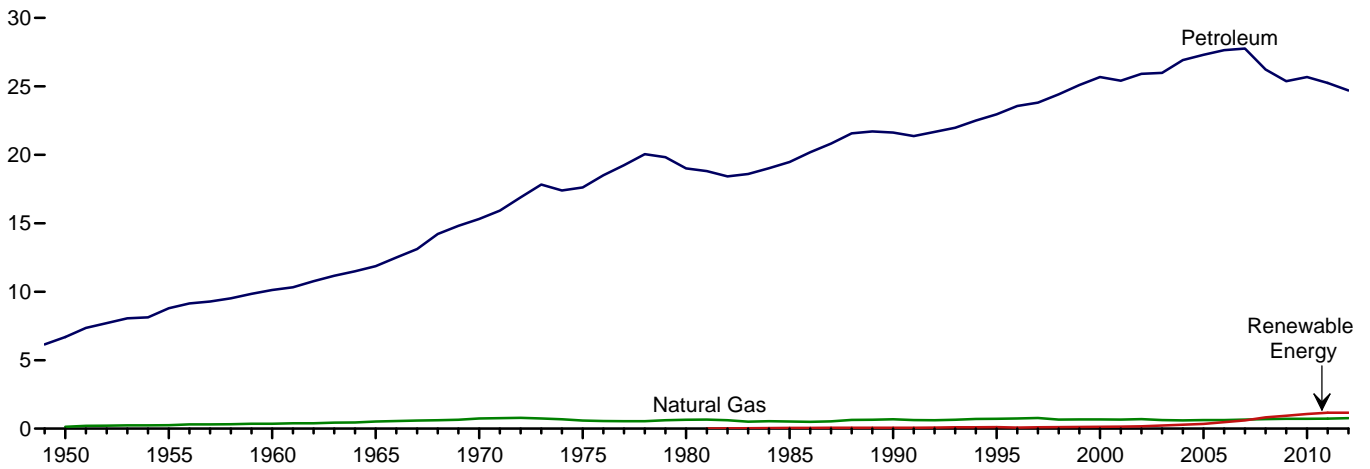
^a See "Primary Energy Consumption" in Glossary.
^b See Table 10.2b for notes on series components and estimation.
^c Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.
^d Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."
^e Includes coal coke net imports, which are not separately displayed. See Tables 1.4a and 1.4b.
^f Conventional hydroelectric power.
^g Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.
^h Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 1, "Electrical System Energy Losses," at end of section.

R=Revised. NA=Not available. --=No data reported. (s)=Less than 0.5 trillion Btu.
Notes: • Data are estimates, except for coal totals; hydroelectric power in 1949–1978 and 1989 forward; solar/PV; wind; and electricity retail sales. • The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#consumption> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#consumption> for all available monthly and annual data beginning in 1973.
Sources: Tables 1.4a, 1.4b, 2.6, 3.8b, 4.3, 6.2, 7.6, 10.2b, A4, A5, and A6.

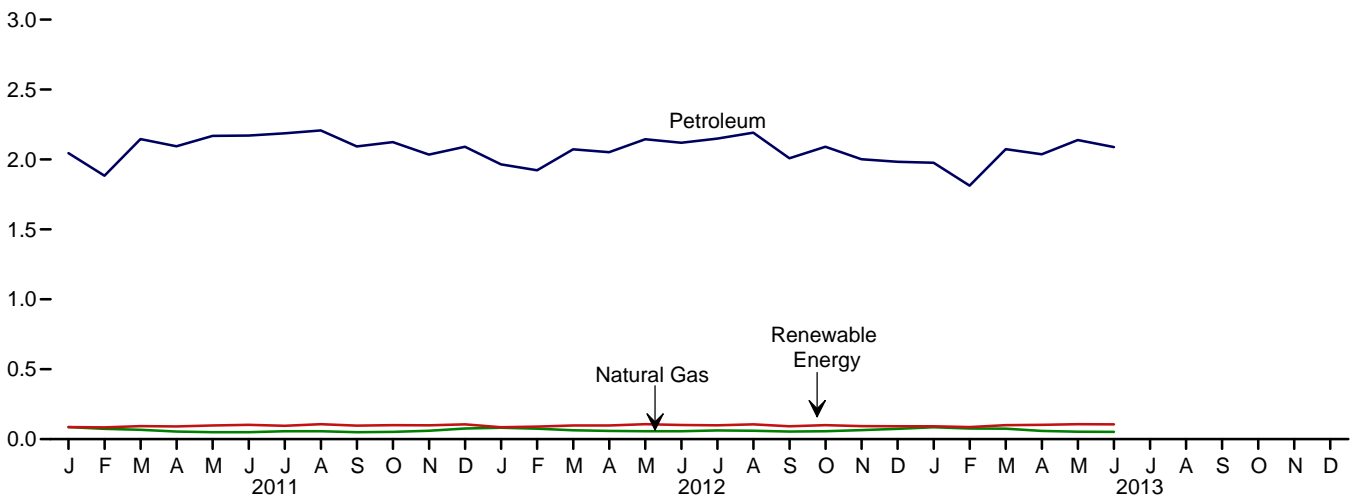
Selected years of data from 1949 through 1972 have been added to this table.
For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 2.5 Transportation Sector Energy Consumption
(Quadrillion Btu)

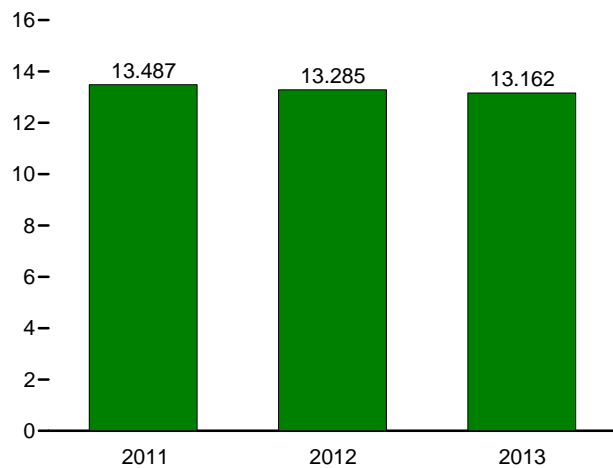
By Major Source, 1949–2012



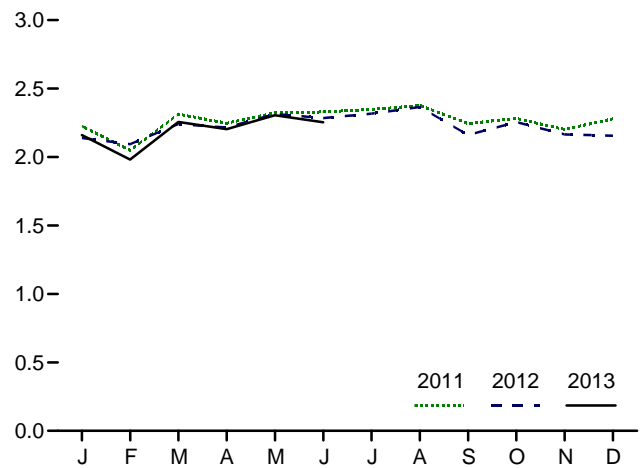
By Major Source, Monthly



Total, January–June



Total, Monthly



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.
Source: Table 2.5.

Table 2.5 Transportation Sector Energy Consumption
(Trillion Btu)

	Primary Consumption ^a						Electricity Retail Sales ^e	Electrical System Energy Losses ^f	Total
	Fossil Fuels				Renewable Energy ^b	Total Primary			
	Coal	Natural Gas ^c	Petroleum ^d	Total	Biomass				
1950 Total	1,564	130	6,690	8,383	NA	8,383	23	86	8,492
1955 Total	421	254	8,799	9,474	NA	9,474	20	56	9,550
1960 Total	75	359	10,125	10,560	NA	10,560	10	26	10,596
1965 Total	16	517	11,866	12,399	NA	12,399	10	24	12,432
1970 Total	7	745	15,310	16,062	NA	16,062	11	26	16,098
1975 Total	1	595	17,615	18,210	NA	18,210	10	24	18,245
1980 Total	(g)	650	19,009	19,659	NA	19,659	11	27	19,697
1985 Total	(g)	519	19,472	19,992	50	20,041	14	32	20,088
1990 Total	(g)	680	21,626	22,306	60	22,366	16	37	22,420
1995 Total	(g)	724	22,955	23,679	112	23,791	17	38	23,846
2000 Total	(g)	672	25,682	26,354	135	26,489	18	42	26,548
2001 Total	(g)	658	25,412	26,070	142	26,213	20	43	26,275
2002 Total	(g)	699	25,913	26,612	170	26,781	19	42	26,842
2003 Total	(g)	627	25,987	26,615	230	26,845	23	51	26,919
2004 Total	(g)	602	26,925	27,527	290	27,817	25	54	27,895
2005 Total	(g)	624	27,309	27,933	339	28,272	26	56	28,353
2006 Total	(g)	625	27,651	28,276	475	28,751	25	54	28,830
2007 Total	(g)	663	27,763	28,427	602	29,029	28	60	29,117
2008 Total	(g)	692	26,230	26,922	826	27,748	26	56	27,831
2009 Total	(g)	715	25,375	26,090	935	27,025	27	56	27,108
2010 Total	(g)	719	25,686	26,405	1,075	27,479	26	55	27,561
2011	(g)								
January	(g)	87	2,045	2,132	86	2,218	2	5	2,225
February	(g)	74	1,883	1,957	84	2,042	2	4	2,048
March	(g)	67	2,146	2,213	93	2,306	2	5	2,313
April	(g)	55	2,095	2,150	90	2,240	2	4	2,247
May	(g)	50	2,168	2,218	98	2,316	2	5	2,323
June	(g)	50	2,171	2,221	103	2,323	2	5	2,330
July	(g)	56	2,187	2,244	96	2,340	2	5	2,347
August	(g)	56	2,207	2,263	107	2,370	2	4	2,377
September	(g)	49	2,093	2,142	96	2,238	2	4	2,245
October	(g)	52	2,124	2,176	100	2,276	2	4	2,282
November	(g)	60	2,035	2,096	99	2,195	2	4	2,201
December	(g)	76	2,092	2,167	105	2,273	2	5	2,280
Total	(g)	732	25,247	25,979	1,158	27,137	26	54	27,218
2012	(g)								
January	(g)	82	1,965	2,047	86	2,132	2	5	2,139
February	(g)	74	1,923	1,997	90	2,087	2	4	2,093
March	(g)	64	2,073	2,136	98	2,234	2	4	2,241
April	(g)	59	2,052	2,111	98	2,209	2	4	2,215
May	(g)	56	2,144	2,201	107	2,308	2	4	2,314
June	(g)	56	2,120	2,176	101	2,277	2	4	2,284
July	(g)	62	2,149	2,211	99	2,310	2	5	2,316
August	(g)	60	2,192	2,252	106	2,358	2	4	2,365
September	(g)	54	2,008	2,063	92	2,155	2	4	2,161
October	(g)	57	2,091	2,148	101	2,249	2	4	2,255
November	(g)	65	2,002	2,067	93	2,159	2	4	2,166
December	(g)	74	1,984	2,058	92	2,149	2	5	2,156
Total	(g)	764	24,702	25,466	1,161	26,627	26	52	26,705
2013	(g)								
January	(g)	85	1,976	2,061	92	2,154	2	5	2,161
February	(g)	76	1,813	1,888	87	1,975	2	4	1,981
March	(g)	75	2,074	2,149	101	2,249	2	4	2,256
April	(g)	59	2,037	2,095	102	2,197	2	4	2,204
May	(g)	53	2,139	2,192	107	2,299	2	5	2,306
June	(g)	52	2,089	2,141	106	2,248	2	5	2,254
6-Month Total	(g)	399	12,128	12,527	595	13,122	13	27	13,162
2012 6-Month Total	(g)	391	12,276	12,668	579	13,246	13	26	13,285
2011 6-Month Total	(g)	382	12,509	12,891	554	13,446	13	28	13,487

^a See "Primary Energy Consumption" in Glossary.

^b See Table 10.2b for notes on series components.

^c Natural gas only; does not include supplemental gaseous fuels—see Note 3, "Supplemental Gaseous Fuels," at end of Section 4. Data are for natural gas consumed in the operation of pipelines (primarily in compressors) and small amounts consumed as vehicle fuel—see Table 4.3.

^d Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

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

^f Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity retail sales. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Note 1, "Electrical System Energy Losses," at end of

section.

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

R=Revised. NA=Not available.

Notes: • Data are estimates, except for coal totals through 1977; and electricity retail sales beginning in 1979. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

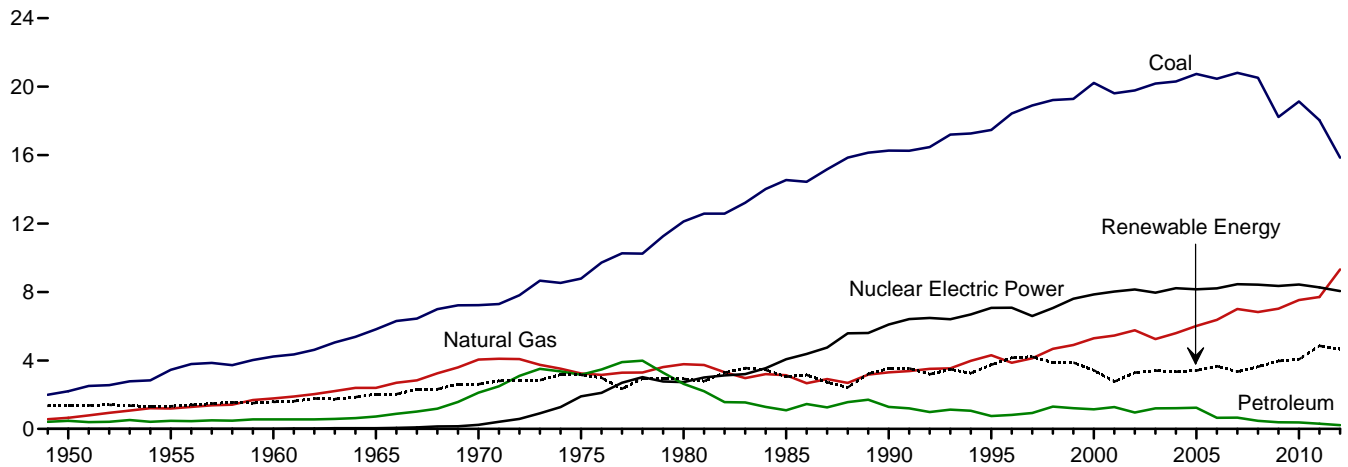
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#consumption> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#consumption> for all available monthly and annual data beginning in 1973.

Sources: Tables 2.6, 3.8c, 4.3, 6.2, 7.6, 10.2b, A4, A5, and A6.

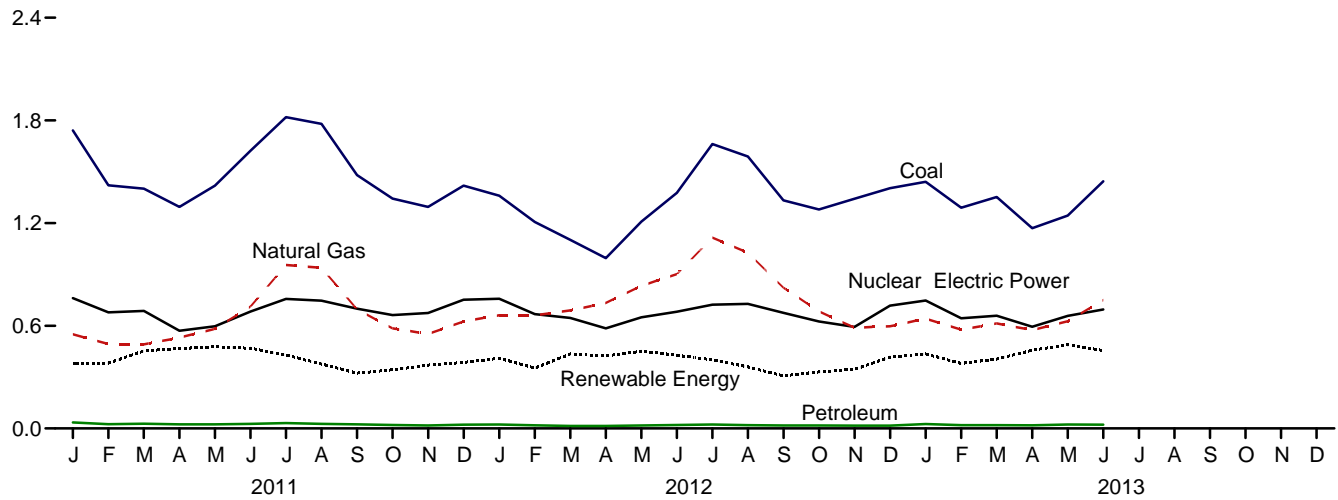
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 2.6 Electric Power Sector Energy Consumption
(Quadrillion Btu)

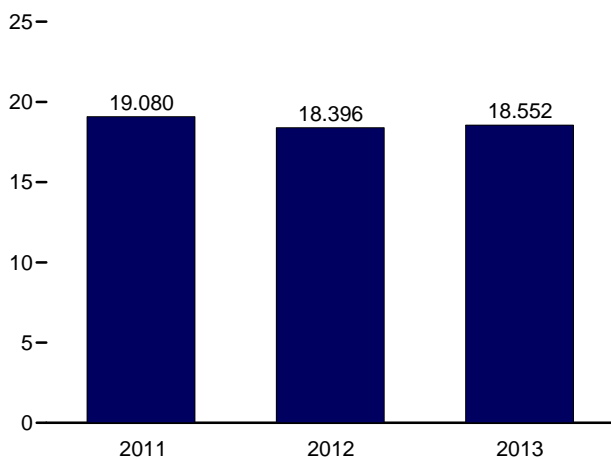
By Major Source, 1949–2012



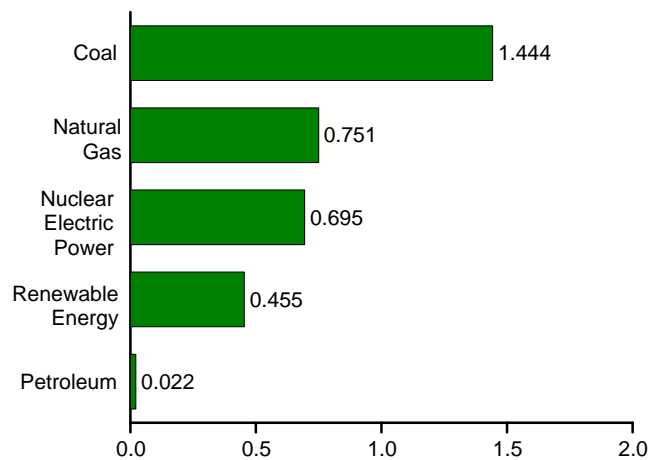
By Major Source, Monthly



Total, January–June



By Major Source, June 2013



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.
Source: Table 2.6.

Table 2.6 Electric Power Sector Energy Consumption
(Trillion Btu)

	Primary Consumption ^a												Elec- tricity Net Imports ^e	Total Primary
	Fossil Fuels				Nuclear Electric Power	Renewable Energy ^b								
	Coal	Natural Gas ^c	Petro- leum	Total		Hydro- electric Power ^d	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total			
1950 Total	2,199	651	472	3,322	0	1,346	NA	NA	NA	5	1,351	6	4,679	
1955 Total	3,458	1,194	471	5,123	0	1,322	NA	NA	NA	3	1,325	14	6,461	
1960 Total	4,228	1,785	553	6,565	6	1,569	(s)	NA	NA	2	1,571	15	8,158	
1965 Total	5,821	2,395	722	8,938	43	2,026	2	NA	NA	3	2,031	(s)	11,012	
1970 Total	7,227	4,054	2,117	13,399	239	2,600	6	NA	NA	4	2,609	7	16,253	
1975 Total	8,786	3,240	3,166	15,191	1,900	3,122	34	NA	NA	2	3,158	21	20,270	
1980 Total	12,123	3,778	2,634	18,534	2,739	2,867	53	NA	NA	4	2,925	71	24,269	
1985 Total	14,542	3,135	1,090	18,767	4,076	2,937	97	(s)	(s)	14	3,049	140	26,032	
1990 Total	16,261	3,309	1,289	20,859	6,104	3,014	161	4	29	317	3,524	8	30,495	
1995 Total	17,466	4,302	755	22,523	7,075	3,149	138	5	33	422	3,747	134	33,479	
2000 Total	20,220	5,293	1,144	26,658	7,862	2,768	144	5	57	453	3,427	115	38,062	
2001 Total	19,614	5,458	1,277	26,348	8,029	2,209	142	6	70	337	2,763	75	37,215	
2002 Total	19,783	5,767	961	26,511	8,145	2,650	147	6	105	380	3,288	72	38,016	
2003 Total	20,185	5,246	1,205	26,636	7,959	2,749	146	5	113	397	3,411	22	38,028	
2004 Total	20,305	5,595	1,212	27,112	8,222	2,655	148	6	142	388	3,339	39	38,712	
2005 Total	20,737	6,015	1,235	27,986	8,161	2,670	147	6	178	406	3,406	85	39,638	
2006 Total	20,462	6,375	648	27,485	8,215	2,839	145	5	264	412	3,665	63	39,428	
2007 Total	20,808	7,005	657	28,470	8,455	2,430	145	6	341	423	3,345	107	40,377	
2008 Total	20,513	6,829	468	27,810	8,427	2,494	146	9	546	435	3,630	112	39,978	
2009 Total	18,225	7,022	390	25,638	8,356	2,650	146	9	721	441	3,967	116	38,077	
2010 Total	19,133	7,528	378	27,039	8,434	2,521	148	12	923	459	4,064	89	39,627	
2011 January	1,741	550	35	2,326	761	247	13	(s)	83	37	381	9	3,477	
February	1,421	493	24	1,938	678	233	12	1	102	35	382	8	3,006	
March	1,401	491	28	1,920	687	301	13	1	102	36	453	8	3,069	
April	1,294	531	24	1,849	571	301	12	2	121	32	467	7	2,895	
May	1,418	582	24	2,024	597	315	13	2	114	34	477	12	3,111	
June	1,623	712	26	2,361	683	311	12	2	107	37	469	11	3,523	
July	1,819	955	32	2,806	757	303	12	2	73	39	429	16	4,008	
August	1,780	938	27	2,745	746	249	12	2	73	39	376	16	3,883	
September	1,481	696	24	2,201	700	207	12	2	67	37	323	10	3,234	
October	1,343	585	20	1,949	663	191	12	1	102	36	343	10	2,963	
November	1,294	552	18	1,864	675	199	12	1	121	36	369	8	2,916	
December	1,419	625	22	2,066	752	229	13	1	103	39	385	12	3,215	
Total	18,035	7,712	303	26,050	8,269	3,085	149	17	1,167	437	4,855	127	39,301	
2012 January	1,359	661	23	2,044	757	225	14	1	134	37	410	11	3,222	
February	1,206	660	18	1,885	668	196	13	1	108	34	353	9	2,916	
March	1,101	690	15	1,806	646	249	14	2	135	35	435	10	2,897	
April	995	734	15	1,743	585	252	13	3	124	31	424	13	2,765	
May	1,209	833	17	2,059	650	276	14	5	122	35	451	15	3,174	
June	1,376	901	20	2,298	682	257	13	5	116	36	428	14	3,422	
July	1,661	1,115	23	2,799	723	259	14	5	85	38	401	19	3,942	
August	1,589	1,026	19	2,634	728	224	13	4	80	38	360	19	3,741	
September	1,333	822	17	2,172	675	170	13	4	84	36	307	14	3,168	
October	1,280	684	17	1,981	625	156	14	4	122	35	330	12	2,949	
November	1,342	589	16	1,947	593	181	14	3	112	36	346	13	2,899	
December	1,403	597	17	2,017	718	224	14	2	138	38	416	11	3,162	
Total	15,854	9,313	218	25,385	8,050	2,668	163	41	1,360	429	4,661	161	38,258	
2013 January	1,441	642	26	2,108	747	241	14	3	141	37	435	14	3,304	
February	1,290	577	19	1,886	643	195	13	4	135	32	380	13	2,922	
March	1,352	614	19	1,985	659	197	14	6	152	37	405	14	3,063	
April	1,170	574	18	1,762	594	238	13	6	168	31	457	12	2,825	
May	1,244	^R 626	23	^R 1,892	658	274	14	7	159	35	489	16	^R 3,054	
June	1,444	751	22	2,217	695	263	14	8	134	36	455	17	3,383	
6-Month Total	7,940	3,784	127	11,851	3,996	1,408	81	34	888	208	2,620	85	18,552	
2012 6-Month Total	7,247	4,480	108	11,835	3,987	1,455	81	18	740	208	2,502	72	18,396	
2011 6-Month Total	8,899	3,359	161	12,419	3,977	1,707	75	8	629	211	2,629	56	19,080	

^a See "Primary Energy Consumption" in Glossary.
^b See Table 10.2c for notes on series components.
^c Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.
^d Conventional hydroelectric power.
^e Net imports equal imports minus exports.
^f Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and 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. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#consumption> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#consumption> for all available monthly and annual data beginning in 1973.
Sources: Tables 3.8c, 4.3, 6.2, 7.1, 7.2b, 10.2c, A4, A5, and A6.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Energy Consumption by Sector

Note 1. 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 electricity retail sales (see Tables 7.6 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, geothermal, solar thermal, photovoltaic, and wind energy sources. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called "line losses"), and unaccounted-for electricity. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales. Overall, about two thirds of total energy input is lost in conversion. Currently, of electricity generated, approximately 5 percent is lost in plant use and 7 percent is lost in transmission and distribution.

Note 2. Energy Consumption Data and Surveys. Most of the data in this section of the *Monthly Energy Review*

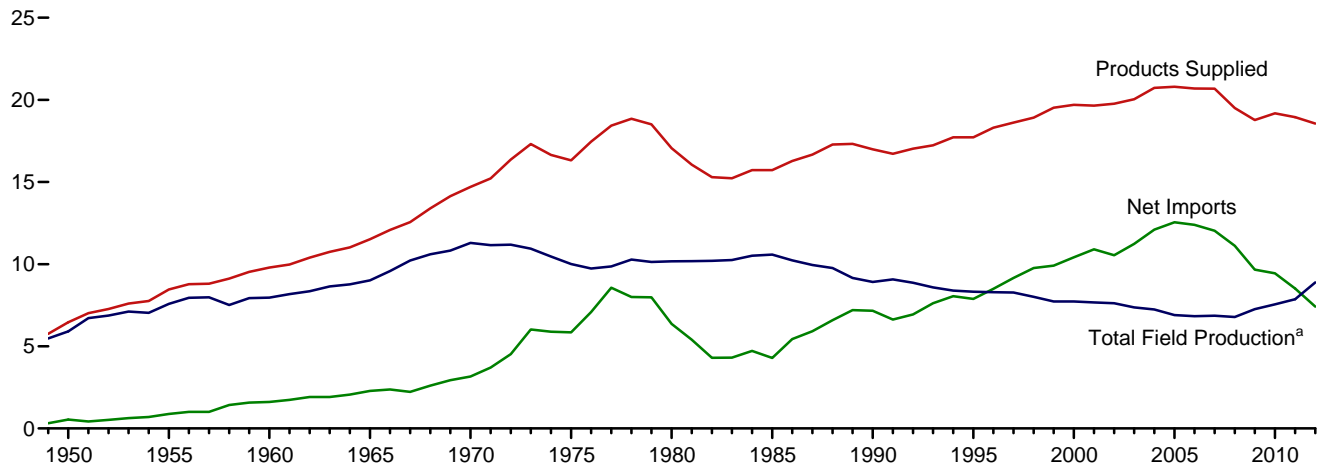
(MER) are developed from a group of energy-related surveys, typically called "supply surveys," conducted by the U.S. Energy Information Administration (EIA). Supply surveys are directed to suppliers and marketers of specific energy sources. They measure the quantities of specific energy sources produced, 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, U.S. Energy Information Administration, Washington, DC, April 6, 1990.

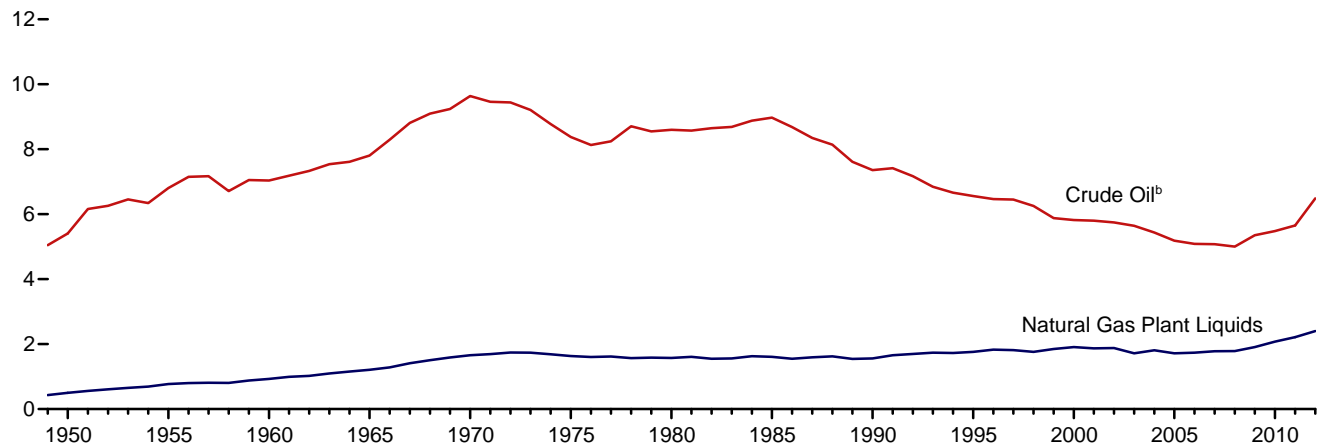
3. Petroleum

Figure 3.1 Petroleum Overview
(Million Barrels per Day)

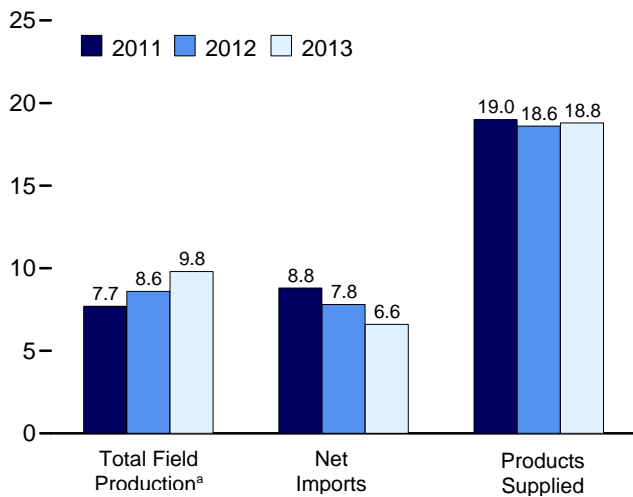
Overview, 1949–2012



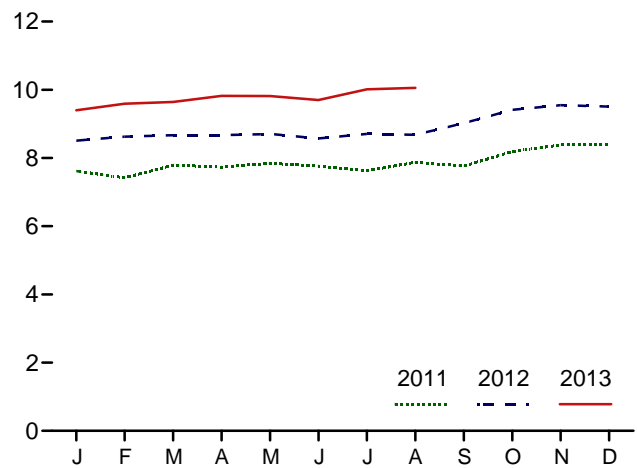
Crude Oil and Natural Gas Plant Liquids Field Production, 1949–2012



Overview, January–August



Total Field Production,^a Monthly



^a Crude oil, including lease condensate, and natural gas plant liquids field production.

^b Includes lease condensate.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
Source: Table 3.1.

Table 3.1 Petroleum Overview
(Thousand Barrels per Day)

	Field Production ^a					Renewable Fuels and Oxygenates ^f	Processing Gain ^g	Trade			Stock Change ^j	Adjustments ^{c,k}	Petroleum Products Supplied
	Crude Oil ^{b,c}			NGPL ^e	Total ^c			Im-ports ^h	Ex-ports	Net Imports ⁱ			
	48 States ^d	Alaska	Total										
1950 Average	5,407	0	5,407	499	5,906	NA	2	850	305	545	-56	-51	6,458
1955 Average	6,807	0	6,807	771	7,578	NA	34	1,248	368	880	(s)	-37	8,455
1960 Average	7,034	2	7,035	929	7,965	NA	146	1,815	202	1,613	-83	-8	9,797
1965 Average	7,774	30	7,804	1,210	9,014	NA	220	2,468	187	2,281	-8	-10	11,512
1970 Average	9,408	229	9,637	1,660	11,297	NA	359	3,419	259	3,161	103	-16	14,697
1975 Average	8,183	191	8,375	1,633	10,007	NA	460	6,056	209	5,846	32	41	16,322
1980 Average	6,980	1,617	8,597	1,573	10,170	NA	597	6,909	544	6,365	140	64	17,056
1985 Average	7,146	1,825	8,971	1,609	10,581	NA	557	5,067	781	4,286	-103	200	15,726
1990 Average	5,582	1,773	7,355	1,559	8,914	NA	683	8,018	857	7,161	107	338	16,988
1995 Average	5,076	1,484	6,560	1,762	8,322	NA	774	8,835	949	7,886	-246	496	17,725
2000 Average	4,851	970	5,822	1,911	7,733	NA	948	11,459	1,040	10,419	-69	532	19,701
2001 Average	4,839	963	5,801	1,868	7,670	NA	903	11,871	971	10,900	325	501	19,649
2002 Average	4,759	985	5,744	1,880	7,624	NA	957	11,530	984	10,546	-105	529	19,761
2003 Average	4,670	974	5,644	1,719	7,363	NA	974	12,264	1,027	11,238	56	514	20,034
2004 Average	4,527	908	5,435	1,809	7,244	NA	1,051	13,145	1,048	12,097	209	548	20,731
2005 Average	4,322	864	5,186	1,717	6,903	NA	989	13,714	1,165	12,549	145	506	20,802
2006 Average	4,348	741	5,089	1,739	6,827	NA	994	13,707	1,317	12,390	60	536	20,687
2007 Average	4,355	722	5,077	1,783	6,860	NA	996	13,468	1,433	12,036	-148	641	20,680
2008 Average	4,318	683	5,000	1,784	6,784	NA	993	12,915	1,802	11,114	195	802	19,498
2009 Average	4,708	645	5,353	1,910	7,263	746	979	11,691	2,024	9,667	109	226	17,771
2010 Average	4,877	601	5,479	2,074	7,553	907	1,068	11,793	2,353	9,441	49	261	19,180
2011 January	5,038	464	5,502	2,114	7,616	982	1,019	12,248	2,750	9,497	484	363	18,993
February	4,799	611	5,410	2,009	7,419	972	954	10,738	2,634	8,104	-1,033	392	18,873
March	4,984	611	5,595	2,195	7,789	1,002	1,019	11,850	2,733	9,117	-139	262	19,329
April	4,940	606	5,546	2,186	7,733	996	1,013	11,808	3,071	8,736	105	278	18,650
May	5,029	582	5,611	2,234	7,845	992	1,085	11,866	2,735	9,131	884	310	18,479
June	5,019	553	5,573	2,188	7,760	1,015	1,106	11,877	2,716	9,161	59	270	19,253
July	4,968	453	5,420	2,206	7,627	1,004	1,122	11,757	3,053	8,704	231	552	18,778
August	5,119	526	5,645	2,227	7,873	1,027	1,133	11,227	3,002	8,224	-644	513	19,415
September	5,008	585	5,593	2,171	7,763	1,011	1,123	11,270	3,174	8,095	-492	407	18,892
October	5,309	566	5,874	2,313	8,188	1,023	1,084	11,053	3,107	7,946	-371	233	18,844
November	5,413	593	6,006	2,373	8,379	1,076	1,113	11,217	3,159	8,059	23	476	19,080
December	5,436	592	6,027	2,358	8,386	1,085	1,134	11,064	3,667	7,397	-646	154	18,803
Average	5,091	561	5,652	2,216	7,868	1,016	1,076	11,504	2,986	8,518	-121	350	18,949
2012 January	RE 5,540	E 593	RE 6,133	2,376	RE 8,508	1,021	1,053	10,944	2,839	8,104	655	R 248	18,280
February	RE 5,654	E 582	RE 6,236	2,388	RE 8,625	1,012	1,068	10,464	2,980	7,484	-228	R 343	18,760
March	RE 5,724	E 567	RE 6,291	2,375	RE 8,666	994	1,023	10,610	3,064	7,547	409	R 391	18,213
April	RE 5,735	E 552	RE 6,287	2,382	RE 8,669	1,001	1,047	10,634	3,263	7,370	-18	R 224	18,330
May	RE 5,782	E 546	RE 6,328	2,376	RE 8,704	1,018	1,089	11,132	3,194	7,939	524	R 482	18,707
June	RE 5,745	E 493	RE 6,238	2,335	RE 8,574	1,004	1,099	11,393	3,209	8,184	493	R 548	18,915
July	RE 5,968	E 415	RE 6,383	2,323	RE 8,705	929	1,060	10,748	3,211	7,537	33	R 402	18,601
August	RE 5,909	E 404	RE 6,313	2,367	RE 8,680	957	1,102	10,898	3,017	7,881	-272	R 335	19,226
September	RE 6,060	E 502	RE 6,562	2,458	RE 9,021	924	1,047	10,533	3,150	7,383	582	R 380	18,173
October	RE 6,381	E 547	RE 6,927	2,485	RE 9,412	913	998	10,088	3,255	6,833	-278	R 287	18,722
November	RE 6,481	E 553	RE 7,034	2,516	RE 9,549	928	1,118	10,103	3,404	6,698	-40	R 269	18,604
December	RE 6,538	E 555	RE 7,093	2,414	RE 9,508	915	1,187	9,610	3,623	5,987	-57	R 476	18,130
Average	RE 5,961	E 526	RE 6,486	2,399	RE 8,886	968	1,074	10,596	3,184	7,412	151	R 366	18,555
2013 January	RE 6,491	E 549	RE 7,040	2,361	RE 9,400	894	1,119	10,042	2,882	7,160	185	R 256	18,646
February	RE 6,598	E 541	RE 7,139	2,453	RE 9,592	908	998	9,235	3,243	5,992	-777	R 391	18,659
March	RE 6,636	E 533	RE 7,169	2,475	RE 9,644	949	1,035	9,456	3,111	6,345	79	R 582	18,476
April	RE 6,828	E 523	RE 7,351	2,469	RE 9,819	973	1,088	10,076	3,208	6,868	444	R 249	18,553
May	RE 6,824	E 515	RE 7,340	2,475	RE 9,815	1,011	1,058	10,052	3,467	6,585	353	R 435	18,551
June	RE 6,716	RE 486	RE 7,201	R 2,498	RE 9,699	R 1,033	R 1,096	R 9,790	R 3,545	R 6,245	R 8	R 658	R 18,724
July	E 7,028	E 490	E 7,518	E 2,493	E 10,011	E 948	E 1,151	E 9,935	E 2,920	E 7,015	E -141	E 332	E 19,597
August	E 7,162	E 428	E 7,590	E 2,464	E 10,054	E 930	E 1,131	E 9,972	E 3,170	E 6,802	E -117	E 259	E 19,158
8-Month Average	E 6,788	E 508	E 7,296	E 2,461	E 9,756	E 956	E 1,086	E 9,826	E 3,191	E 6,635	E 29	E 395	E 18,798
2012 8-Month Average	E 5,758	E 519	E 6,277	2,365	E 8,642	992	1,068	10,855	3,097	7,758	203	372	18,628
2011 8-Month Average	4,989	550	5,539	2,172	7,711	999	1,058	11,681	2,839	8,842	5	368	18,973

^a Crude oil production on leases, and natural gas liquids (liquefied petroleum gases, pentanes plus, and a small amount of finished petroleum products) production at natural gas processing plants. Excludes what was previously classified as "Field Production" of finished motor gasoline, motor gasoline blending components, and other hydrocarbons and oxygenates; these are now included in "Adjustments."

^b Includes lease condensate.

^c Once a month, data for crude oil production, total field production, and adjustments are revised going back as far as the data year of the U.S. Energy Information Administration's (EIA) last published *Petroleum Supply Annual (PSA)*—these revisions are released at the same time as EIA's *Petroleum Supply Monthly*. Once a year, data for these series are revised going back as far as 10 years—these revisions are released at the same time as the PSA.

^d United States excluding Alaska and Hawaii.

^e Natural gas plant liquids.

^f Renewable fuels and oxygenate plant net production.

^g Refinery and blender net production minus refinery and blender net inputs. See Table 3.2.

^h Includes Strategic Petroleum Reserve imports. See Table 3.3b.

ⁱ Net imports equal imports minus exports.

^j A negative value indicates a decrease in stocks and a positive value indicates an increase. The current month stock change estimate is based on the change from the previous month's estimate, rather than the stocks values shown in Table 3.4. Includes crude oil stocks in the Strategic Petroleum Reserve, but excludes distillate fuel oil stocks in the Northeast Home Heating Oil Reserve. See Table 3.4.

^k An adjustment for crude oil, hydrogen, oxygenates, renewable fuels, other hydrocarbons, motor gasoline blending components, finished motor gasoline, and distillate fuel oil. See EIA's *Petroleum Supply Monthly*, Appendix B, "PSM Explanatory Notes," for further information.

R=Revised. E=Estimate. NA=Not available. (s)=Less than 500 barrels per day and greater than -500 barrels per day.

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

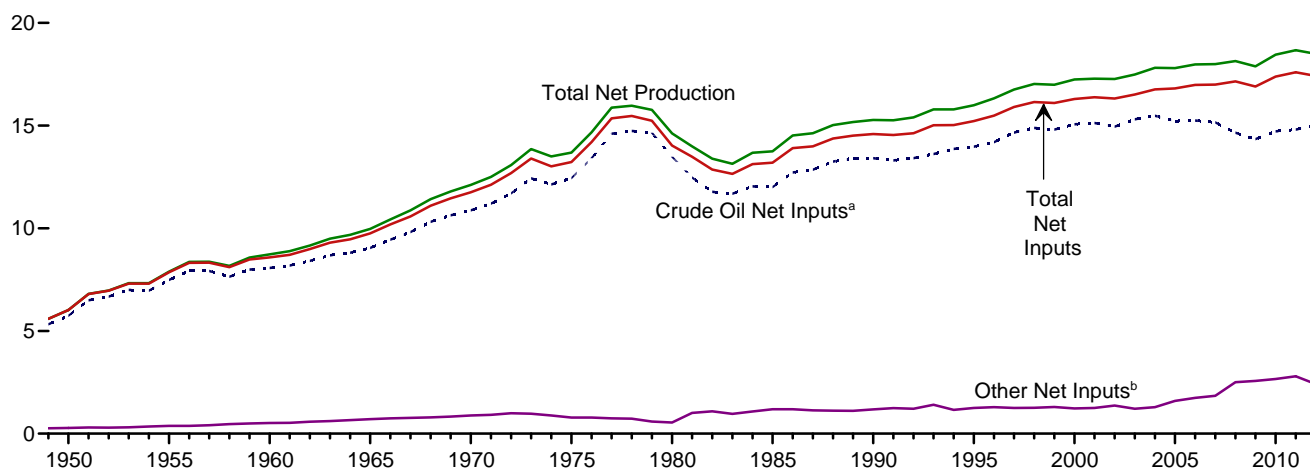
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949-1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

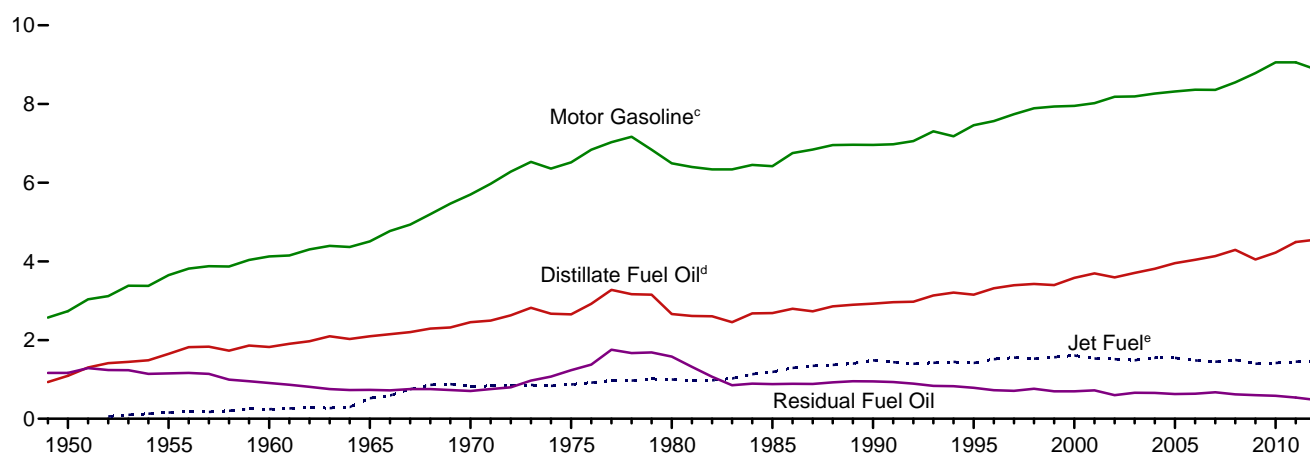
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 3.2 Refinery and Blender Net Inputs and Net Production
(Million Barrels per Day)

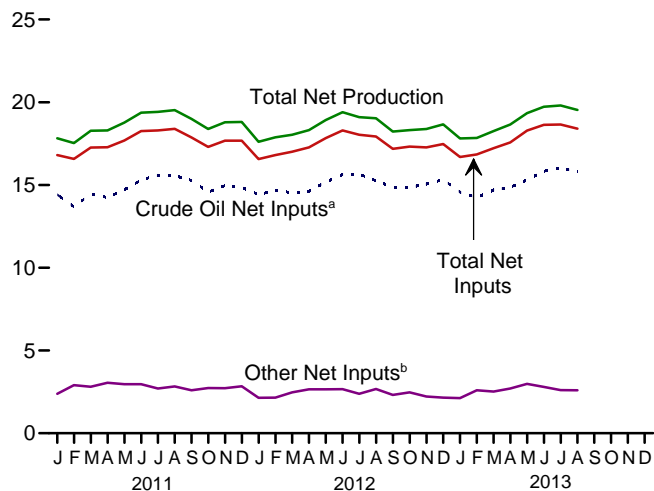
Net Inputs and Net Production, 1949–2012



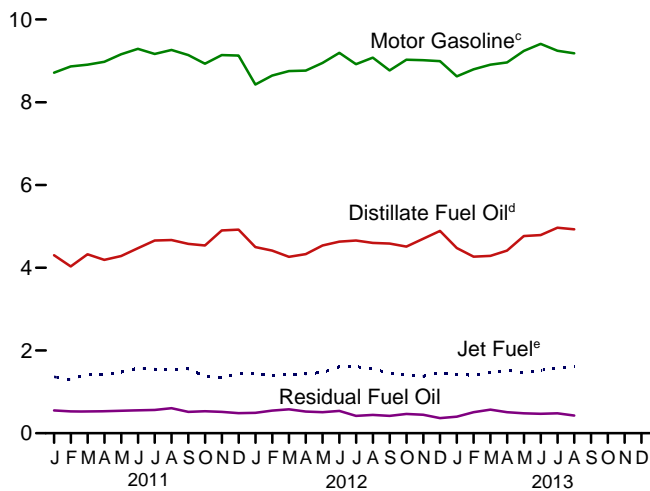
Net Production, Selected Products, 1949–2012



Net Inputs and Net Production, Monthly



Net Production, Selected Products, Monthly



^a Includes lease condensate.

^b Natural gas plant liquids and other liquids.

^c Beginning in 1993, includes fuel ethanol blended into motor gasoline.

^d Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

^e Beginning in 2005, includes kerosene-type jet fuel only.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.

Source: Table 3.2.

Table 3.2 Refinery and Blender Net Inputs and Net Production
(Thousand Barrels per Day)

	Refinery and Blender Net Inputs ^a				Refinery and Blender Net Production ^b							
	Crude Oil ^d	NGL ^e	Other Liquids ^f	Total	Distillate Fuel Oil ^g	Jet Fuel ^h	LPG ^c		Motor Gasoline ⁱ	Residual Fuel Oil	Other Products ^k	Total
							Propane ^l	Total				
1950 Average	5,739	259	19	6,018	1,093	(^h)	NA	80	2,735	1,165	947	6,019
1955 Average	7,480	345	32	7,857	1,651	155	NA	119	3,648	1,152	1,166	7,891
1960 Average	8,067	455	61	8,583	1,823	241	NA	212	4,126	908	1,420	8,729
1965 Average	9,043	618	88	9,750	2,096	523	NA	293	4,507	736	1,814	9,970
1970 Average	10,870	763	121	11,754	2,454	827	NA	345	5,699	706	2,082	12,113
1975 Average	12,442	710	72	13,225	2,653	871	234	311	6,518	1,235	2,097	13,685
1980 Average	13,481	462	81	14,025	2,661	999	269	330	6,492	1,580	2,559	14,622
1985 Average	12,002	509	681	13,192	2,686	1,189	295	391	6,419	882	2,183	13,750
1990 Average	13,409	467	713	14,589	2,925	1,488	404	499	6,959	950	2,452	15,272
1995 Average	13,973	471	775	15,220	3,155	1,416	503	654	7,459	788	2,522	15,994
2000 Average	15,067	380	849	16,295	3,580	1,606	583	705	7,951	696	2,705	17,243
2001 Average	15,128	429	825	16,382	3,695	1,530	556	667	8,022	721	2,651	17,285
2002 Average	14,947	429	941	16,316	3,592	1,514	572	671	8,183	601	2,712	17,273
2003 Average	15,304	419	791	16,513	3,707	1,488	570	658	8,194	660	2,787	17,487
2004 Average	15,475	422	866	16,762	3,814	1,547	584	645	8,265	655	2,887	17,814
2005 Average	15,220	441	1,149	16,811	3,954	1,546	540	573	8,318	628	2,782	17,900
2006 Average	15,242	501	1,238	16,981	4,040	1,481	543	627	8,364	635	2,827	17,975
2007 Average	15,156	505	1,337	16,999	4,133	1,448	562	655	8,358	673	2,728	17,994
2008 Average	14,648	485	2,019	17,153	4,294	1,493	519	630	8,548	620	2,561	18,146
2009 Average	14,336	485	2,082	16,904	4,048	1,396	537	623	8,786	598	2,431	17,882
2010 Average	14,724	442	2,219	17,385	4,223	1,418	560	659	9,059	585	2,509	18,452
2011 January	14,423	549	1,835	16,807	4,303	1,362	561	431	8,714	552	2,464	17,826
February	13,676	515	2,388	16,579	4,033	1,298	512	472	8,866	529	2,335	17,533
March	14,451	460	2,350	17,261	4,326	1,431	528	636	8,908	526	2,454	18,280
April	14,231	448	2,606	17,285	4,189	1,422	542	781	8,978	534	2,394	18,298
May	14,718	432	2,535	17,685	4,283	1,479	563	815	9,157	538	2,496	18,770
June	15,294	444	2,522	18,260	4,471	1,568	567	847	9,289	553	2,638	19,366
July	15,589	417	2,288	18,294	4,656	1,550	557	820	9,166	563	2,661	19,416
August	15,556	437	2,396	18,388	4,668	1,543	553	791	9,264	604	2,652	19,522
September	15,275	494	2,100	17,870	4,576	1,553	569	603	9,140	516	2,605	18,993
October	14,570	524	2,205	17,298	4,539	1,378	540	480	8,932	530	2,525	18,382
November	14,960	599	2,118	17,677	4,902	1,341	564	377	9,141	516	2,513	18,790
December	14,842	566	2,270	17,678	4,919	1,449	566	368	9,128	486	2,462	18,812
Average	14,806	490	2,300	17,596	4,492	1,449	552	619	9,058	537	2,518	18,673
2012 January	14,415	513	1,633	16,561	4,498	1,437	518	414	8,427	495	2,343	17,613
February	14,659	531	1,618	16,809	4,476	1,401	532	492	8,645	547	2,375	17,876
March	14,545	445	2,022	17,012	4,262	1,412	545	685	8,753	577	2,347	18,035
April	14,614	443	2,215	17,272	4,330	1,433	558	833	8,763	525	2,436	18,319
May	15,177	429	2,228	17,833	4,537	1,468	569	856	8,952	509	2,601	18,922
June	15,632	442	2,222	18,297	4,632	1,609	585	841	9,193	538	2,582	19,396
July	15,656	435	1,944	18,036	4,659	1,611	565	841	9,211	420	2,644	19,096
August	15,259	435	2,239	17,932	4,599	1,559	543	777	9,079	443	2,577	19,034
September	14,863	522	1,794	17,179	4,584	1,450	522	553	8,770	420	2,450	18,226
October	14,854	620	1,846	17,320	4,509	1,418	543	476	9,026	467	2,421	18,318
November	15,054	624	1,591	17,269	4,702	1,378	550	366	9,016	445	2,480	18,387
December	15,320	642	1,513	17,475	4,890	1,463	579	384	8,993	364	2,568	18,662
Average	15,006	507	1,906	17,419	4,552	1,470	551	627	8,879	479	2,486	18,493
2013 January	14,569	541	1,580	16,690	4,476	1,421	543	417	8,624	399	2,472	17,810
February	14,246	501	2,094	16,841	4,267	1,403	535	485	8,794	508	2,382	17,839
March	14,703	488	2,035	17,226	4,285	1,463	557	652	8,908	571	2,380	18,260
April	14,865	427	2,275	17,567	4,415	1,526	561	820	8,963	509	2,422	18,655
May	15,300	379	2,606	18,286	4,767	1,451	574	869	9,241	483	2,532	19,343
June	R 15,833	R 426	R 2,376	R 18,634	R 4,788	R 1,523	R 566	R 848	R 9,409	R 469	R 2,693	R 19,731
July	F 16,047	F 422	RE 2,181	RF 18,650	E 4,966	E 1,576	RE 695	RF 840	E 9,244	E 482	RE 2,692	RE 19,801
August	E 15,802	F 438	E 2,161	F 18,401	E 4,929	E 1,601	E 680	F 812	E 9,184	E 427	E 2,579	E 19,532
8-Month Average	E 15,180	E 452	E 2,163	E 17,796	E 4,616	E 1,496	E 590	E 720	E 9,048	E 481	E 2,521	E 18,881
2012 8-Month Average	14,996	459	2,017	17,472	4,492	1,492	552	718	8,842	506	2,489	18,539
2011 8-Month Average	14,755	462	2,363	17,580	4,371	1,458	548	701	9,044	550	2,514	18,638

^a See "Refinery and Blender Net Inputs" in Glossary.

^b See "Refinery and Blender Net Production" in Glossary.

^c Liquefied petroleum gases.

^d Includes lease condensate.

^e Natural gas plant liquids (liquefied petroleum gases and pentanes plus).

^f Unfinished oils (net), other hydrocarbons, and hydrogen. Beginning in 1981, also includes aviation and motor gasoline blending components (net). Beginning in 1993, also includes oxygenates (net), including fuel ethanol. Beginning in 2009, also includes renewable diesel fuel (including biodiesel).

^g Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

^h Beginning in 1965, includes kerosene-type jet fuel. (Through 1964, kerosene-type jet fuel is included with kerosene in "Other Products.") For 1952–2004, also includes naphtha-type jet fuel. (Through 1951, naphtha-type jet fuel is included in the products from which it was blended—gasoline, kerosene, and distillate fuel oil. Beginning in 2005, naphtha-type jet fuel is included in "Other Products.")

ⁱ Includes propylene.

^j Finished motor gasoline. Through 1963, also includes aviation gasoline and special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor

gasoline.

^k Asphalt and road oil, kerosene, lubricants, petrochemical feedstocks, petroleum coke, still gas (refinery gas), waxes, and miscellaneous products. Through 1964, also includes kerosene-type jet fuel. Beginning in 1964, also includes finished aviation gasoline and special naphthas. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. E=Estimate. F=Forecast. 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.

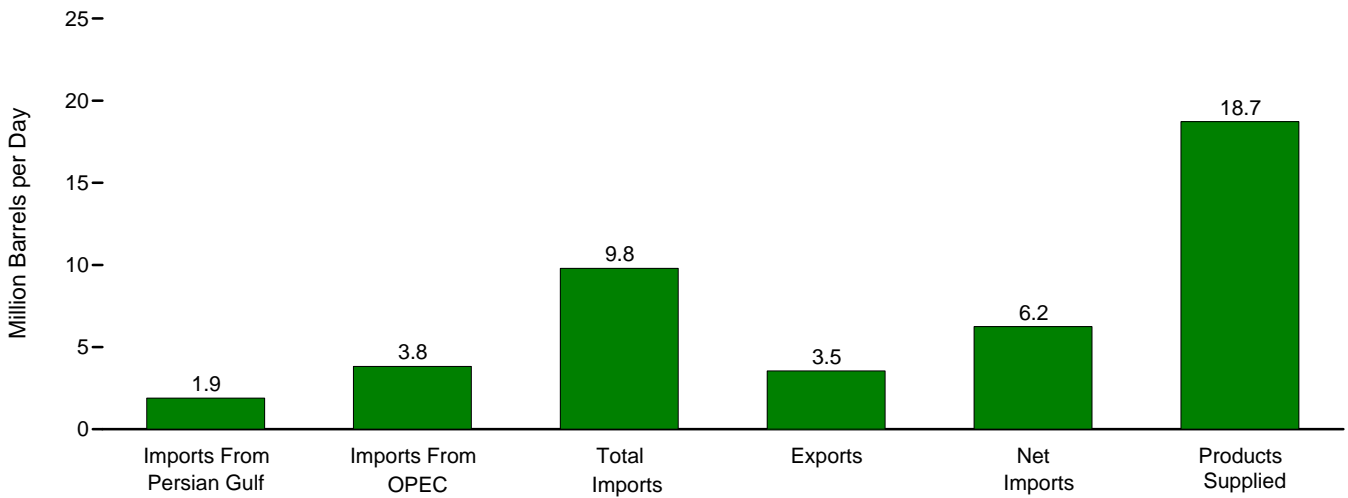
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: • 1949–1975: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • 1976–1980: U.S. Energy Information Administration (EIA), *Energy Data Reports, Petroleum Statement, Annual*, annual reports. • 1981–2011: EIA, *Petroleum Supply Annual*, annual reports. • 2012 and 2013: EIA, *Petroleum Supply Monthly*, monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system, Short-Term Integrated Forecasting System, and *Monthly Energy Review* data system calculations.

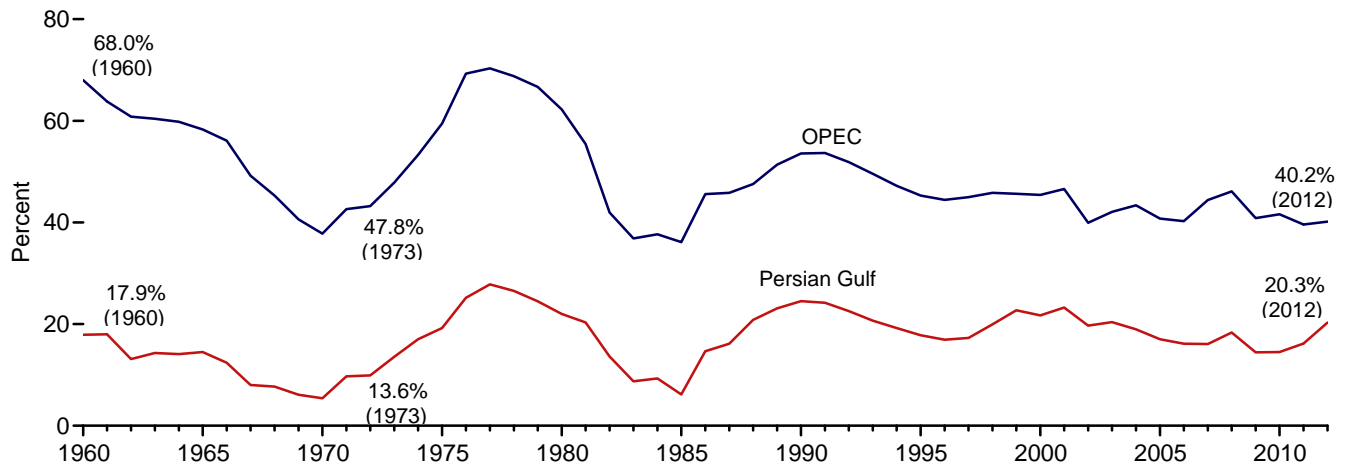
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Figure 3.3a Petroleum Trade: Overview

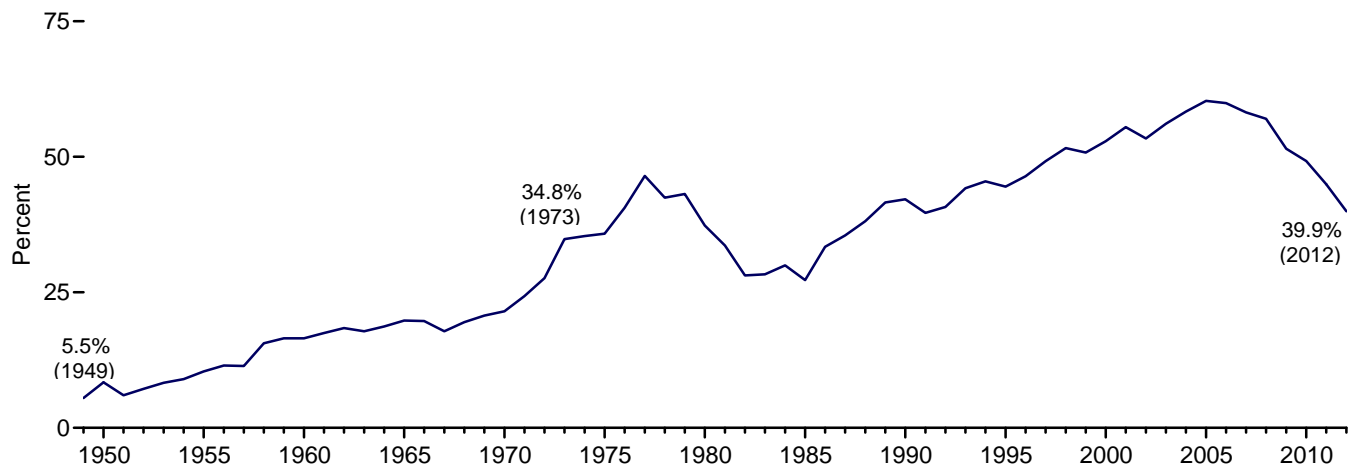
Overview, June 2013



Imports From OPEC and Persian Gulf as Share of Total Imports, 1960–2012



Net Imports as Share of Products Supplied, 1949–2012



Note: OPEC=Organization of the Petroleum Exporting Countries.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
 Source: Table 3.3a.

Table 3.3a Petroleum Trade: Overview

	Imports From Persian Gulf ^a	Imports From OPEC ^b	Imports	Exports	Net Imports	Products Supplied	As Share of Products Supplied				As Share of Total Imports	
							Imports From Persian Gulf ^a	Imports From OPEC ^b	Imports	Net Imports	Imports From Persian Gulf ^a	Imports From OPEC ^b
							Thousand Barrels per Day						Percent
1950 Average	NA	NA	850	305	545	6,458	NA	NA	13.2	8.4	NA	NA
1955 Average	NA	NA	1,248	368	880	8,455	NA	NA	14.8	10.4	NA	NA
1960 Average	326	1,233	1,815	202	1,613	9,797	3.3	12.6	18.5	16.5	17.9	68.0
1965 Average	359	1,439	2,468	187	2,281	11,512	3.1	12.5	21.4	19.8	14.5	58.3
1970 Average	184	1,294	3,419	259	3,161	14,697	1.3	8.8	23.3	21.5	5.4	37.8
1975 Average	1,165	3,601	6,056	209	5,846	16,322	7.1	22.1	37.1	35.8	19.2	59.5
1980 Average	1,519	4,300	6,909	544	6,365	17,056	8.9	25.2	40.5	37.3	22.0	62.2
1985 Average	311	1,830	5,067	781	4,286	15,726	2.0	11.6	32.2	27.3	6.1	36.1
1990 Average	1,966	4,296	8,018	857	7,161	16,988	11.6	25.3	47.2	42.2	24.5	53.6
1995 Average	1,573	4,002	8,835	949	7,886	17,725	8.9	22.6	49.8	44.5	17.8	45.3
2000 Average	2,488	5,203	11,459	1,040	10,419	19,701	12.6	26.4	58.2	52.9	21.7	45.4
2001 Average	2,761	5,528	11,871	971	10,900	19,649	14.1	28.1	60.4	55.5	23.3	46.6
2002 Average	2,269	4,605	11,530	984	10,546	19,761	11.5	23.3	58.3	53.4	19.7	39.9
2003 Average	2,501	5,162	12,264	1,027	11,238	20,034	12.5	25.8	61.2	56.1	20.4	42.1
2004 Average	2,493	5,701	13,145	1,048	12,097	20,731	12.0	27.5	63.4	58.4	19.0	43.4
2005 Average	2,334	5,587	13,714	1,165	12,549	20,802	11.2	26.9	65.9	60.3	17.0	40.7
2006 Average	2,211	5,517	13,707	1,317	12,390	20,687	10.7	26.7	66.3	59.9	16.1	40.2
2007 Average	2,163	5,980	13,468	1,433	12,036	20,680	10.5	28.9	65.1	58.2	16.1	44.4
2008 Average	2,370	5,954	12,915	1,802	11,114	19,498	12.2	30.5	66.2	57.0	18.4	46.1
2009 Average	1,689	4,776	11,691	2,024	9,667	18,771	9.0	25.4	62.3	51.5	14.4	40.9
2010 Average	1,711	4,906	11,793	2,353	9,441	19,180	8.9	25.6	61.5	49.2	14.5	41.6
2011 January	1,681	4,909	12,248	2,750	9,497	18,993	8.8	25.8	64.5	50.0	13.7	40.1
February	1,495	4,530	10,738	2,634	8,104	18,873	7.9	24.0	56.9	42.9	13.9	42.2
March	1,667	4,638	11,850	2,733	9,117	19,329	8.6	24.0	61.3	47.2	14.1	39.1
April	1,704	4,548	11,808	3,071	8,736	18,650	9.1	24.4	63.3	46.8	14.4	38.5
May	1,844	4,619	11,866	2,735	9,131	18,479	10.0	25.0	64.2	49.4	15.5	38.9
June	2,033	4,894	11,877	2,716	9,161	19,253	10.6	25.4	61.7	47.6	17.1	41.2
July	2,167	4,939	11,757	3,053	8,704	18,778	11.5	26.3	62.6	46.4	18.4	42.0
August	1,910	4,656	11,227	3,002	8,224	19,415	9.8	24.0	57.8	42.4	17.0	41.5
September	2,039	4,326	11,270	3,174	8,095	18,892	10.8	22.9	59.7	42.9	18.1	38.4
October	1,904	4,296	11,053	3,107	7,946	18,844	10.1	22.8	58.7	42.2	17.2	38.9
November	1,944	4,206	11,217	3,159	8,059	19,080	10.2	22.0	58.8	42.2	17.3	37.5
December	1,921	4,093	11,064	3,667	7,397	18,803	10.2	21.8	58.8	39.3	17.4	37.0
Average	1,861	4,555	11,504	2,986	8,518	18,949	9.8	24.0	60.7	44.9	16.2	39.6
2012 January	2,208	4,203	10,944	2,839	8,104	18,280	12.1	23.0	59.9	44.3	20.2	38.4
February	1,948	3,986	10,464	2,980	7,484	18,760	10.4	21.2	55.8	39.9	18.6	38.1
March	2,222	4,314	10,610	3,064	7,547	18,213	12.2	23.7	58.3	41.4	20.9	40.7
April	2,228	4,394	10,634	3,263	7,370	18,330	12.2	24.0	58.0	40.2	21.0	41.3
May	2,560	4,672	11,132	3,194	7,939	18,707	13.7	25.0	59.5	42.4	23.0	42.0
June	2,376	4,618	11,393	3,209	8,184	18,915	12.6	24.4	60.2	43.3	20.9	40.5
July	2,131	4,331	10,748	3,211	7,537	18,601	11.5	23.3	57.8	40.5	19.8	40.3
August	2,071	4,344	10,898	3,017	7,881	19,226	10.8	22.6	56.7	41.0	19.0	39.9
September	2,071	4,268	10,533	3,150	7,383	18,173	11.4	23.5	58.0	40.6	19.7	40.5
October	2,141	4,186	10,088	3,255	6,833	18,722	11.4	22.4	53.9	36.5	21.2	41.5
November	2,103	4,195	10,103	3,404	6,698	18,604	11.3	22.5	54.3	36.0	20.8	41.5
December	1,750	3,554	9,610	3,623	5,987	18,130	9.7	19.6	53.0	33.0	18.2	37.0
Average	2,151	4,256	10,596	3,184	7,412	18,555	11.6	22.9	57.1	39.9	20.3	40.2
2013 January	1,798	3,850	10,042	2,882	7,160	18,646	9.6	20.6	53.9	38.4	17.9	38.3
February	1,831	3,094	9,235	3,243	5,992	18,659	9.8	16.6	49.5	32.1	19.8	33.5
March	2,087	3,713	9,456	3,111	6,345	18,476	11.3	20.1	51.2	34.3	22.1	39.3
April	1,804	3,780	10,076	3,208	6,868	18,553	9.7	20.4	54.3	37.0	17.9	37.5
May	2,135	4,045	10,052	3,467	6,585	18,551	11.5	21.8	54.2	35.5	21.2	40.2
June	R 1,894	R 3,825	R 9,790	R 3,545	R 6,245	R 18,724	R 10.1	R 20.4	R 52.3	R 33.4	R 19.3	R 39.1
July	NA	NA	E 9,935	E 2,920	E 7,015	E 19,597	NA	NA	E 50.7	E 35.8	NA	NA
August	NA	NA	E 9,972	E 3,170	E 6,802	E 19,158	NA	NA	E 52.1	E 35.5	NA	NA
8-Month Average	NA	NA	E 9,826	E 3,191	E 6,635	E 18,798	NA	NA	E 52.3	E 35.3	NA	NA
2012 8-Month Average	2,220	4,360	10,855	3,097	7,758	18,628	11.9	23.4	58.3	41.6	20.4	40.2
2011 8-Month Average	1,816	4,719	11,681	2,839	8,842	18,973	9.6	24.9	61.6	46.6	15.5	40.4

^a Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

^b See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. See Table 3.3c for notes on which countries are included in the data.

R=Revised, E=Estimate, NA=Not available.

Notes: • For the feature article "Measuring Dependence on Imported Oil," published in the August 1995 *Monthly Energy Review*, see http://www.eia.gov/totalenergy/data/monthly/pdf/historical/imported_oil.pdf.

• Beginning in October 1977, data include Strategic Petroleum Reserve imports. See Table 3.3b. • Annual averages may not equal average of months due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia. U.S. exports include shipments to U.S. territories, and imports include

receipts from U.S. territories.

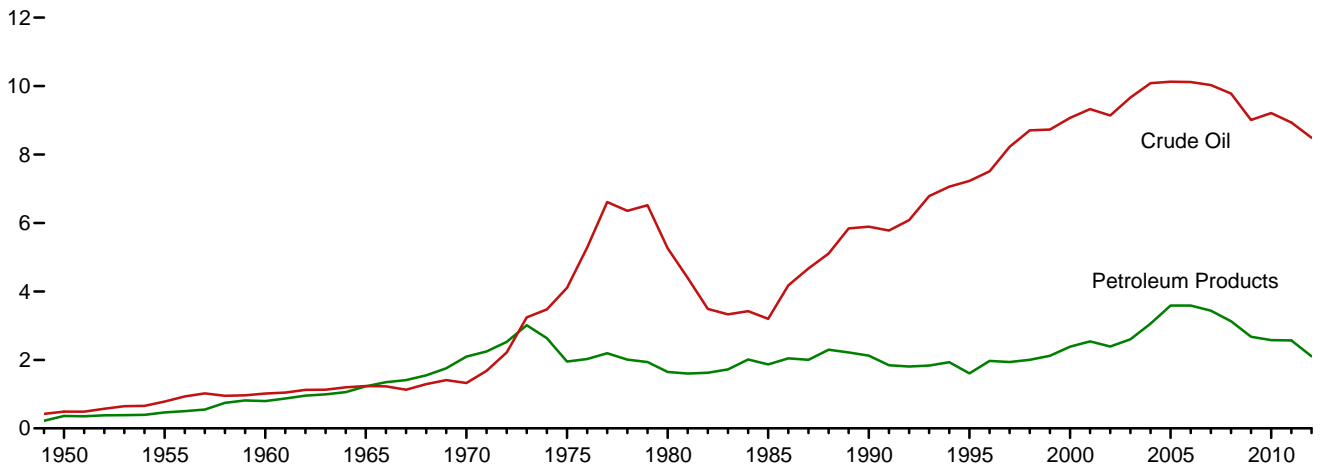
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: • **1949–1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976–1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • **1981–2011:** EIA, *Petroleum Supply Annual*, annual reports. • **2012 and 2013:** EIA, *Petroleum Supply Monthly*, monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system and *Monthly Energy Review* data system calculations.

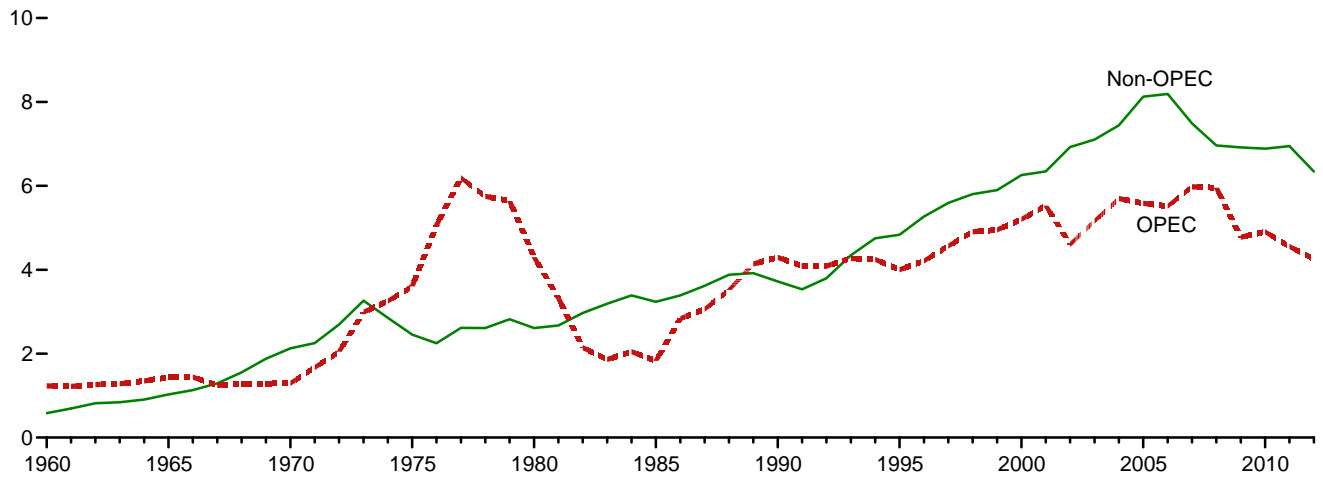
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 3.3b Petroleum Trade: Imports
(Million Barrels per Day)

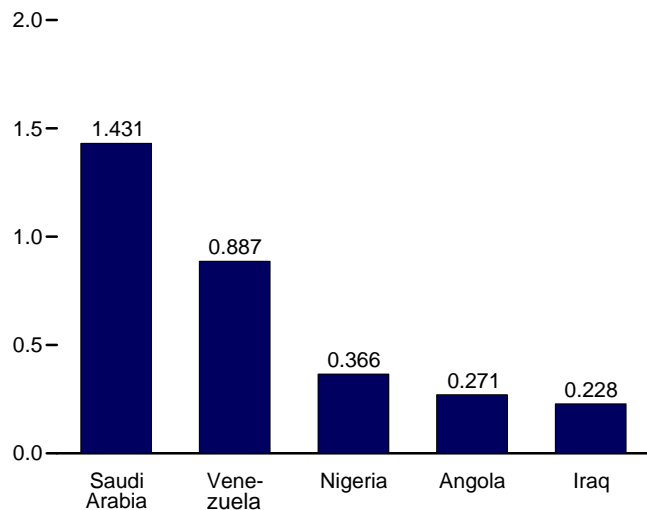
Overview, 1949–2012



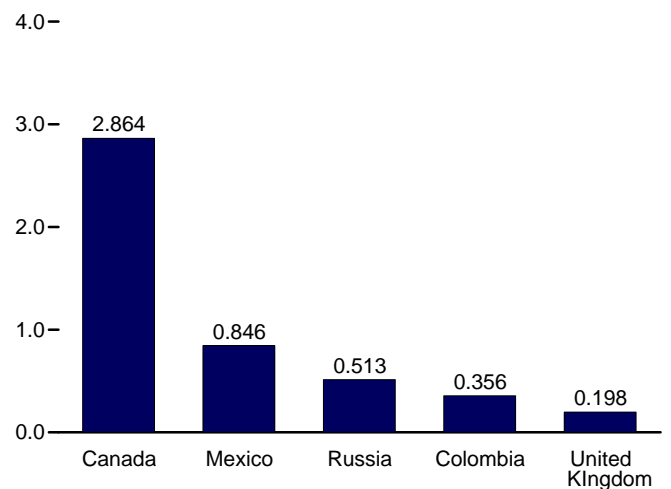
OPEC and Non-OPEC, 1960–2012



From Selected OPEC Countries, June 2013



From Selected Non-OPEC Countries, June 2013



Note: OPEC=Organization of the Petroleum Exporting Countries.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
Sources: Tables 3.3b–3.3d.

Table 3.3b Petroleum Trade: Imports and Exports by Type
(Thousand Barrels per Day)

	Imports										Exports		
	Crude Oil ^a		Distillate Fuel Oil	Jet Fuel ^d	LPG ^b		Motor Gasoline ^f	Residual Fuel Oil	Other ^g	Total	Crude Oil ^a	Petroleum Products	Total
	SPR ^c	Total			Propane ^e	Total							
1950 Average	--	487	7	(^d)	0	0	(s)	329	27	850	95	210	305
1955 Average	--	782	12	(^d)	0	0	13	417	24	1,248	32	336	368
1960 Average	--	1,015	35	34	NA	4	27	637	62	1,815	8	193	202
1965 Average	--	1,238	36	81	NA	21	28	946	119	2,468	3	184	187
1970 Average	--	1,324	147	144	26	52	67	1,528	157	3,419	14	245	259
1975 Average	--	4,105	155	133	60	112	184	1,223	144	6,056	6	204	209
1980 Average	44	5,263	142	80	69	216	140	939	130	6,909	287	258	544
1985 Average	118	3,201	200	39	67	187	381	510	550	5,067	204	577	781
1990 Average	27	5,894	278	108	115	188	342	504	705	8,018	109	748	857
1995 Average	--	7,230	193	106	102	146	265	187	708	8,835	95	855	949
2000 Average	8	9,071	295	162	161	215	427	352	938	11,459	50	990	1,040
2001 Average	11	9,328	344	148	145	206	454	295	1,095	11,871	20	951	971
2002 Average	16	9,140	267	107	145	183	498	249	1,085	11,530	9	975	984
2003 Average	--	9,665	333	109	168	225	518	327	1,087	12,264	12	1,014	1,027
2004 Average	77	10,088	325	127	209	263	496	426	1,419	13,145	27	1,021	1,048
2005 Average	52	10,126	329	190	233	328	603	530	1,609	13,714	32	1,133	1,165
2006 Average	8	10,118	365	186	228	332	475	350	1,881	13,707	25	1,292	1,317
2007 Average	7	10,031	304	217	182	247	413	372	1,885	13,468	27	1,405	1,433
2008 Average	19	9,783	213	103	185	253	302	349	1,913	12,915	29	1,773	1,802
2009 Average	56	9,013	225	81	147	182	223	331	1,635	11,691	44	1,980	2,024
2010 Average	--	9,213	228	98	121	153	134	366	1,600	11,793	42	2,311	2,353
2011 January	--	9,183	337	65	235	290	102	411	1,860	12,248	72	2,678	2,750
February	--	8,184	206	68	220	266	119	364	1,532	10,738	30	2,604	2,634
March	--	9,183	190	65	205	260	135	378	1,639	11,850	36	2,696	2,733
April	--	8,839	191	80	141	177	138	424	1,959	11,808	41	3,031	3,071
May	--	9,059	170	91	118	160	137	306	1,942	11,866	37	2,698	2,735
June	--	9,235	127	82	115	160	130	353	1,789	11,877	36	2,680	2,716
July	--	9,276	157	95	115	157	92	246	1,733	11,757	37	2,980	3,053
August	--	8,936	148	66	123	167	106	231	1,573	11,227	34	2,969	3,002
September	--	8,914	179	58	141	176	99	277	1,567	11,270	35	3,139	3,174
October	--	8,907	128	61	129	166	66	286	1,440	11,053	51	3,057	3,107
November	--	8,724	138	72	152	191	74	341	1,677	11,217	64	3,094	3,159
December	--	8,711	175	21	210	258	60	330	1,509	11,064	53	3,614	3,667
Average	--	8,935	179	69	158	202	105	328	1,686	11,504	47	2,939	2,986
2012 January	--	8,572	156	6	145	168	99	305	1,637	10,944	56	2,783	2,839
February	--	8,558	142	41	125	155	46	226	1,296	10,464	59	2,921	2,980
March	--	8,767	136	5	108	136	91	271	1,205	10,610	60	3,004	3,064
April	--	8,591	98	56	102	129	53	240	1,466	10,634	32	3,231	3,263
May	--	8,909	111	49	172	218	60	251	1,534	11,132	69	3,124	3,194
June	--	9,101	87	42	133	170	66	325	1,602	11,393	46	3,163	3,209
July	--	8,606	113	48	148	182	52	247	1,501	10,748	77	3,134	3,211
August	--	8,631	110	124	142	186	37	233	1,577	10,898	60	2,957	3,017
September	--	8,375	84	84	149	191	35	256	1,507	10,533	58	3,092	3,150
October	--	8,091	88	106	135	176	26	219	1,382	10,088	67	3,188	3,255
November	--	8,130	189	46	136	156	32	236	1,314	10,103	73	3,331	3,404
December	--	7,576	190	59	160	181	64	178	1,362	9,610	58	3,565	3,623
Average	--	8,491	125	55	138	171	55	249	1,449	10,596	60	3,125	3,184
2013 January	--	7,953	213	46	184	207	40	238	1,345	10,042	73	2,809	2,882
February	--	7,270	174	61	166	186	19	196	1,331	9,235	124	3,119	3,243
March	--	7,460	146	18	141	164	56	300	1,312	9,456	101	3,010	3,111
April	--	7,726	238	74	110	130	35	259	1,614	10,076	132	3,075	3,208
May	--	7,737	168	83	81	98	24	186	1,757	10,052	125	3,342	3,467
June	--	R 7,730	R 120	R 76	R 110	R 131	R 70	R 173	R 1,490	R 9,790	R 120	R 3,425	R 3,545
July	--	E 7,901	E 114	E 52	E 75	NA	E 59	E 235	NA	E 9,935	E 51	E 2,869	E 2,920
August	--	E 8,111	E 105	E 123	E 74	NA	E 64	E 215	NA	E 9,972	E 54	E 3,116	E 3,170
8-Month Average	--	E 7,742	E 159	E 67	E 117	NA	E 46	E 226	NA	E 9,826	E 97	E 3,094	E 3,191
2012 8-Month Average	--	8,717	119	46	135	168	63	262	1,478	10,855	58	3,039	3,097
2011 8-Month Average	--	8,996	191	77	159	204	120	338	1,755	11,681	45	2,794	2,839

^a Includes lease condensate.
^b Liquefied petroleum gases.
^c "SPR" is the Strategic Petroleum Reserve, which began in October 1977. Through 2003, includes crude oil imports by SPR only; beginning in 2004, includes crude oil imports by SPR, and crude oil imports into SPR by others.
^d Beginning in 1965, includes kerosene-type jet fuel. (Through 1964, kerosene-type jet fuel is included with kerosene in "Other.") For 1956–2004, also includes naphtha-type jet fuel. (Through 1955, naphtha-type jet fuel is included in "Motor Gasoline." Beginning in 2005, naphtha-type jet fuel is included in "Other.")
^e Includes propylene.
^f Finished motor gasoline. Through 1955, also includes naphtha-type jet fuel. Through 1963, also includes aviation gasoline and special naphthas. Through 1980, also includes motor gasoline blending components.
^g Asphalt and road oil, aviation gasoline blending components, kerosene, lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, unfinished oils, waxes, other hydrocarbons and oxygenates, and miscellaneous products. Through 1964, also includes kerosene-type jet fuel. Beginning in 1964, also includes finished aviation gasoline and special naphthas. Beginning in 1981, also

includes motor gasoline blending components. Beginning in 2005, also includes naphtha-type jet fuel.
R=Revised. E=Estimate. NA=Not available. -- =Not applicable. -- =No data reported. (s)=Less than 500 barrels per day.
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.
Sources: • 1949–1975: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • 1976–1980: U.S. Energy Information Administration (EIA), *Energy Data Reports, Petroleum Statement, Annual*, annual reports. • 1981–2011: EIA, *Petroleum Supply Annual*, annual reports. • 2012 and 2013: EIA, *Petroleum Supply Monthly*, monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system and *Monthly Energy Review* data system calculations.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 3.3c Petroleum Trade: Imports From OPEC Countries
(Thousand Barrels per Day)

	Algeria ^a	Angola ^b	Ecuador ^c	Iraq	Kuwait ^d	Libya ^e	Nigeria ^f	Saudi Arabia ^d	Venezuela	Other ^g	Total OPEC
1960 Average	(^a)	(^b)	(^c)	22	182	(^e)	(^f)	84	911	34	1,233
1965 Average	(^a)	(^b)	(^c)	16	74	42	(^f)	158	994	155	1,439
1970 Average	8	(^b)	(^c)	0	48	47	(^f)	30	989	172	1,294
1975 Average	282	(^b)	57	2	16	232	762	715	702	832	3,601
1980 Average	488	(^b)	27	28	27	554	857	1,261	481	577	4,300
1985 Average	187	(^b)	67	46	21	4	293	168	605	439	1,830
1990 Average	280	(^b)	49	518	86	0	800	1,339	1,025	199	4,296
1995 Average	234	(^b)	(^c)	0	218	0	627	1,344	1,480	98	4,002
2000 Average	225	(^b)	(^c)	620	272	0	896	1,572	1,546	72	5,203
2001 Average	278	(^b)	(^c)	795	250	0	885	1,662	1,553	105	5,528
2002 Average	264	(^b)	(^c)	459	228	0	621	1,552	1,398	83	4,605
2003 Average	382	(^b)	(^c)	481	220	0	867	1,774	1,376	61	5,162
2004 Average	452	(^b)	(^c)	656	250	20	1,140	1,558	1,554	70	5,701
2005 Average	478	(^b)	(^c)	531	243	56	1,166	1,537	1,529	47	5,587
2006 Average	657	(^b)	(^c)	553	185	87	1,114	1,463	1,419	38	5,517
2007 Average	670	508	(^c)	484	181	117	1,134	1,485	1,361	39	5,980
2008 Average	548	513	221	627	210	103	988	1,529	1,189	26	5,954
2009 Average	493	460	185	450	182	79	809	1,004	1,063	50	4,776
2010 Average	510	393	212	415	197	70	1,023	1,096	988	3	4,906
2011 January	565	316	238	433	147	57	1,022	1,101	1,030	–	4,909
February	406	370	255	263	118	36	978	1,114	989	–	4,530
March	500	280	182	398	161	32	913	1,108	1,065	–	4,638
April	466	277	169	519	78	1	922	1,107	1,009	–	4,548
May	391	356	158	422	200	(s)	854	1,203	1,016	19	4,619
June	297	373	219	559	238	35	853	1,169	1,084	68	4,894
July	354	407	172	596	228	–	884	1,326	956	18	4,939
August	298	331	309	637	165	1	892	1,075	914	32	4,656
September	291	304	305	404	145	2	580	1,479	806	11	4,326
October	173	439	178	490	278	2	693	1,120	906	17	4,296
November	260	340	181	395	302	10	703	1,222	767	26	4,206
December	297	357	106	380	231	9	534	1,310	868	–	4,093
Average	358	346	206	459	191	15	818	1,195	951	16	4,555
2012 January	269	370	100	390	352	5	504	1,423	750	41	4,203
February	256	230	244	271	252	29	353	1,420	931	–	3,986
March	325	175	174	386	462	60	374	1,374	984	–	4,314
April	259	253	201	395	235	68	483	1,589	904	7	4,394
May	303	256	199	675	407	65	428	1,471	861	7	4,672
June	236	378	236	649	250	93	515	1,456	788	17	4,618
July	213	285	176	352	304	110	372	1,466	1,046	7	4,331
August	303	153	180	550	301	126	504	1,220	1,007	–	4,344
September	175	237	218	461	310	67	468	1,291	1,035	6	4,268
October	186	183	122	593	287	59	543	1,257	951	4	4,186
November	199	157	136	489	276	30	501	1,325	1,070	12	4,195
December	179	116	155	462	254	16	248	1,032	1,092	–	3,554
Average	242	232	178	474	308	61	441	1,359	952	8	4,256
2013 January	194	223	240	419	389	20	479	979	898	10	3,850
February	17	198	174	529	255	20	255	1,032	601	14	3,094
March	74	98	218	426	367	74	403	1,284	763	8	3,713
April	160	167	322	455	238	76	405	1,109	847	–	3,780
May	168	328	178	321	361	125	395	1,440	720	10	4,045
June	88	271	202	228	217	119	366	1,431	887	16	3,825
6-Month Average	118	214	223	395	306	73	386	1,215	788	10	3,727
2012 6-Month Average	275	277	191	462	328	53	443	1,455	869	12	4,367
2011 6-Month Average	439	328	203	434	158	27	923	1,134	1,033	15	4,692

^a Algeria joined OPEC in 1969. For 1960–1968, Algeria is included in "Total Non-OPEC" on Table 3.3d.

^b Angola joined OPEC in January 2007. For 1960–2006, Angola is included in "Total Non-OPEC" on Table 3.3d.

^c Ecuador was a member of OPEC from 1973–1992, and rejoined OPEC in November 2007. For 1960–1972 and 1993–2007, Ecuador is included in "Total Non-OPEC" on Table 3.3d.

^d Through 1970, includes half the imports from the Neutral Zone between Kuwait and Saudi Arabia. Beginning in 1971, imports from the Neutral Zone are reported as originating in either Kuwait or Saudi Arabia depending on the country reported to U.S. Customs.

^e Libya joined OPEC in 1962. For 1960 and 1961, Libya is included in "Total Non-OPEC" on Table 3.3d.

^f Nigeria joined OPEC in 1971. For 1960–1970, Nigeria is included in "Total Non-OPEC" on Table 3.3d.

^g Includes these countries in the years indicated: Gabon (1975–1994), Indonesia (1962–2008), Iran (1960 forward), Qatar (1961 forward), and United Arab Emirates (1967 forward).

–=No data reported. (s)=Less than 500 barrels per day.

Notes: • See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. Petroleum imports not classified as "OPEC" on this table are included on Table 3.3d. • The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil. • Includes imports for the Strategic Petroleum Reserve, which began in October 1977. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1960–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: • **1960–1972:** Bureau of Mines, *Minerals Yearbook*, annual reports. • **1973–1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976–1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • **1981–2011:** EIA, *Petroleum Supply Annual*, annual reports. • **2012 and 2013:** EIA, *Petroleum Supply Monthly*, monthly reports.

Selected years of data from 1960 through 1972 have been added to this table. For all years of data from 1960 through 2013, see the "Web Pages" cited above.

Table 3.3d Petroleum Trade: Imports From Non-OPEC Countries
(Thousand Barrels per Day)

	Brazil	Canada	Colombia	Mexico	Nether-lands	Norway	Russia ^a	United Kingdom	U.S. Virgin Islands	Other	Total Non-OPEC
1960 Average	1	120	42	16	NA	NA	0	(s)	NA	NA	581
1965 Average	0	323	51	48	1	0	0	(s)	0	606	1,029
1970 Average	2	766	46	42	39	0	3	11	189	1,027	2,126
1975 Average	5	846	9	71	19	17	14	14	406	1,052	2,454
1980 Average	3	455	4	533	2	144	1	176	388	903	2,609
1985 Average	61	770	23	816	58	32	8	310	247	913	3,237
1990 Average	49	934	182	755	55	102	45	189	282	1,128	3,721
1995 Average	8	1,332	219	1,068	15	273	25	383	278	1,233	4,833
2000 Average	51	1,807	342	1,373	30	343	72	366	291	1,581	6,257
2001 Average	82	1,828	296	1,440	43	341	90	324	268	1,631	6,343
2002 Average	116	1,971	260	1,547	66	393	210	478	236	1,649	6,925
2003 Average	108	2,072	195	1,623	87	270	254	440	288	1,766	7,103
2004 Average	104	2,138	176	1,665	101	244	298	380	330	2,008	7,444
2005 Average	156	2,181	196	1,662	151	233	410	396	328	2,413	8,127
2006 Average	193	2,353	155	1,705	174	196	369	272	328	2,446	8,190
2007 Average	200	2,455	155	1,532	128	142	414	277	346	1,839	7,489
2008 Average	258	2,493	200	1,302	168	102	465	236	320	1,416	6,961
2009 Average	309	2,479	276	1,210	140	108	563	245	277	1,307	6,915
2010 Average	272	2,535	365	1,284	108	89	612	256	253	1,112	6,887
2011 January	263	3,004	355	1,366	101	85	558	155	276	1,176	7,338
February	179	2,997	258	1,103	129	69	437	110	179	749	6,209
March	165	2,819	427	1,319	91	156	690	198	149	1,198	7,211
April	228	2,755	548	1,077	133	167	704	193	179	1,275	7,260
May	298	2,564	433	1,303	129	101	684	245	194	1,296	7,247
June	283	2,586	309	1,222	175	93	689	146	151	1,330	6,983
July	330	2,691	418	1,197	80	58	564	175	192	1,113	6,818
August	239	2,688	395	1,185	81	87	585	125	185	1,001	6,571
September	190	2,880	529	1,192	64	97	592	124	189	1,087	6,943
October	190	2,719	578	1,177	23	180	687	150	151	902	6,757
November	245	2,858	424	1,256	96	174	737	125	177	918	7,011
December	417	3,009	508	1,064	101	88	552	162	214	857	6,971
Average	253	2,796	433	1,206	100	113	624	159	186	1,077	6,948
2012 January	321	3,008	431	1,114	101	46	572	168	96	884	6,740
February	286	3,048	472	1,081	92	163	288	127	28	894	6,478
March	356	2,931	482	1,004	143	87	326	187	1	779	6,296
April	237	2,931	472	1,002	84	51	388	204	12	858	6,239
May	215	3,018	430	996	121	95	550	143	2	891	6,460
June	297	3,051	515	915	151	82	655	205	(s)	904	6,775
July	257	2,973	397	1,007	137	47	491	131	1	976	6,417
August	289	3,022	409	1,016	91	90	368	197	—	1,072	6,554
September	152	2,815	357	1,096	75	63	562	109	—	1,036	6,264
October	90	2,683	376	1,062	69	67	552	117	3	882	5,902
November	107	2,843	465	1,065	72	80	445	126	—	704	5,908
December	85	3,131	379	1,016	52	36	523	144	—	690	6,056
Average	224	2,955	432	1,031	99	75	477	155	12	881	6,341
2013 January	106	3,433	351	1,068	120	48	327	116	—	624	6,193
February	79	3,416	366	978	120	10	454	95	—	623	6,141
March	123	3,004	479	677	121	69	454	111	—	705	5,743
April	96	3,163	465	973	80	40	579	131	—	769	6,296
May	193	2,842	389	885	88	26	552	170	—	862	6,007
June	182	2,864	356	846	74	80	513	198	—	853	5,965
6-Month Average	131	3,117	401	903	101	46	479	137	—	740	6,055
2012 6-Month Average	285	2,998	467	1,019	116	87	464	172	23	868	6,498
2011 6-Month Average	237	2,785	390	1,235	126	112	629	176	188	1,176	7,054

^a Through 1992, may include imports from republics other than Russia in the former U.S.S.R. See "Union of Soviet Socialist Republics (U.S.S.R.);" in Glossary.

NA=Not available. —=No data reported. (s)=Less than 500 barrels per day.

Notes: • See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. Petroleum imports not classified as "OPEC" on Table 3.3c are included on this table. • The country of origin for petroleum products may not be the country of origin for the crude oil from which the products were produced. For example, refined products imported from West European refining areas may have been produced from Middle East crude oil. • Includes imports for the Strategic Petroleum Reserve, which began in October 1977. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50

states and the District of Columbia.

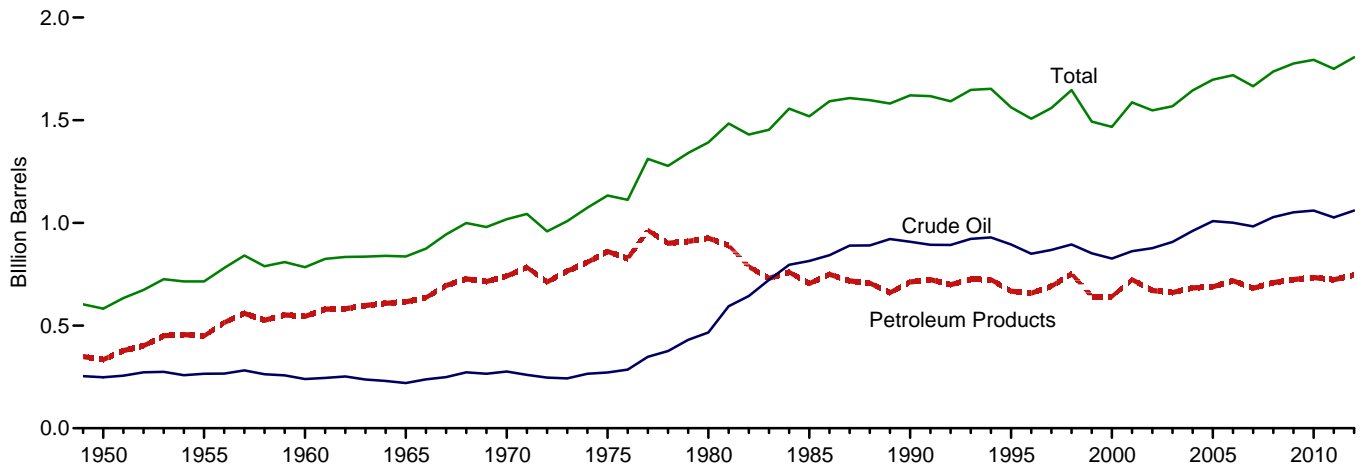
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1960–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: • **1960–1972:** Bureau of Mines, *Minerals Yearbook*, annual reports. • **1973–1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976–1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • **1981–2011:** EIA, *Petroleum Supply Annual*, annual reports. • **2012 and 2013:** EIA, *Petroleum Supply Monthly*, monthly reports.

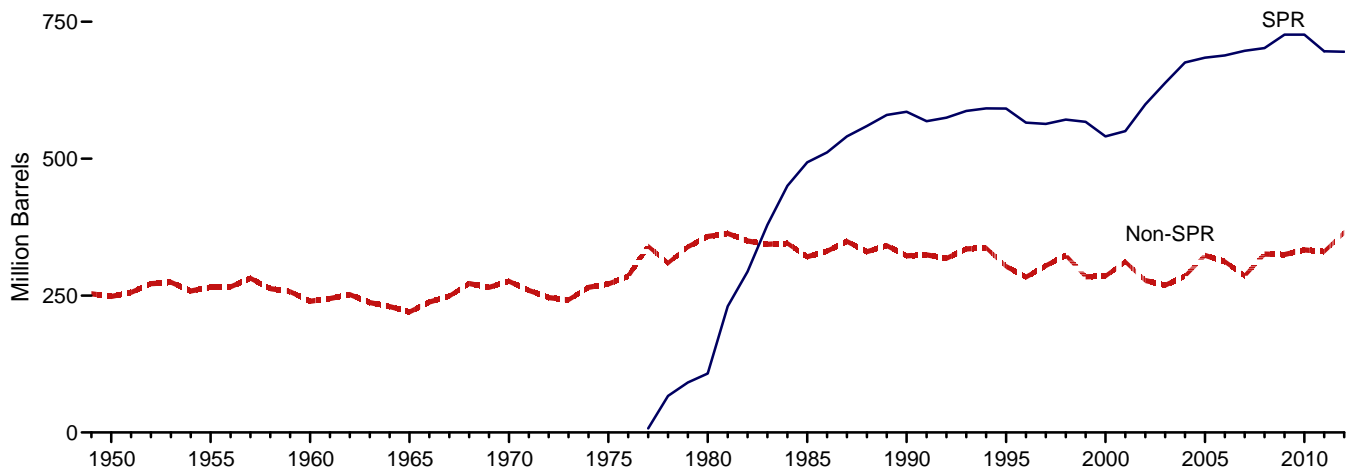
Selected years of data from 1960 through 1972 have been added to this table. For all years of data from 1960 through 2013, see the "Web Pages" cited above.

Figure 3.4 Petroleum Stocks

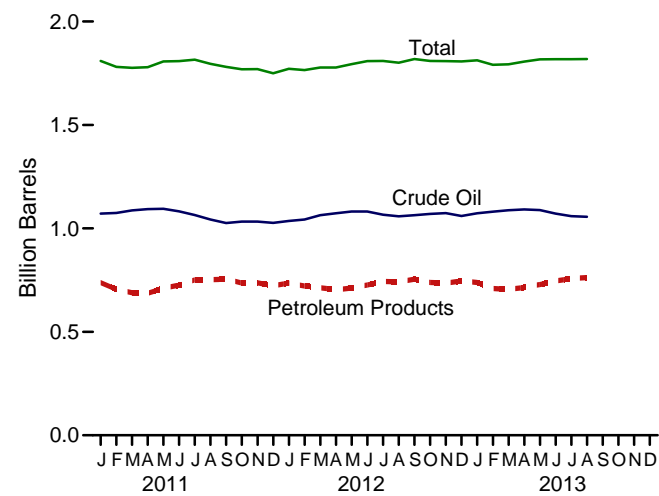
Overview, 1949–2012



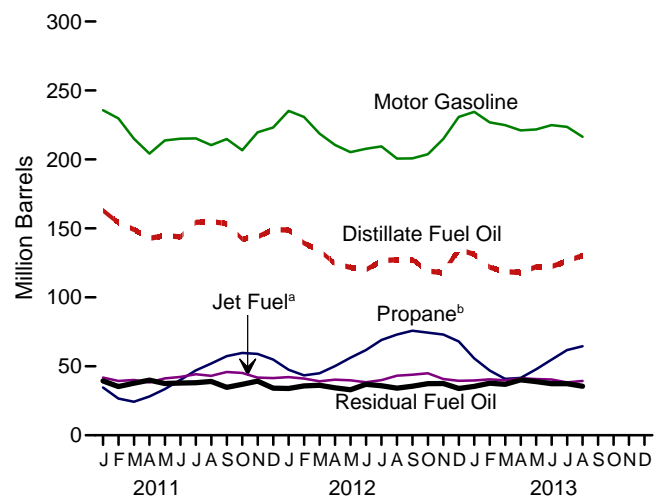
SPR and Non-SPR Crude Oil Stocks, 1949–2012



Overview, Monthly



Selected Products, Monthly



^a Includes kerosene-type jet fuel only.

^b Includes propylene.

Notes: • SPR=Strategic Petroleum Reserve. • Stocks are at end of

period.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.

Source: Table 3.4.

Table 3.4 Petroleum Stocks
(Million Barrels)

	Crude Oil ^a			Distillate Fuel Oil ^f	Jet Fuel ^g	LPG ^b		Motor Gasoline ⁱ	Residual Fuel Oil	Other ^j	Total
	SPR ^c	Non-SPR ^{d,e}	Total ^e			Propane ^h	Total				
1950 Year	--	248	248	72	(^g)	NA	2	116	41	104	583
1955 Year	--	266	266	111	3	NA	7	165	39	123	715
1960 Year	--	240	240	138	7	NA	23	195	45	137	785
1965 Year	--	220	220	155	19	NA	30	175	56	181	836
1970 Year	--	276	276	195	28	NA	67	209	54	188	1,018
1975 Year	--	271	271	209	30	82	125	235	74	188	1,133
1980 Year	108	358	466	205	42	65	120	261	92	205	1,392
1985 Year	493	321	814	144	40	39	74	223	50	174	1,519
1990 Year	586	323	908	132	52	49	98	220	49	162	1,621
1995 Year	592	303	895	130	40	43	93	202	37	165	1,563
2000 Year	541	286	826	118	45	41	83	196	36	164	1,468
2001 Year	550	312	862	145	42	66	121	210	41	166	1,586
2002 Year	599	278	877	134	39	53	106	209	31	152	1,548
2003 Year	638	269	907	137	39	50	94	207	38	147	1,568
2004 Year	676	286	961	126	40	55	104	218	42	153	1,645
2005 Year	685	324	1,008	136	42	57	109	208	37	157	1,698
2006 Year	689	312	1,001	144	39	62	113	212	42	169	1,720
2007 Year	697	286	983	134	39	52	96	218	39	156	1,665
2008 Year	702	326	1,028	146	38	55	113	214	36	162	1,737
2009 Year	727	325	1,052	166	43	50	102	223	37	153	1,776
2010 Year	727	333	1,060	164	43	49	108	219	41	158	1,794
2011 January	727	345	1,072	163	42	35	87	236	39	171	1,809
February	727	348	1,075	154	39	27	73	230	35	174	1,780
March	727	360	1,087	149	40	24	71	215	38	177	1,776
April	727	367	1,093	143	38	28	81	204	40	180	1,779
May	727	368	1,095	145	41	34	93	214	38	181	1,807
June	727	356	1,082	144	42	40	107	215	38	180	1,809
July	718	346	1,065	154	44	47	121	215	38	179	1,816
August	696	347	1,043	155	43	52	132	210	39	173	1,796
September	696	330	1,026	153	46	57	135	215	35	171	1,781
October	696	337	1,033	142	45	60	135	207	37	170	1,769
November	696	337	1,033	144	42	59	126	220	39	167	1,770
December	696	331	1,027	149	41	55	112	223	34	164	1,750
2012 January	696	340	1,036	149	42	48	101	235	34	175	1,772
February	696	347	1,043	139	41	43	96	231	36	179	1,765
March	696	368	1,064	134	39	45	102	219	36	184	1,778
April	696	377	1,073	125	40	50	116	211	34	179	1,777
May	696	386	1,082	122	40	56	133	205	33	179	1,794
June	696	386	1,082	120	38	62	147	208	37	176	1,808
July	696	370	1,066	127	40	69	159	210	36	172	1,809
August	696	363	1,058	127	43	73	171	201	34	166	1,801
September	695	369	1,064	127	44	76	175	201	36	172	1,818
October	695	375	1,070	119	45	74	168	204	37	166	1,810
November	695	379	1,074	118	41	73	158	215	38	166	1,809
December	695	365	1,060	135	39	68	141	231	34	167	1,807
2013 January	696	378	1,073	131	40	56	121	234	35	177	1,812
February	696	385	1,081	122	41	47	108	227	38	175	1,791
March	696	392	1,088	119	40	41	103	225	37	182	1,793
April	696	396	1,092	118	41	42	111	221	40	183	1,807
May	696	392	1,088	122	41	48	127	222	39	179	1,817
June	696	^R 376	^R 1,072	122	40	^R 55	^R 142	^R 225	^R 37	^R 178	^R 1,818
July	^E 696	^E 363	^E 1,059	^E 126	^E 38	^E 62	^E 157	^E 224	^E 37	^E 176	^E 1,818
August	^E 696	^E 360	^E 1,056	^E 130	^E 39	^E 65	^E 169	^E 216	^E 36	^E 172	^E 1,818

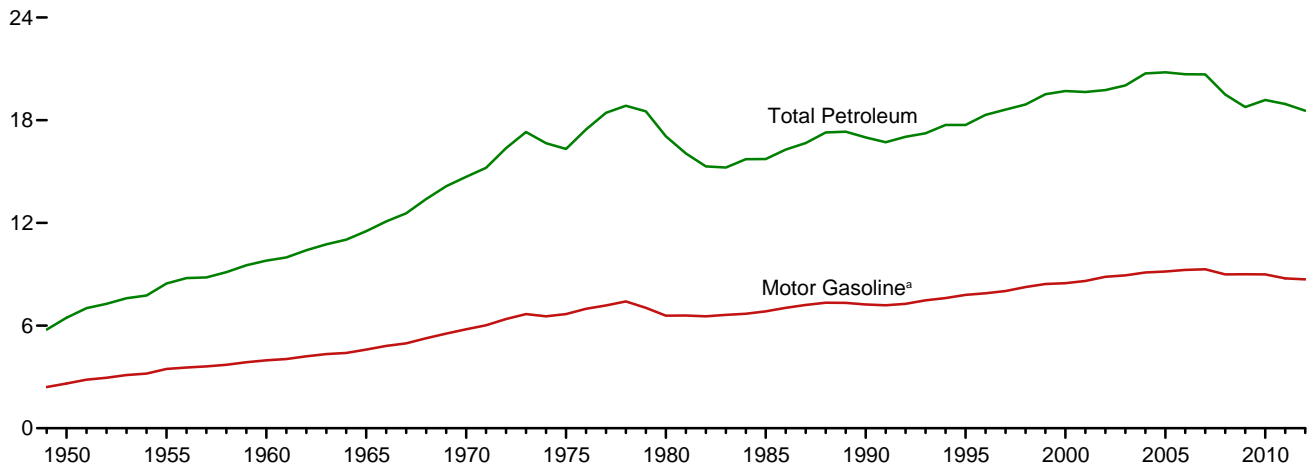
^a Includes lease condensate.
^b Liquefied petroleum gases.
^c "SPR" is the Strategic Petroleum Reserve, which began in October 1977. Crude oil stocks in the SPR include non-U.S. stocks held under foreign or commercial storage agreements.
^d All crude oil stocks other than those in "SPR."
^e Beginning in 1981, includes stocks of Alaskan crude oil in transit.
^f Excludes stocks in the Northeast Home Heating Oil Reserve. Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
^g Beginning in 1965, includes kerosene-type jet fuel. (Through 1964, kerosene-type jet fuel is included with kerosene in "Other.") For 1952–2004, also includes naphtha-type jet fuel. (Through 1951, naphtha-type jet fuel is included in the products from which it was blended—gasoline, kerosene, and distillate fuel oil. Beginning in 2005, naphtha-type jet fuel is included in "Other.")
^h Includes propylene.
ⁱ Includes finished motor gasoline and motor gasoline blending components; excludes oxygenates. Through 1963, also includes aviation gasoline and special naphthas.
^j Asphalt and road oil, aviation gasoline blending components, kerosene,

lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, unfinished oils, waxes, miscellaneous products, oxygenates, renewable fuels, and other hydrocarbons. Through 1964, also includes kerosene-type jet fuel. Beginning in 1964, also includes finished aviation gasoline and special naphthas. Beginning in 2005, also includes naphtha-type jet fuel.
^R=Revised. ^E=Estimate. ^F=Forecast. ^{NA}=Not available. -- =Not applicable.
Notes: • Stocks are at end of period. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.
Sources: • **1949–1975**: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976–1980**: U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • **1981–2011**: EIA, *Petroleum Supply Annual*, annual reports. • **2012 and 2013**: EIA, *Petroleum Supply Monthly*, monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system, Short-Term Integrated Forecasting System, and *Monthly Energy Review* data system calculations.

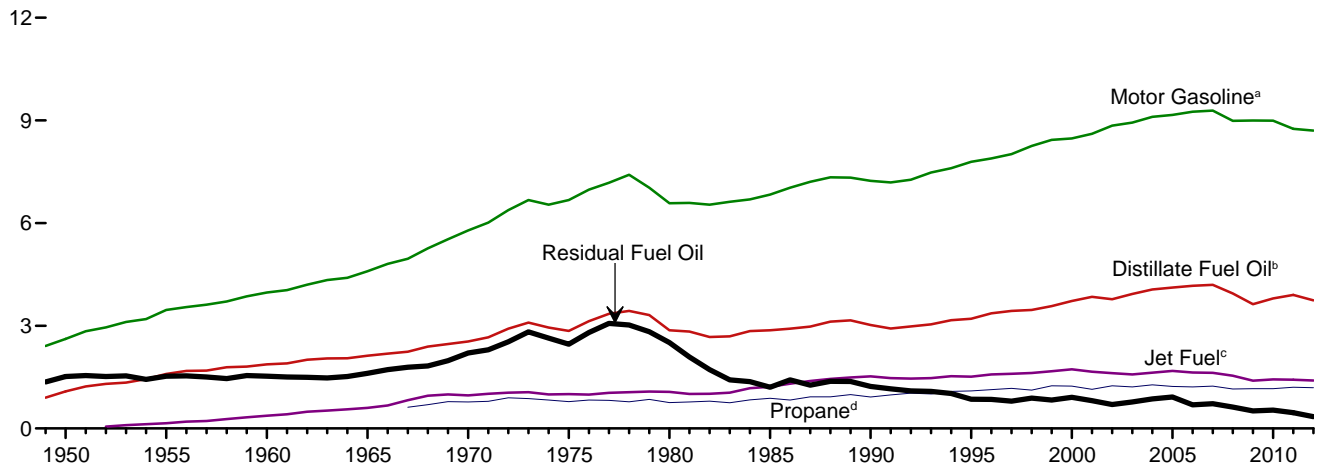
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 3.5 Petroleum Products Supplied by Type
(Million Barrels per Day)

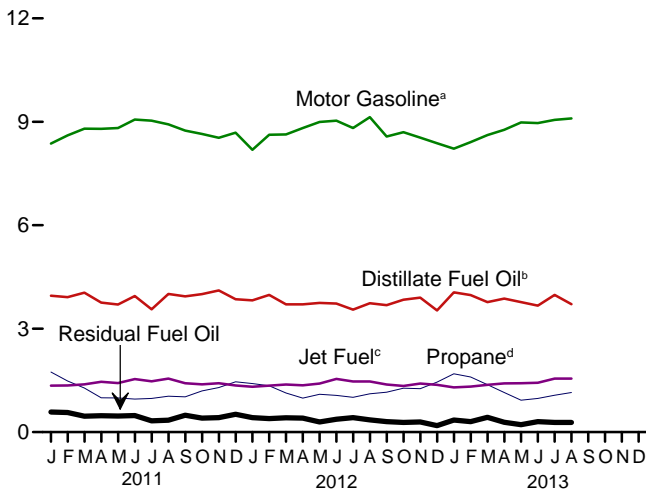
Total Petroleum and Motor Gasoline, 1949–2012



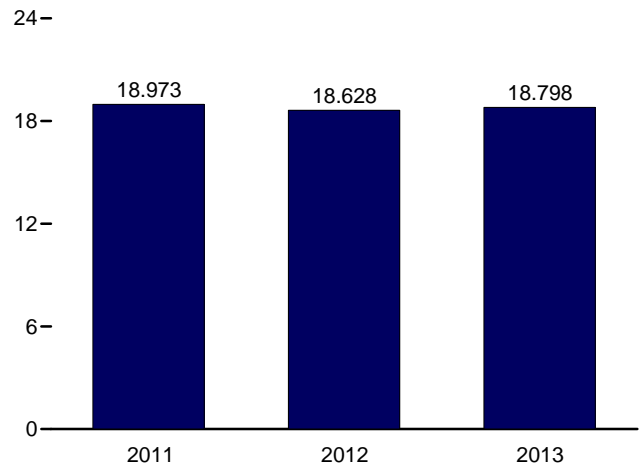
Selected Products, 1949–2012



Selected Products, Monthly



Total Petroleum, January–August



^a Beginning in 1993, includes fuel ethanol blended into motor gasoline.
^b Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
^c Beginning in 2005, includes kerosene-type jet fuel only.

^d Includes propylene.
 Note: SPR=Strategic Petroleum Reserve.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
 Source: Table 3.5.

Table 3.5 Petroleum Products Supplied by Type
(Thousand Barrels per Day)

	Asphalt and Road Oil	Aviation Gasoline	Distillate Fuel Oil ^b	Jet Fuel ^c	Kerosene	LPG ^a		Lubricants	Motor Gasoline ^e	Petroleum Coke	Residual Fuel Oil	Other ^f	Total
						Propane ^d	Total						
1950 Average	180	108	1,082	(^c)	323	NA	234	106	2,616	41	1,517	250	6,458
1955 Average	254	192	1,592	154	320	NA	404	116	3,463	67	1,526	366	8,455
1960 Average	302	161	1,872	371	271	NA	621	117	3,969	149	1,529	435	9,797
1965 Average	368	120	2,126	602	267	NA	841	129	4,593	202	1,608	657	11,512
1970 Average	447	55	2,540	967	263	776	1,224	136	5,785	212	2,204	866	14,697
1975 Average	419	39	2,851	1,001	159	783	1,333	137	6,675	247	2,462	1,001	16,322
1980 Average	396	35	2,866	1,068	158	754	1,469	159	6,579	237	2,508	1,581	17,056
1985 Average	425	27	2,868	1,218	114	883	1,599	145	6,831	264	1,202	1,032	15,726
1990 Average	483	24	3,021	1,522	43	917	1,556	164	7,235	339	1,229	1,373	16,988
1995 Average	486	21	3,207	1,514	54	1,096	1,899	156	7,789	365	852	1,381	17,725
2000 Average	525	20	3,722	1,725	67	1,235	2,231	166	8,472	406	909	1,458	19,701
2001 Average	519	19	3,847	1,655	72	1,142	2,044	153	8,610	437	811	1,481	19,649
2002 Average	512	18	3,776	1,614	43	1,248	2,163	151	8,848	463	700	1,474	19,761
2003 Average	503	16	3,927	1,578	55	1,215	2,074	140	8,935	455	772	1,579	20,034
2004 Average	537	17	4,058	1,630	64	1,276	2,132	141	9,105	524	865	1,657	20,731
2005 Average	546	19	4,118	1,679	70	1,229	2,030	141	9,159	515	920	1,605	20,802
2006 Average	521	18	4,169	1,633	54	1,215	2,052	137	9,253	522	689	1,640	20,687
2007 Average	494	17	4,196	1,622	32	1,235	2,085	142	9,286	490	723	1,593	20,680
2008 Average	417	15	3,945	1,539	14	1,154	1,954	131	8,989	464	622	1,408	19,498
2009 Average	360	14	3,631	1,393	18	1,160	2,051	118	8,997	427	511	1,251	18,771
2010 Average	362	15	3,800	1,432	20	1,160	2,173	131	8,993	376	535	1,343	19,180
2011													
January	221	11	3,958	1,346	19	1,743	2,757	124	8,370	361	582	1,244	18,993
February	248	14	3,913	1,352	50	1,485	2,527	121	8,604	293	566	1,185	18,873
March	282	18	4,045	1,385	26	1,277	2,410	150	8,799	348	462	1,405	19,329
April	311	10	3,755	1,457	8	996	2,043	136	8,796	355	477	1,301	18,650
May	357	18	3,699	1,424	(s)	989	2,077	122	8,817	414	468	1,082	18,479
June	454	17	3,947	1,540	4	958	2,027	125	9,067	379	479	1,213	19,253
July	465	19	3,564	1,473	9	976	2,039	119	9,031	368	329	1,363	18,778
August	545	18	4,009	1,554	5	1,040	2,102	137	8,925	461	347	1,311	19,415
September	462	13	3,936	1,416	8	1,021	2,050	125	8,744	349	491	1,299	18,892
October	423	16	4,003	1,384	2	1,195	2,227	102	8,649	395	405	1,239	18,844
November	297	12	4,109	1,416	6	1,292	2,393	124	8,537	377	419	1,391	19,080
December	187	10	3,853	1,353	12	1,458	2,616	111	8,683	229	519	1,228	18,803
Average	355	15	3,899	1,425	12	1,202	2,272	125	8,753	361	461	1,272	18,949
2012													
January	216	12	3,823	1,313	2	1,406	2,463	129	8,187	367	420	1,349	18,280
February	218	11	3,980	1,350	23	1,343	2,421	139	8,622	297	394	1,306	18,760
March	236	14	3,706	1,382	2	1,134	2,226	111	8,633	323	416	1,163	18,213
April	329	14	3,704	1,359	3	986	2,069	122	8,817	338	408	1,166	18,330
May	378	17	3,745	1,409	1	1,095	2,152	116	8,996	376	294	1,224	18,707
June	454	13	3,729	1,545	2	1,064	2,072	107	9,035	372	372	1,214	18,915
July	461	20	3,552	1,468	2	1,008	2,120	104	8,819	338	418	1,298	18,601
August	485	13	3,740	1,469	1	1,110	2,190	111	9,135	409	353	1,320	19,226
September	444	15	3,681	1,379	3	1,157	2,224	103	8,575	357	302	1,090	18,173
October	369	14	3,838	1,341	3	1,273	2,388	110	8,700	319	279	1,361	18,722
November	282	11	3,902	1,407	3	1,258	2,367	116	8,539	380	294	1,303	18,604
December	206	9	3,529	1,373	2	1,452	2,541	91	8,378	363	190	1,448	18,130
Average	340	14	3,743	1,399	4	1,191	2,270	113	8,703	354	345	1,271	18,555
2013													
January	223	11	4,055	1,297	9	1,693	2,767	127	8,218	369	350	1,220	18,646
February	212	8	3,975	1,320	7	1,597	2,753	125	8,412	281	304	1,259	18,659
March	237	12	3,772	1,369	15	1,376	2,498	126	8,616	306	431	1,095	18,476
April	295	12	3,871	1,414	5	1,148	2,245	110	8,766	293	284	1,259	18,553
May	294	15	3,772	1,416	2	924	2,038	129	8,983	360	215	1,327	18,551
June	R 410	R 15	R 3,667	R 1,431	R 2	R 979	R 2,025	R 141	R 8,965	R 402	R 303	R 1,362	R 18,724
July	F 457	F 16	E 3,979	E 1,550	RF 6	E 1,070	RF 2,092	RF 113	E 9,054	F 353	E 283	RE 1,695	E 19,597
August	F 482	F 16	E 3,710	E 1,552	F 5	E 1,147	F 2,173	F 125	E 9,099	F 395	E 281	E 1,318	E 19,158
8-Month Average ...	E 328	E 13	E 3,849	E 1,420	E 6	E 1,239	E 2,320	E 124	E 8,768	E 346	E 306	E 1,318	E 18,798
2012 8-Month Average ...	348	14	3,746	1,412	4	1,143	2,214	117	8,781	353	384	1,255	18,628
2011 8-Month Average ...	362	16	3,861	1,442	15	1,181	2,246	129	8,803	373	462	1,264	18,973

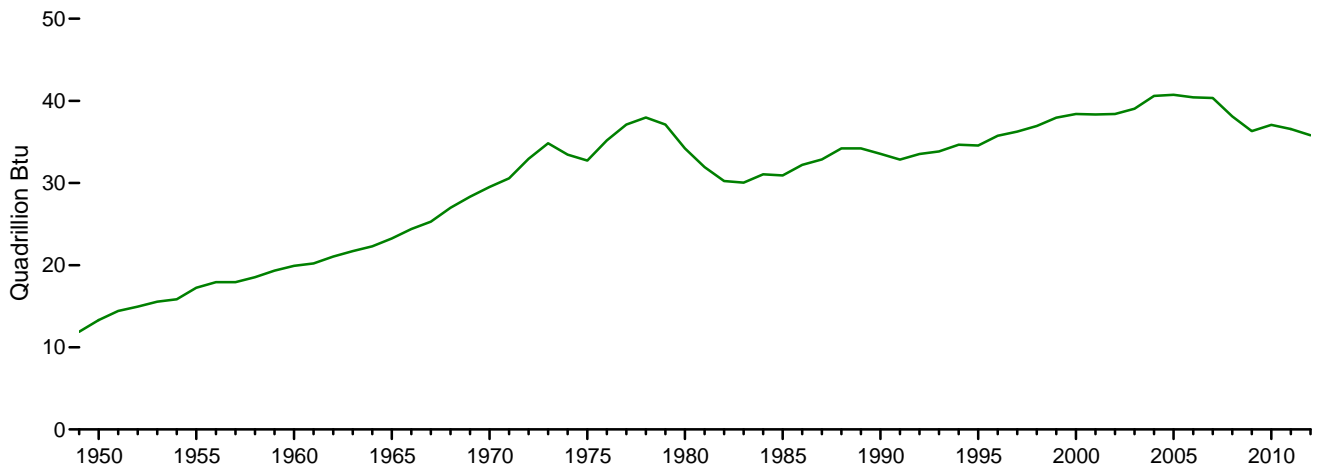
a Liquefied petroleum gases.
 b Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
 c Beginning in 1957, includes kerosene-type jet fuel. For 1952–2004, also includes naphtha-type jet fuel. (Through 1951, naphtha-type jet fuel is included in the products from which it was blended—gasoline, kerosene, and distillate fuel oil. Beginning in 2005, naphtha-type jet fuel is included in "Other.")
 d Includes propylene.
 e Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.
 f Pentanes plus, petrochemical feedstocks, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1964, also includes special naphthas. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.
 R=Revised. E=Estimate. F=Forecast. NA=Not available. (s)=Less than 500

barrels per day and greater than -500 barrels per day.
 Notes: • Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
 Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.
 Sources: • 1949–1975: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • 1976–1980: U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • 1981–2011: EIA, *Petroleum Supply Annual*, annual reports. • 2012 and 2013: EIA, *Petroleum Supply Monthly*, monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system, Short-Term Integrated Forecasting System, and *Monthly Energy Review* data system calculations.

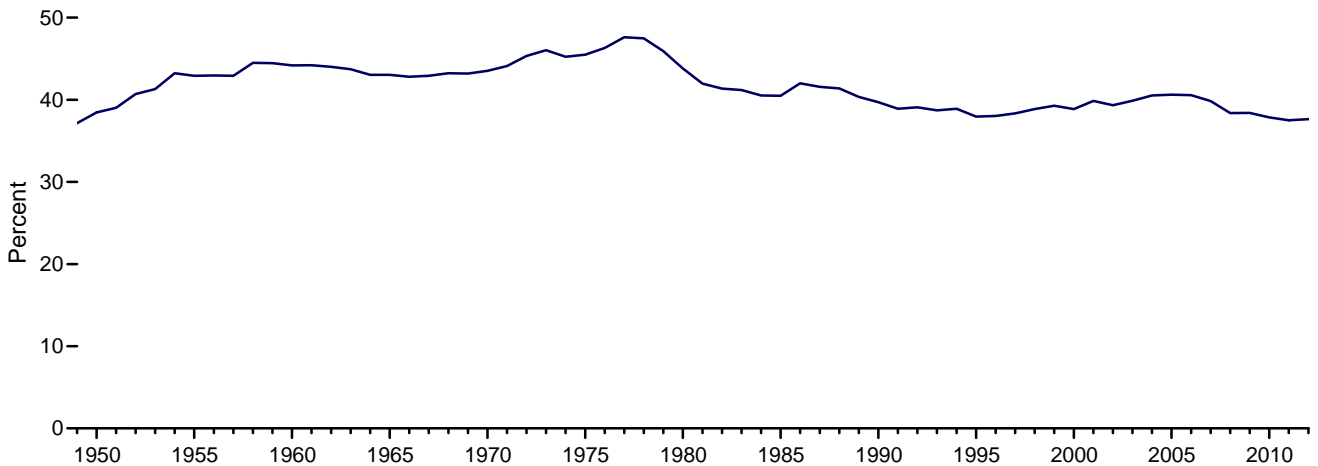
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 3.6 Heat Content of Petroleum Products Supplied by Type

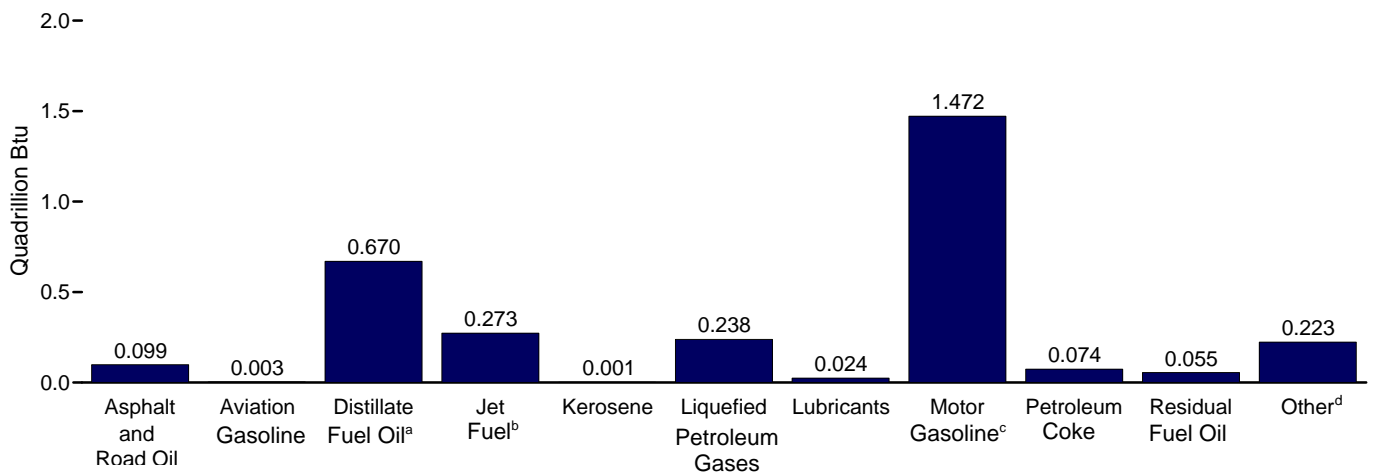
Total, 1949–2012



Petroleum Products Supplied as Share of Total Energy Consumption, 1949–2012



By Product, August 2013



^a Includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

^b Includes kerosene-type jet fuel only.

^c Includes fuel ethanol blended into motor gasoline.

^d All petroleum products not separately displayed.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.

Sources: Tables 1.1 and 3.6.

Table 3.6 Heat Content of Petroleum Products Supplied by Type
(Trillion Btu)

	Asphalt and Road Oil	Aviation Gasoline	Distillate Fuel Oil ^b	Jet Fuel ^c	Kerosene	LPG ^a		Lubricants	Motor Gasoline ^e	Petroleum Coke	Residual Fuel Oil	Other ^f	Total
						Propane ^d	Total						
1950 Total	435	199	2,300	(^c)	668	NA	343	236	5,015	90	3,482	546	13,315
1955 Total	615	354	3,385	301	662	NA	592	258	6,640	147	3,502	798	17,255
1960 Total	734	298	3,992	739	563	NA	912	259	7,631	328	3,517	947	19,919
1965 Total	890	222	4,519	1,215	553	NA	1,232	286	8,806	444	3,691	1,390	23,246
1970 Total	1,082	100	5,401	1,973	544	1,086	1,689	301	11,091	465	5,057	1,817	29,521
1975 Total	1,014	71	6,061	2,047	329	1,097	1,807	304	12,798	542	5,649	2,109	32,732
1980 Total	962	64	6,110	2,190	329	1,059	1,976	354	12,648	522	5,772	3,278	34,205
1985 Total	1,029	50	6,098	2,497	236	1,236	2,103	322	13,098	582	2,759	2,152	30,925
1990 Total	1,170	45	6,422	3,129	88	1,284	2,059	362	13,872	745	2,820	2,839	33,552
1995 Total	1,178	40	6,818	3,132	112	1,534	2,512	346	14,825	802	1,955	2,837	34,556
2000 Total	1,276	36	7,935	3,580	140	1,734	2,945	369	16,155	895	2,091	2,979	38,402
2001 Total	1,257	35	8,179	3,426	150	1,598	2,697	338	16,373	961	1,861	3,056	38,333
2002 Total	1,240	34	8,028	3,340	90	1,747	2,852	334	16,819	1,018	1,605	3,040	38,400
2003 Total	1,220	30	8,349	3,265	113	1,701	2,748	309	16,981	1,000	1,772	3,264	39,051
2004 Total	1,304	31	8,652	3,383	133	1,791	2,824	313	17,379	1,156	1,990	3,428	40,593
2005 Total	1,323	35	8,755	3,475	144	1,721	2,682	312	17,444	1,133	2,111	3,318	40,732
2006 Total	1,261	33	8,864	3,379	111	1,701	2,700	303	17,622	1,148	1,581	3,416	40,420
2007 Total	1,197	32	8,921	3,358	67	1,729	2,733	313	17,689	1,077	1,659	3,313	40,358
2008 Total	1,012	28	8,411	3,193	30	1,620	2,574	291	17,168	1,022	1,432	2,941	38,101
2009 Total	873	27	7,720	2,883	36	1,624	2,664	262	17,135	938	1,173	2,611	36,321
2010 Total	878	27	8,080	2,963	41	1,624	2,821	291	17,127	826	1,228	2,800	37,082
2011 January	45	2	715	237	3	207	304	23	1,354	67	113	227	3,091
February	46	2	638	215	8	159	254	20	1,257	49	100	190	2,779
March	58	3	730	243	5	152	265	28	1,423	65	90	250	3,160
April	62	2	656	248	1	115	216	25	1,377	64	90	224	2,965
May	73	3	668	250	(s)	118	226	23	1,426	77	91	194	3,032
June	90	3	690	262	1	110	214	23	1,419	68	90	209	3,070
July	96	3	644	259	2	116	222	22	1,461	69	64	245	3,086
August	112	3	724	273	1	124	231	26	1,444	86	68	234	3,201
September	92	2	688	241	1	117	216	23	1,369	63	93	224	3,011
October	87	2	723	243	(s)	142	245	19	1,399	74	79	220	3,092
November	59	2	718	241	1	149	254	23	1,336	68	79	239	3,020
December	38	2	696	238	2	173	289	21	1,405	43	101	220	3,054
Total	859	27	8,289	2,950	25	1,682	2,937	276	16,670	794	1,058	2,676	36,562
2012 January	44	2	690	231	(s)	167	270	24	1,324	69	82	238	2,976
February	42	2	672	222	4	149	250	24	1,305	52	72	219	2,864
March	49	2	669	243	(s)	135	245	21	1,397	60	81	209	2,976
April	65	2	647	231	1	113	219	22	1,381	61	77	201	2,907
May	78	3	676	248	(s)	130	237	22	1,455	70	57	217	3,063
June	90	2	652	263	(s)	122	218	19	1,415	67	70	211	3,008
July	95	3	641	258	(s)	120	230	20	1,427	63	81	232	3,051
August	100	2	675	258	(s)	132	239	21	1,478	76	69	233	3,152
September	88	2	643	235	(s)	133	236	19	1,343	64	57	190	2,877
October	76	2	693	236	1	151	263	21	1,408	60	54	241	3,054
November	56	2	682	239	1	145	252	21	1,337	69	56	225	2,939
December	42	1	637	241	(s)	173	281	17	1,356	68	37	259	2,940
Total	826	25	7,979	2,904	8	1,671	2,940	251	16,624	779	793	2,676	35,806
2013 January	46	2	732	228	2	201	308	24	1,330	69	68	218	3,025
February	39	1	648	210	1	171	277	21	1,229	47	53	204	2,732
March	49	2	681	241	3	164	278	24	1,394	57	84	195	3,006
April	59	2	676	241	1	132	240	20	1,372	53	54	217	2,934
May	61	2	681	249	(s)	110	223	24	1,453	67	42	236	3,039
June	R 82	2	R 641	R 243	(s)	R 113	R 214	R 26	1,404	R 73	R 57	R 233	R 2,975
July	F 94	F 2	E 719	E 272	F 1	E 127	RF 230	F 21	E 1,465	F 66	E 55	RE 278	E 3,203
August	F 99	F 3	E 670	E 273	F 1	E 136	F 238	F 24	E 1,472	F 74	E 55	E 223	E 3,131
8-Month Total	E 528	E 16	E 5,449	E 1,957	E 9	E 1,155	E 2,007	E 183	E 11,119	E 506	E 468	E 1,804	E 24,046
2012 8-Month Total	563	18	5,324	1,953	6	1,069	1,908	173	11,182	519	590	1,761	23,996
2011 8-Month Total	583	19	5,465	1,987	21	1,101	1,933	190	11,161	547	706	1,773	24,385

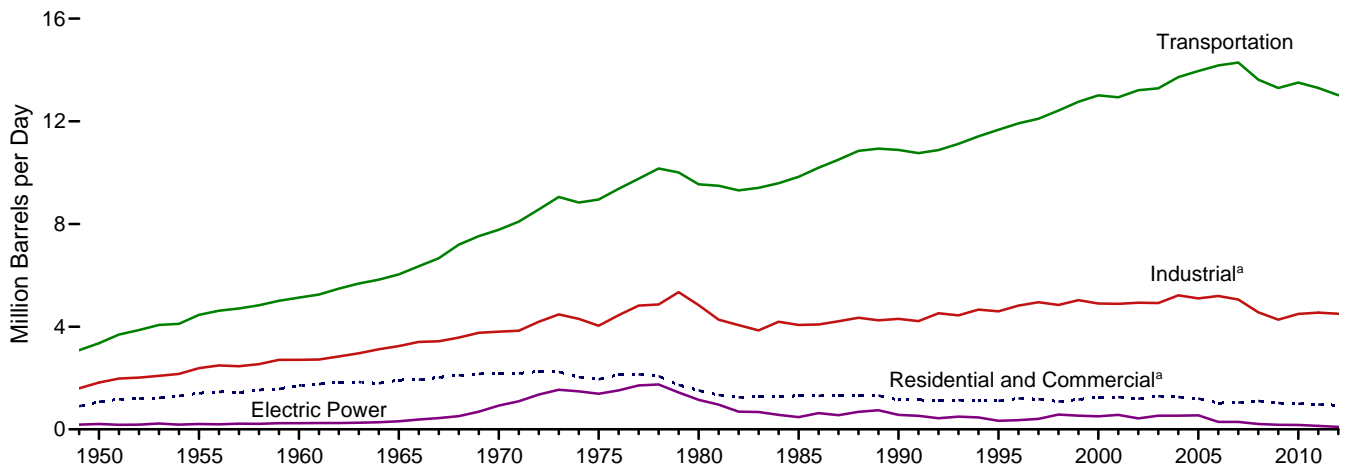
^a Liquefied petroleum gases.
^b Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
^c Beginning in 1957, includes kerosene-type jet fuel. For 1952–2004, also includes naphtha-type jet fuel. (Through 1951, naphtha-type jet fuel is included in the products from which it was blended—gasoline, kerosene, and distillate fuel oil. Beginning in 2005, naphtha-type jet fuel is included in "Other.")
^d Includes propylene.
^e Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.
^f Pentanes plus, petrochemical feedstocks, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1964, also includes special naphthas. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components.

Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.
R=Revised. E=Estimate. F=Forecast. NA=Not available. (s)=Less than 0.5 trillion Btu and greater than -0.5 trillion Btu.
Notes: • Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.
Sources: See end of section.

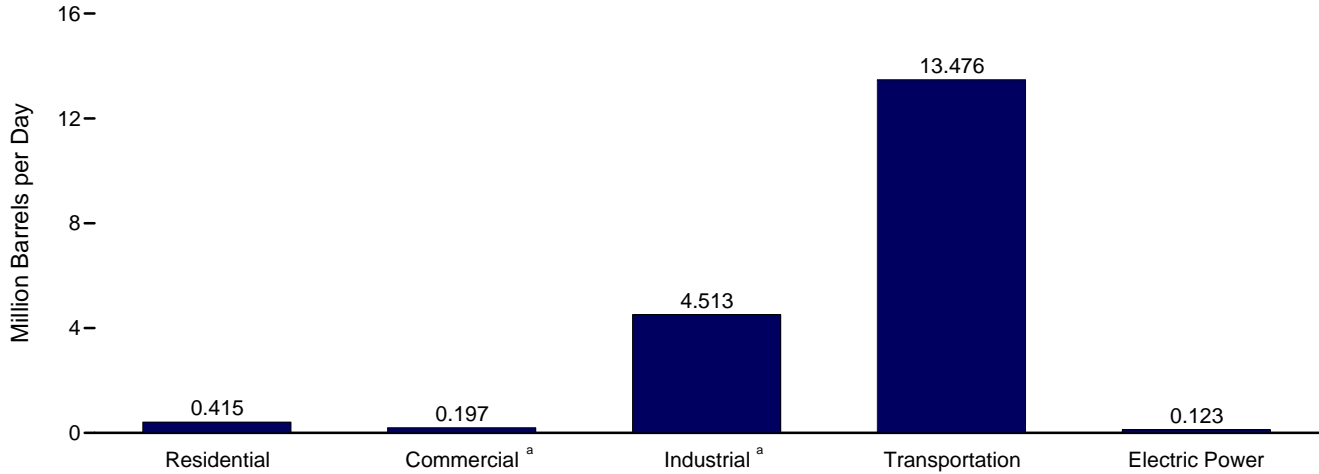
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 3.7 Petroleum Consumption by Sector

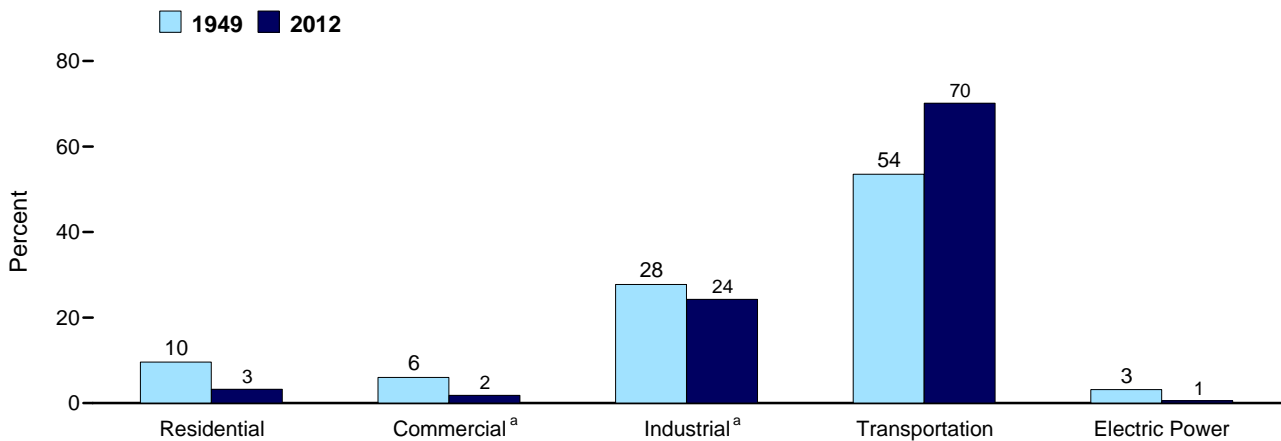
By Sector, 1949–2012



By Sector, June 2013



Sector Shares, 1949 and 2012



^a Includes combined-heat-and-power plants and a small number of electricity-only plants.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
Sources: Tables 3.7a–3.7c.

Table 3.7a Petroleum Consumption: Residential and Commercial Sectors
(Thousand Barrels per Day)

	Residential Sector				Commercial Sector ^a						
	Distillate Fuel Oil	Kero-sene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kero-sene	Liquefied Petroleum Gases	Motor Gasoline ^b	Petro-leum Coke	Residual Fuel Oil	Total
1950 Average	390	168	104	662	123	23	28	52	NA	185	411
1955 Average	562	179	144	885	177	24	38	69	NA	209	519
1960 Average	736	171	217	1,123	232	23	58	35	NA	243	590
1965 Average	805	161	275	1,242	251	26	74	40	NA	281	672
1970 Average	883	144	392	1,419	276	30	102	45	NA	311	764
1975 Average	850	78	365	1,293	276	24	92	46	NA	214	653
1980 Average	617	51	222	890	243	20	63	56	NA	245	626
1985 Average	514	77	224	815	297	16	68	50	NA	99	530
1990 Average	460	31	252	742	252	6	73	58	0	100	489
1995 Average	426	36	282	743	225	11	78	10	(s)	62	385
2000 Average	424	46	395	865	230	14	107	23	(s)	40	415
2001 Average	427	46	375	849	239	15	102	20	(s)	30	406
2002 Average	404	29	384	817	209	8	101	24	(s)	35	376
2003 Average	438	34	389	861	233	9	112	32	(s)	48	434
2004 Average	433	41	364	839	221	10	108	23	(s)	53	416
2005 Average	402	40	366	809	210	10	94	24	(s)	50	389
2006 Average	335	32	318	685	189	7	88	26	(s)	33	343
2007 Average	342	21	345	708	181	4	87	32	(s)	33	337
2008 Average	354	10	394	758	181	2	113	24	(s)	31	351
2009 Average	276	13	391	680	188	2	99	28	(s)	31	348
2010 Average	266	14	379	659	184	2	100	28	(s)	27	342
2011 January	351	14	439	803	278	2	127	23	(s)	33	464
February	368	36	402	806	292	6	116	23	(s)	35	473
March	251	19	384	654	199	3	111	24	(s)	24	361
April	173	6	325	504	137	1	94	24	0	16	273
May	114	(s)	331	445	90	(s)	96	24	0	11	221
June	177	3	323	503	140	1	93	25	0	17	276
July	158	7	325	489	125	1	94	25	0	15	260
August	216	4	335	555	172	1	97	24	0	20	314
September	237	6	326	569	188	1	94	24	0	22	329
October	257	1	354	613	204	(s)	103	24	0	24	354
November	295	4	381	680	234	1	110	23	(s)	28	396
December	380	9	416	805	302	2	120	24	(s)	36	483
Average	247	9	362	618	196	2	105	24	(s)	23	350
2012 January	395	1	392	789	314	(s)	113	22	(s)	29	479
February	332	17	385	734	264	3	111	23	(s)	24	426
March	270	1	354	625	214	(s)	103	23	(s)	20	360
April	197	2	329	529	157	(s)	95	24	(s)	14	291
May	196	(s)	343	539	155	(s)	99	24	0	14	293
June	203	1	330	534	161	(s)	95	25	0	15	296
July	189	2	337	528	150	(s)	98	24	(s)	14	286
August	238	1	349	587	189	(s)	101	25	(s)	17	332
September	191	2	354	547	152	(s)	102	23	(s)	14	292
October	170	2	380	552	135	(s)	110	24	(s)	12	281
November	224	2	377	603	178	(s)	109	23	(s)	16	327
December	248	2	404	655	197	(s)	117	23	(s)	18	355
Average	238	3	361	602	189	(s)	105	24	(s)	17	335
2013 January	315	7	441	763	250	1	127	22	(s)	23	425
February	324	5	438	767	266	1	127	23	(s)	24	441
March	254	11	398	662	201	2	115	23	(s)	19	361
April	197	3	357	558	156	1	103	24	(s)	14	298
May	124	2	324	450	99	(s)	94	24	0	9	226
June	91	2	322	415	72	(s)	93	24	0	7	197
6-Month Average	217	5	380	601	173	1	110	24	(s)	16	323
2012 6-Month Average	266	4	356	625	211	1	103	24	(s)	19	357
2011 6-Month Average	237	13	367	617	188	2	106	24	(s)	22	343

^a Commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^b Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

R=Revised. NA=Not available. (s)=Less than 500 barrels per day and greater than -500 barrels per day.

Notes: • Data are estimates. • For total petroleum consumption by all sectors, see petroleum products supplied data in Table 3.5. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term

"petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the “Web Pages” cited above.

Table 3.7b Petroleum Consumption: Industrial Sector
(Thousand Barrels per Day)

	Industrial Sector ^a									
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline ^b	Petroleum Coke	Residual Fuel Oil	Other ^c	Total
1950 Average	180	328	132	100	43	131	41	617	250	1,822
1955 Average	254	466	116	212	47	173	67	686	366	2,387
1960 Average	302	476	78	333	48	198	149	689	435	2,708
1965 Average	368	541	80	470	62	179	202	689	657	3,247
1970 Average	447	577	89	699	70	150	203	708	866	3,808
1975 Average	419	630	58	844	68	116	246	658	1,001	4,038
1980 Average	396	621	87	1,172	82	82	234	586	1,581	4,842
1985 Average	425	526	21	1,285	75	114	261	326	1,032	4,065
1990 Average	483	541	6	1,215	84	97	325	179	1,373	4,304
1995 Average	486	532	7	1,527	80	105	328	147	1,381	4,594
2000 Average	525	563	8	1,720	86	79	361	105	1,458	4,903
2001 Average	519	611	11	1,557	79	155	390	89	1,481	4,892
2002 Average	512	566	7	1,668	78	163	383	83	1,474	4,934
2003 Average	503	551	12	1,560	72	171	375	96	1,579	4,918
2004 Average	537	570	14	1,646	73	195	423	108	1,657	5,222
2005 Average	546	594	19	1,549	72	187	404	123	1,605	5,100
2006 Average	521	594	14	1,627	71	198	425	104	1,640	5,193
2007 Average	494	595	6	1,637	73	161	412	84	1,593	5,056
2008 Average	417	637	2	1,419	67	131	394	84	1,408	4,559
2009 Average	360	508	2	1,541	61	128	363	57	1,251	4,272
2010 Average	362	547	4	1,673	68	140	310	52	1,343	4,500
2011										
January	221	711	3	2,162	64	131	275	76	1,244	4,887
February	248	601	7	1,981	62	135	218	74	1,185	4,512
March	282	751	4	1,890	77	138	266	60	1,405	4,871
April	311	568	1	1,602	70	138	302	61	1,301	4,353
May	357	557	(s)	1,629	63	138	359	60	1,082	4,246
June	454	580	1	1,589	64	142	309	61	1,213	4,414
July	465	344	1	1,599	61	142	287	39	1,363	4,301
August	545	546	1	1,648	70	140	388	42	1,311	4,691
September	462	570	1	1,607	64	137	276	63	1,299	4,480
October	423	599	(s)	1,746	53	136	343	52	1,239	4,590
November	297	704	1	1,876	64	134	336	53	1,391	4,855
December	187	487	2	2,051	57	136	173	66	1,228	4,388
Average	355	584	2	1,781	64	137	295	59	1,272	4,549
2012										
January	216	637	(s)	1,931	66	129	303	53	1,349	4,684
February	218	781	3	1,898	71	135	242	51	1,306	4,706
March	236	581	(s)	1,746	57	136	292	54	1,163	4,265
April	329	569	(s)	1,623	63	138	311	53	1,166	4,253
May	378	553	(s)	1,687	59	141	343	38	1,224	4,424
June	454	479	(s)	1,625	55	142	336	46	1,214	4,350
July	461	367	(s)	1,662	54	138	298	52	1,298	4,330
August	485	421	(s)	1,717	57	143	368	44	1,320	4,555
September	444	522	(s)	1,744	53	135	314	38	1,090	4,340
October	369	648	(s)	1,873	57	137	283	35	1,361	4,763
November	282	708	(s)	1,856	60	134	341	37	1,303	4,722
December	206	489	(s)	1,992	47	132	325	22	1,448	4,661
Average	340	562	1	1,780	58	137	313	44	1,271	4,504
2013										
January	223	861	1	2,170	65	129	315	42	1,220	5,027
February	212	737	1	2,159	64	132	229	38	1,259	4,831
March	237	637	2	1,959	65	135	255	56	1,095	4,440
April	295	674	1	1,760	56	138	245	36	1,259	4,464
May	294	^R 649	(s)	1,598	67	141	293	27	1,327	^R 4,397
June	410	567	(s)	1,588	72	141	333	39	1,362	4,513
6-Month Average	279	688	1	1,870	65	136	279	40	1,253	4,610
2012 6-Month Average	305	599	1	1,751	62	137	305	49	1,237	4,446
2011 6-Month Average	312	629	3	1,808	67	137	289	65	1,239	4,550

^a Industrial sector fuel use, including that at industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

^b Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

^c Pentanes plus, petrochemical feedstocks, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1964, also includes special naphthas. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. (s)=Less than 500 barrels per day and greater than -500 barrels per day.

Notes: • Data are estimates. • For total petroleum consumption by all sectors, see petroleum products supplied data in Table 3.5. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 3.7c Petroleum Consumption: Transportation and Electric Power Sectors
(Thousand Barrels per Day)

	Transportation Sector								Electric Power Sector ^a			
	Aviation Gasoline	Distillate Fuel Oil ^b	Jet Fuel ^c	Liquefied Petroleum Gases	Lubricants	Motor Gasoline ^d	Residual Fuel Oil	Total	Distillate Fuel Oil ^e	Petroleum Coke	Residual Fuel Oil ^f	Total
1950 Average	108	226	(^c)	2	64	2,433	524	3,356	15	NA	192	207
1955 Average	192	372	154	9	70	3,221	440	4,458	15	NA	191	206
1960 Average	161	418	371	13	68	3,736	367	5,135	10	NA	231	241
1965 Average	120	514	602	23	67	4,374	336	6,036	14	NA	302	316
1970 Average	55	738	967	32	66	5,589	332	7,778	66	9	853	928
1975 Average	39	998	992	31	70	6,512	310	8,951	107	1	1,280	1,388
1980 Average	35	1,311	1,062	13	77	6,441	608	9,546	79	2	1,069	1,151
1985 Average	27	1,491	1,218	21	71	6,667	342	9,838	40	3	435	478
1990 Average	24	1,722	1,522	16	80	7,080	443	10,888	45	14	507	566
1995 Average	21	1,973	1,514	13	76	7,674	397	11,668	51	37	247	334
2000 Average	20	2,422	1,725	8	81	8,370	386	13,012	82	45	378	505
2001 Average	19	2,489	1,655	10	74	8,435	255	12,938	80	47	437	564
2002 Average	18	2,536	1,614	10	73	8,662	295	13,208	60	80	287	427
2003 Average	16	2,629	1,578	13	68	8,733	249	13,286	76	79	379	534
2004 Average	17	2,783	1,630	14	69	8,887	321	13,720	52	101	382	535
2005 Average	19	2,858	1,679	20	68	8,948	365	13,957	54	111	382	547
2006 Average	18	3,017	1,633	20	67	9,029	395	14,178	35	97	157	289
2007 Average	17	3,037	1,622	16	69	9,093	433	14,287	42	78	173	293
2008 Average	15	2,738	1,539	29	64	8,834	402	13,621	34	70	104	209
2009 Average	14	2,626	1,393	20	57	8,841	344	13,296	33	63	79	175
2010 Average	15	2,765	1,432	21	64	8,824	389	13,509	38	65	67	170
2011 January	11	2,575	1,346	29	60	8,216	417	12,655	43	85	56	184
February	14	2,620	1,352	27	59	8,446	421	12,938	33	75	37	144
March	18	2,816	1,385	26	73	8,637	342	13,295	29	82	37	147
April	10	2,844	1,457	22	66	8,634	354	13,387	33	54	46	133
May	18	2,907	1,424	22	59	8,655	355	13,440	31	55	41	128
June	17	3,019	1,540	22	61	8,900	358	13,916	32	70	43	145
July	19	2,901	1,473	22	58	8,865	223	13,559	36	81	52	169
August	18	3,048	1,554	22	67	8,761	240	13,711	26	73	44	143
September	13	2,918	1,416	22	61	8,583	372	13,384	24	73	33	130
October	16	2,921	1,384	24	50	8,489	297	13,180	24	52	32	107
November	12	2,852	1,416	26	60	8,380	306	13,052	25	40	32	97
December	10	2,656	1,353	28	54	8,523	386	13,011	28	56	31	116
Average	15	2,841	1,425	24	61	8,592	338	13,295	30	66	41	137
2012 January	12	2,451	1,313	26	62	8,036	304	12,205	26	63	34	123
February	11	2,580	1,350	26	67	8,463	291	12,788	23	55	27	105
March	14	2,623	1,382	24	54	8,474	314	12,883	19	31	29	79
April	14	2,755	1,359	22	59	8,655	312	13,177	26	27	28	80
May	17	2,812	1,409	23	56	8,830	214	13,360	29	33	29	91
June	13	2,858	1,545	22	52	8,868	266	13,624	29	37	45	111
July	20	2,818	1,468	23	51	8,657	299	13,336	28	40	53	121
August	13	2,870	1,469	23	54	8,966	253	13,649	23	41	39	102
September	15	2,794	1,379	24	50	8,417	220	12,899	22	43	30	94
October	14	2,861	1,341	25	54	8,540	200	13,034	24	36	32	92
November	11	2,768	1,407	25	56	8,381	213	12,861	24	39	28	91
December	9	2,573	1,373	27	44	8,224	121	12,372	22	38	28	88
Average	14	2,730	1,399	24	55	8,543	250	13,016	25	40	34	98
2013 January	11	2,595	1,297	30	62	8,067	234	12,296	32	54	50	136
February	8	2,626	1,320	29	61	8,257	206	12,507	23	52	37	112
March	12	2,659	1,369	27	61	8,457	329	12,913	21	51	28	100
April	12	2,822	1,414	24	53	8,604	204	13,134	22	48	29	100
May	15	^R 2,873	1,416	22	63	8,817	^R 151	^R 13,357	26	66	28	120
June	15	2,915	1,431	22	68	8,800	225	13,476	22	69	32	123
6-Month Average	12	2,749	1,375	25	61	8,502	225	12,950	24	57	34	115
2012 6-Month Average	14	2,679	1,393	24	58	8,553	283	13,004	25	41	32	98
2011 6-Month Average	15	2,798	1,418	25	63	8,581	374	13,273	33	70	44	147

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

^b Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

^c Beginning in 1957, includes kerosene-type jet fuel. For 1952–2004, also includes naphtha-type jet fuel. (Through 1951, naphtha-type jet fuel is included in the products from which it was blended—gasoline, kerosene, and distillate fuel oil. Beginning in 2005, naphtha-type jet fuel is included in "Other" on Table 3.7b.)

^d Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

^e Fuel oil nos. 1, 2, and 4. Through 1979, data are for gas turbine and internal combustion plant use of petroleum. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

^f Fuel oil nos. 5 and 6. Through 1979, data are for steam plant use of

petroleum. Through 2000, electric utility data also include a small amount of fuel oil no. 4.

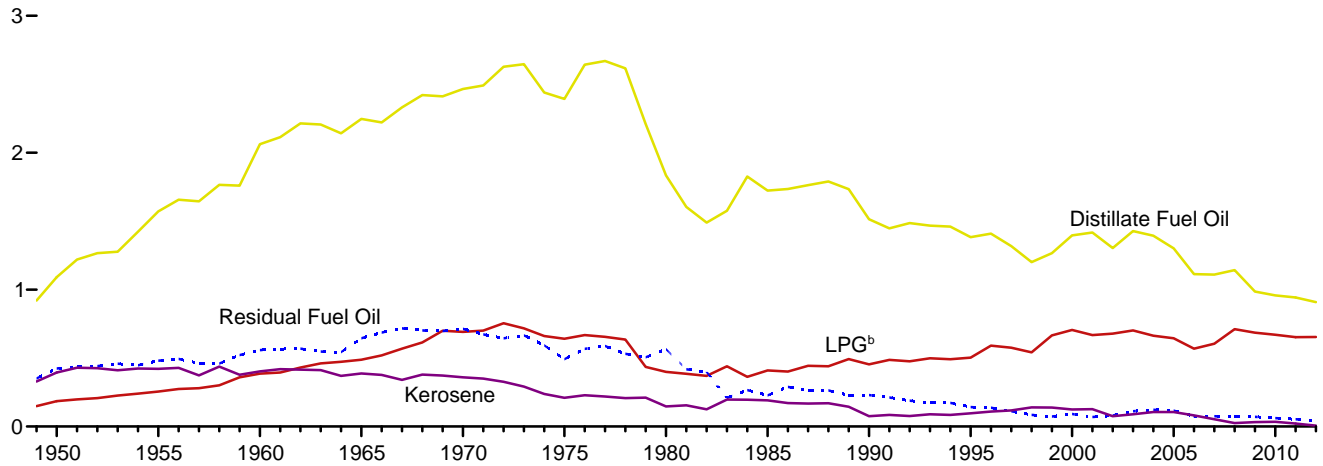
R=Revised. NA=Not available.

Notes: • Transportation sector data are estimates. • For total petroleum consumption by all sectors, see petroleum products supplied data in Table 3.5. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia. Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973. Sources: See end of section.

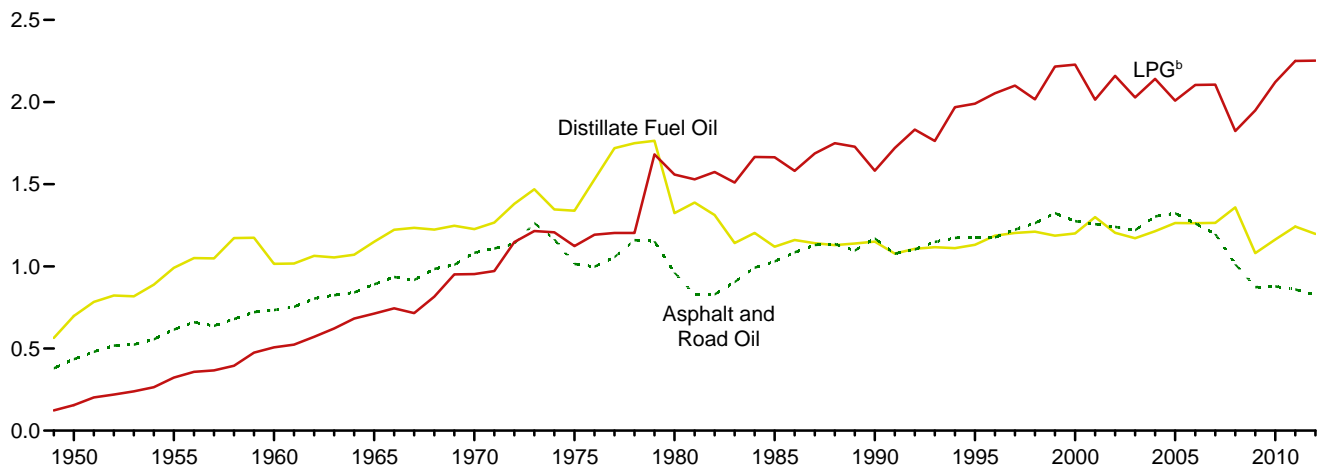
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 3.8a Heat Content of Petroleum Consumption by End-Use Sector, 1949–2012
(Quadrillion Btu)

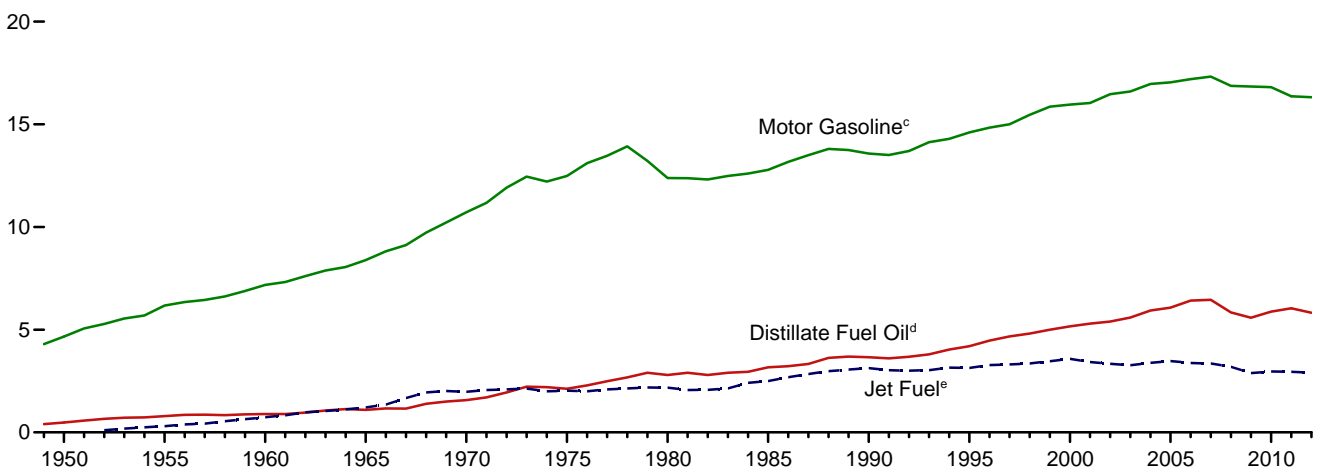
Residential and Commercial^a Sectors, Selected Products



Industrial^a Sector, Selected Products



Transportation Sector, Selected Products



^a Includes combined-heat-and-power plants and a small number of electricity-only plants.

^b Liquefied petroleum gases.

^c Beginning in 1993, includes fuel ethanol blended into motor gasoline.

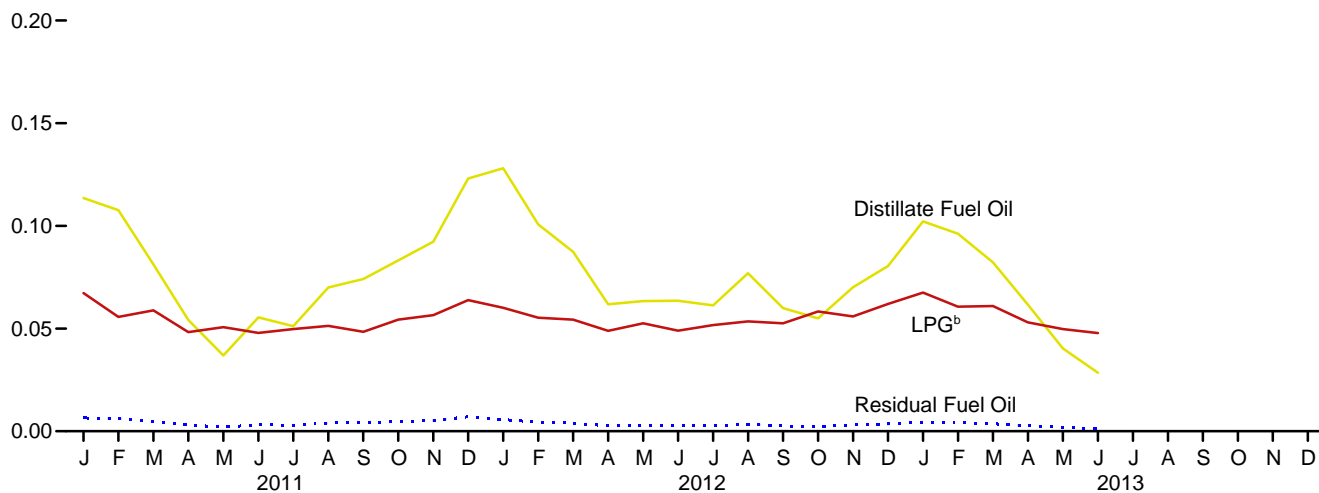
^d Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

^e Beginning in 2005, includes kerosene-type jet fuel only.

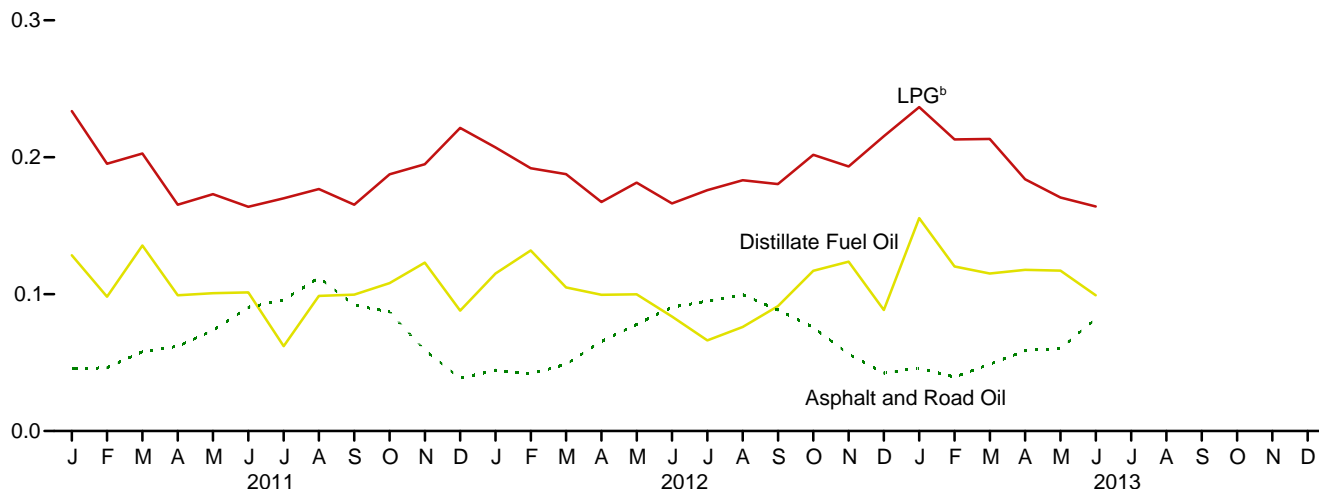
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
Sources: Tables 3.8a–3.8c.

Figure 3.8b Heat Content of Petroleum Consumption by End-Use Sector, Monthly
(Quadrillion Btu)

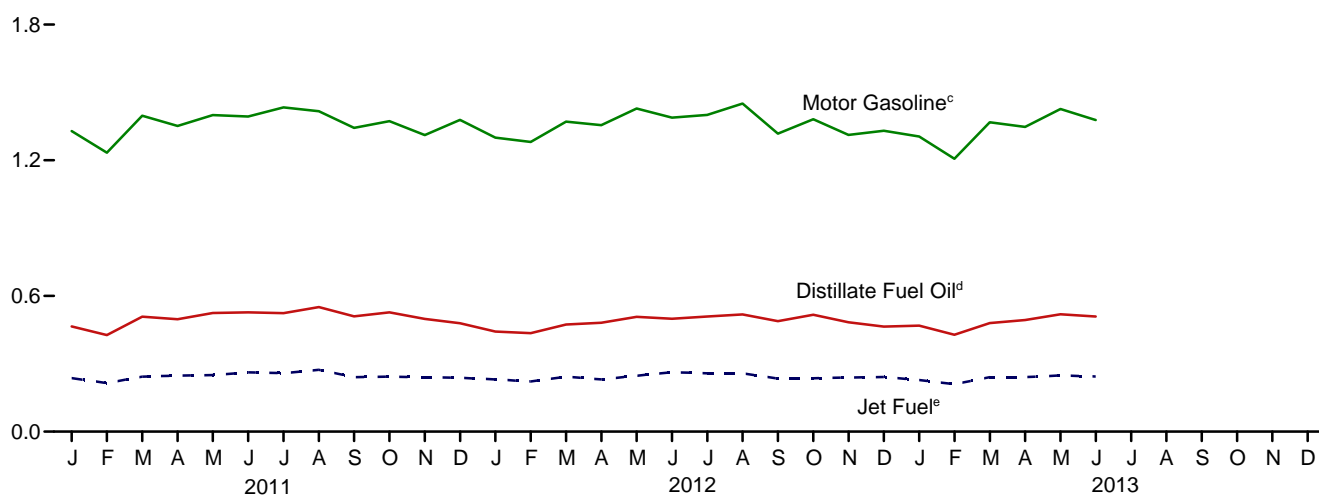
Residential and Commercial^a Sectors, Selected Products



Industrial^a Sector, Selected Products



Transportation Sector, Selected Products



^a Includes combined-heat-and-power plants and a small number of electricity-only plants.

^b Liquefied petroleum gases.

^c Includes fuel ethanol blended into motor gasoline.

^d Includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

^e Includes kerosene-type jet fuel only.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
Sources: Tables 3.8a–3.8c.

Table 3.8a Heat Content of Petroleum Consumption: Residential and Commercial Sectors
(Trillion Btu)

	Residential Sector				Commercial Sector ^a						
	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Motor Gasoline ^b	Petroleum Coke	Residual Fuel Oil	Total
1950 Total	829	347	146	1,322	262	47	39	100	NA	424	872
1955 Total	1,194	371	202	1,767	377	51	54	133	NA	480	1,095
1960 Total	1,568	354	305	2,227	494	48	81	67	NA	559	1,248
1965 Total	1,713	334	385	2,432	534	54	103	77	NA	645	1,413
1970 Total	1,878	298	549	2,725	587	61	143	86	NA	714	1,592
1975 Total	1,807	161	512	2,479	587	49	129	89	NA	492	1,346
1980 Total	1,316	107	311	1,734	518	41	88	107	NA	565	1,318
1985 Total	1,092	159	314	1,565	631	33	95	96	NA	228	1,083
1990 Total	978	64	352	1,394	536	12	102	111	0	230	991
1995 Total	905	74	395	1,374	479	22	109	18	(s)	141	769
2000 Total	905	95	555	1,554	491	30	150	45	(s)	92	807
2001 Total	908	95	526	1,529	508	31	143	37	(s)	70	790
2002 Total	860	60	537	1,457	444	16	141	45	(s)	80	726
2003 Total	932	70	544	1,547	496	19	157	60	(s)	111	843
2004 Total	924	85	512	1,520	470	20	152	45	(s)	122	810
2005 Total	854	84	513	1,451	447	22	131	46	(s)	116	762
2006 Total	712	66	446	1,224	401	15	123	49	(s)	75	664
2007 Total	726	44	484	1,254	384	9	121	61	(s)	75	651
2008 Total	756	21	553	1,330	387	4	158	46	(s)	71	666
2009 Total	587	28	547	1,161	399	4	139	53	(s)	71	667
2010 Total	566	29	530	1,126	392	5	140	53	(s)	62	652
2011 January	63	2	52	118	50	(s)	15	4	(s)	6	76
February	60	6	43	109	48	1	12	3	(s)	6	71
March	45	3	46	94	36	1	13	4	(s)	5	58
April	30	1	37	69	24	(s)	11	4	0	3	42
May	21	(s)	39	60	16	(s)	11	4	0	2	34
June	31	1	37	69	25	(s)	11	4	0	3	42
July	29	1	39	68	23	(s)	11	4	0	3	41
August	39	1	40	80	31	(s)	12	4	0	4	51
September	41	1	38	80	33	(s)	11	4	0	4	52
October	46	(s)	42	89	37	(s)	12	4	0	5	58
November	51	1	44	96	41	(s)	13	4	(s)	5	63
December	69	2	50	120	54	(s)	14	4	(s)	7	80
Total	526	19	506	1,051	417	3	146	45	(s)	54	666
2012 January	71	(s)	47	118	57	(s)	13	4	(s)	6	79
February	56	3	43	102	45	(s)	12	4	(s)	4	65
March	49	(s)	42	91	39	(s)	12	4	(s)	4	59
April	34	(s)	38	73	27	(s)	11	4	(s)	3	45
May	35	(s)	41	76	28	(s)	12	4	0	3	47
June	35	(s)	38	74	28	(s)	11	4	0	3	46
July	34	(s)	40	75	27	(s)	12	4	(s)	3	45
August	43	(s)	41	85	34	(s)	12	4	(s)	3	54
September	33	(s)	41	75	27	(s)	12	4	(s)	3	45
October	31	(s)	45	76	24	(s)	13	4	(s)	2	44
November	39	(s)	43	83	31	(s)	13	4	(s)	3	50
December	45	(s)	48	93	36	(s)	14	4	(s)	4	57
Total	507	6	507	1,020	402	1	147	45	(s)	40	635
2013 January	57	1	52	111	45	(s)	15	4	(s)	4	69
February	53	1	47	101	43	(s)	14	3	(s)	4	65
March	46	2	47	95	36	(s)	14	4	(s)	4	58
April	34	1	41	76	27	(s)	12	4	(s)	3	46
May	^R 22	(s)	39	^R 61	18	(s)	11	4	0	2	35
June	16	(s)	37	53	13	(s)	11	4	0	1	28
6-Month Total	228	5	264	497	183	1	76	22	(s)	18	300
2012 6-Month Total	282	4	248	534	223	1	72	23	(s)	22	341
2011 6-Month Total	250	13	255	518	199	2	74	22	(s)	26	323

^a Commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^b Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

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

Notes: • Data are estimates. • For total heat content of petroleum consumption by all sectors, see data for heat content of petroleum products supplied in Table 3.6. Petroleum products supplied is an approximation of petroleum consumption

and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 3.8b Heat Content of Petroleum Consumption: Industrial Sector
(Trillion Btu)

	Industrial Sector ^a									
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline ^b	Petroleum Coke	Residual Fuel Oil	Other ^c	Total
1950 Total	435	698	274	156	94	251	90	1,416	546	3,960
1955 Total	615	991	241	323	103	332	147	1,573	798	5,123
1960 Total	734	1,016	161	507	107	381	328	1,584	947	5,766
1965 Total	890	1,150	165	712	137	342	444	1,582	1,390	6,813
1970 Total	1,082	1,226	185	953	155	288	446	1,624	1,817	7,776
1975 Total	1,014	1,339	119	1,123	149	223	540	1,509	2,109	8,127
1980 Total	962	1,324	181	1,559	182	158	516	1,349	3,278	9,509
1985 Total	1,029	1,119	44	1,664	166	218	575	748	2,152	7,714
1990 Total	1,170	1,150	12	1,582	186	185	714	411	2,839	8,251
1995 Total	1,178	1,131	15	1,990	178	200	721	337	2,837	8,588
2000 Total	1,276	1,200	16	2,228	190	150	796	241	2,979	9,076
2001 Total	1,257	1,300	23	2,014	174	295	858	203	3,056	9,181
2002 Total	1,240	1,204	14	2,160	172	309	842	190	3,040	9,171
2003 Total	1,220	1,171	24	2,028	159	324	825	220	3,264	9,235
2004 Total	1,304	1,214	28	2,141	161	372	934	249	3,428	9,831
2005 Total	1,323	1,264	39	2,009	160	356	889	281	3,318	9,640
2006 Total	1,261	1,263	30	2,104	156	376	934	239	3,416	9,780
2007 Total	1,197	1,265	13	2,106	161	306	906	193	3,313	9,461
2008 Total	1,012	1,359	4	1,823	150	250	868	194	2,941	8,600
2009 Total	873	1,081	4	1,950	135	244	799	130	2,611	7,826
2010 Total	878	1,163	7	2,121	149	267	682	120	2,800	8,188
2011 January	45	128	(s)	234	12	21	51	15	227	734
February	46	98	1	195	11	20	37	13	190	611
March	58	136	1	203	14	22	50	12	250	745
April	62	99	(s)	165	13	22	55	12	224	651
May	73	101	(s)	173	12	22	67	12	194	654
June	90	101	(s)	164	12	22	56	12	209	666
July	96	62	(s)	170	11	23	54	8	245	668
August	112	99	(s)	177	13	23	73	8	234	739
September	92	100	(s)	165	12	21	50	12	224	676
October	87	108	(s)	187	10	22	64	10	220	709
November	59	123	(s)	195	12	21	61	10	239	719
December	38	88	(s)	221	11	22	32	13	220	646
Total	859	1,242	4	2,250	142	262	648	135	2,676	8,218
2012 January	44	115	(s)	207	12	21	57	10	238	705
February	42	132	1	192	13	20	42	9	219	670
March	49	105	(s)	188	11	22	55	10	209	648
April	65	99	(s)	167	11	22	56	10	201	633
May	78	100	(s)	181	11	23	64	7	217	682
June	90	84	(s)	166	10	22	61	9	211	653
July	95	66	(s)	176	10	22	56	10	232	667
August	100	76	(s)	183	11	23	69	9	233	703
September	88	91	(s)	180	10	21	57	7	190	644
October	76	117	(s)	202	11	22	53	7	241	729
November	56	124	(s)	193	11	21	62	7	225	699
December	42	88	(s)	215	9	21	61	4	259	700
Total	826	1,197	1	2,252	129	261	690	100	2,676	8,133
2013 January	46	156	(s)	237	12	21	59	8	218	756
February	39	120	(s)	213	11	19	39	7	204	653
March	49	115	(s)	213	12	22	48	11	195	665
April	59	118	(s)	184	10	22	44	7	217	661
May	61	117	(s)	171	13	23	55	5	236	680
June	82	99	(s)	164	13	22	60	7	233	680
6-Month Total	335	725	1	1,181	71	128	304	45	1,304	4,095
2012 6-Month Total	369	635	1	1,102	68	130	334	56	1,296	3,990
2011 6-Month Total	375	663	3	1,134	73	130	315	74	1,294	4,061

^a Industrial sector fuel use, including that at industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

^b Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

^c Pentanes plus, petrochemical feedstocks, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1964, also includes special naphthas. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

(s)=Less than 0.5 trillion Btu and greater than -0.5 trillion Btu.

Notes: • Data are estimates. • For total heat content of petroleum consumption by all sectors, see data for heat content of petroleum products supplied in Table 3.6. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a-3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949-1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 3.8c Heat Content of Petroleum Consumption: Transportation and Electric Power Sectors (Trillion Btu)

	Transportation Sector								Electric Power Sector ^a			
	Aviation Gasoline	Distillate Fuel Oil ^b	Jet Fuel ^c	Liquefied Petroleum Gases	Lubricants	Motor Gasoline ^d	Residual Fuel Oil	Total	Distillate Fuel Oil ^e	Petroleum Coke	Residual Fuel Oil ^f	Total
1950 Total	199	480	(^c)	3	141	4,664	1,201	6,690	32	NA	440	472
1955 Total	354	791	301	13	155	6,175	1,009	8,799	32	NA	439	471
1960 Total	298	892	739	19	152	7,183	844	10,125	22	NA	530	553
1965 Total	222	1,093	1,215	32	149	8,386	770	11,866	29	NA	693	722
1970 Total	100	1,569	1,973	44	147	10,716	761	15,310	141	19	1,958	2,117
1975 Total	71	2,121	2,029	43	155	12,485	711	17,615	226	2	2,937	3,166
1980 Total	64	2,795	2,179	18	172	12,383	1,398	19,009	169	5	2,459	2,634
1985 Total	50	3,170	2,497	30	156	12,784	786	19,472	85	7	998	1,090
1990 Total	45	3,661	3,129	23	176	13,575	1,016	21,626	97	30	1,163	1,289
1995 Total	40	4,195	3,132	18	168	14,607	911	23,070	108	81	566	755
2000 Total	36	5,165	3,580	12	179	15,960	888	25,820	175	99	871	1,144
2001 Total	35	5,292	3,426	14	164	16,041	586	25,557	171	103	1,003	1,277
2002 Total	34	5,392	3,340	14	162	16,465	677	26,085	127	175	659	961
2003 Total	30	5,590	3,265	18	150	16,597	571	26,222	161	175	869	1,205
2004 Total	31	5,932	3,383	19	152	16,962	740	27,219	111	222	879	1,212
2005 Total	35	6,076	3,475	28	151	17,043	837	27,645	115	243	876	1,235
2006 Total	33	6,414	3,379	27	147	17,197	906	28,105	74	214	361	648
2007 Total	32	6,457	3,358	22	152	17,321	994	28,335	89	171	397	657
2008 Total	28	5,837	3,193	40	141	16,872	926	27,038	73	154	240	468
2009 Total	27	5,583	2,883	28	127	16,838	791	26,277	70	139	181	390
2010 Total	27	5,879	2,963	29	141	16,807	892	26,738	80	144	154	378
2011 January	2	465	237	3	11	1,329	81	2,129	8	16	11	35
February	2	427	215	3	10	1,234	74	1,965	5	13	6	24
March	3	509	243	3	14	1,397	67	2,235	5	15	7	28
April	2	497	248	3	12	1,352	67	2,179	6	10	9	24
May	3	525	250	3	11	1,400	69	2,261	6	10	8	24
June	3	528	262	2	11	1,393	67	2,266	6	13	8	26
July	3	524	259	3	11	1,434	43	2,276	7	15	10	32
August	3	550	273	3	13	1,417	47	2,306	5	14	9	27
September	2	510	241	3	11	1,344	70	2,180	4	13	6	24
October	2	527	243	3	9	1,373	58	2,216	4	10	6	20
November	2	498	241	3	11	1,312	58	2,125	4	7	6	18
December	2	480	238	3	10	1,379	75	2,187	5	11	6	22
Total	27	6,040	2,950	34	134	16,363	776	26,324	64	146	93	303
2012 January	2	443	231	3	12	1,300	59	2,050	5	12	7	23
February	2	436	222	3	12	1,281	53	2,008	4	10	5	18
March	2	474	243	3	10	1,371	61	2,164	3	6	6	15
April	2	481	231	3	11	1,355	59	2,142	4	5	5	15
May	3	508	248	3	11	1,429	42	2,242	5	6	6	17
June	2	499	263	3	9	1,389	50	2,215	5	7	9	20
July	3	509	258	3	10	1,401	58	2,241	5	7	10	23
August	2	518	258	3	10	1,451	49	2,291	4	8	8	19
September	2	488	235	3	9	1,318	42	2,096	4	8	6	17
October	2	517	236	3	10	1,382	39	2,188	4	7	6	17
November	2	484	239	3	10	1,312	40	2,090	4	7	5	16
December	1	465	241	3	8	1,331	24	2,073	4	7	5	17
Total	25	5,821	2,904	34	122	16,318	576	25,800	52	89	77	218
2013 January	2	469	228	4	12	1,305	46	2,064	6	10	10	26
February	1	428	210	3	10	1,207	36	1,895	4	9	6	19
March	2	480	241	3	11	1,368	64	2,170	4	9	6	19
April	2	493	241	3	10	1,347	38	2,134	4	9	6	18
May	2	^R 519	249	3	12	1,427	29	2,240	5	12	5	23
June	2	509	243	2	12	1,378	42	2,190	4	13	6	22
6-Month Total	11	2,898	1,411	18	67	8,032	256	12,693	26	62	39	127
2012 6-Month Total	12	2,841	1,437	17	64	8,124	324	12,820	27	45	37	108
2011 6-Month Total	13	2,950	1,455	17	69	8,105	425	13,035	35	76	50	161

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

^b Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

^c Beginning in 1957, includes kerosene-type jet fuel. For 1952–2004, also includes naphtha-type jet fuel. (Through 1951, naphtha-type jet fuel is included in the products from which it was blended—gasoline, kerosene, and distillate fuel oil. Beginning in 2005, naphtha-type jet fuel is included in "Other" on Table 3.8b.)

^d Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

^e Fuel oil nos. 1, 2, and 4. Through 1979, data are for gas turbine and internal combustion plant use of petroleum. Through 2000, electric utility data also include small amounts of kerosene and jet fuel.

^f Fuel oil nos. 5 and 6. Through 1979, data are for steam plant use of

petroleum. Through 2000, electric utility data also include a small amount of fuel oil no. 4.

R=Revised. NA=Not available.

Notes: • Transportation sector data are estimates. • For total heat content of petroleum consumption by all sectors, see data for heat content of petroleum products supplied in Table 3.6. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Petroleum

Note 1. Petroleum Products Supplied and Petroleum Consumption. Total petroleum products supplied is the sum of the products supplied for each petroleum product, crude oil, unfinished oils, and gasoline blending components. For each of these except crude oil, product supplied is calculated by adding refinery production, natural gas plant liquids production, new supply of other liquids, imports, and stock withdrawals, and subtracting stock additions, refinery inputs, and exports. Crude oil product supplied is the sum of crude oil burned on leases and at pipeline pump stations as reported on Form EIA-813, “Monthly Crude Oil Report.” Prior to 1983, crude oil burned on leases and used at pipeline pump stations was reported as either distillate or residual fuel oil and was included as product supplied for these products. Petroleum product supplied (see Tables 3.5 and 3.6) is an approximation of petroleum consumption and is synonymous with the term “Petroleum Consumption” in Tables 3.7a–3.8c.

Note 2. Petroleum Survey Respondents. The U.S. Energy Information Administration (EIA) uses a number of sources and methods to maintain the survey respondent lists. On a regular basis, survey managers review such industry publications as the *Oil & Gas Journal* and *Oil Daily* for information on facilities or companies starting up or closing down operations. Those sources are augmented by articles in newspapers, communications from respondents indicating changes in status, and information received from survey systems.

To supplement routine frames maintenance and to provide more thorough coverage, a comprehensive frames investigation is conducted every 3 years. This investigation results in the reassessment and recompilation of the complete frame for each survey. The effort also includes the evaluation of the impact of potential frame changes on the historical time series of data from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

Note 3. Historical Petroleum Data. Detailed information on petroleum data through 1993 can be found in Notes 1–6 on pages 60 and 61 in the July 2013 *Monthly Energy Review (MER)* at

<http://www.eia.gov/totalenergy/data/monthly/archive/00351307.pdf>.

The notes discuss:

Note 1, “Petroleum Survey Respondents”: In 1993, EIA added numerous companies that produce, blend, store, or import oxygenates to the monthly surveys.

Note 2, “Motor Gasoline”: In 1981, EIA expanded its universe to include nonrefinery blenders and separated blending components from finished motor gasoline as a reporting category. In 1993, EIA made adjustments to finished motor gasoline product supplied data to more accurately account for fuel ethanol and motor gasoline blending components blended into finished motor gasoline.

Note 3, “Distillate and Residual Fuel Oils”: In 1981, EIA eliminated the requirement to report crude oil in pipelines or burned on leases as either distillate or residual fuel oil.

Note 4, “Petroleum New Stock Basis”: In 1975, 1979, 1981, and 1983, EIA added numerous respondents to bulk terminal and pipeline surveys; in 1984, EIA made changes in the reporting of natural gas liquids; and in 1993, EIA changed how it collected bulk terminal and pipeline stocks of oxygenates. These changes affected stocks reported and stock change calculations.

Note 5, “Stocks of Alaskan Crude Oil”: In 1981, EIA began to include data for stocks of Alaskan crude oil in transit.

Note 6, “Petroleum Data Discrepancies”: In 1976, 1978, and 1979, there are some small discrepancies between data in the MER and the *Petroleum Supply Annual*.

Table 3.1 Sources

1949–1975: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports.

1976–1980: U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports.

1981–2001: EIA, *Petroleum Supply Annual (PSA)*, annual reports.

2002 forward: EIA, PSA, annual reports; *Petroleum Supply Monthly*, monthly reports; revisions to crude oil production, total field production, and adjustments (based on crude oil production data from: state government agencies; U.S. Department of the Interior, Bureau of Safety and Environmental Enforcement, and predecessor agencies; and Form EIA-182, “Domestic Crude Oil First Purchase Report”); and, for the current two months, *Weekly Petroleum Status Report* data system and *Monthly Energy Review* data system calculations.

Table 3.6 Sources

Asphalt and Road Oil, Aviation Gasoline, Distillate Fuel Oil, Kerosene, Propane, Lubricants, Petroleum Coke, and Residual Fuel Oil

Product supplied data in thousand barrels per day for these petroleum products are from Table 3.5, and are converted to trillion Btu by multiplying by the appropriate heat content factors in Table A1.

Jet Fuel

Product supplied data in thousand barrels per day for kerosene-type jet fuel and, through 2004, naphtha-type jet fuel are from the U.S. Energy Information Administration’s (EIA) *Petroleum Supply Annual (PSA)*, *Petroleum Supply Monthly (PSM)*, and earlier publications (see sources for Table 3.5). These data are converted to trillion Btu by multiplying by the appropriate heat content factors in Table A1. Total jet fuel product supplied is the sum of the data in trillion Btu for kerosene-type and naphtha-type jet fuel.

Liquefied Petroleum Gases (LPG) Total

Prior to the current two months, product supplied data in thousand barrels per day for the component products of LPG (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene) are from the PSA, PSM, and earlier publications (see sources for Table 3.5). These data are converted to trillion Btu by multiplying by the appropriate heat content factors in Table A1. Total LPG product supplied is the sum of the data in trillion Btu for the LPG component products.

For the current two months, product supplied data in thousand barrels per day for total LPG are from Table 3.5, and are converted to trillion Btu by multiplying by the LPG heat content factors in Table A3.

Motor Gasoline

Product supplied data in thousand barrels per day for motor gasoline are from Table 3.5, and are converted to trillion Btu by multiplying by the motor gasoline heat content factors in Table A3.

Other Petroleum Products

Prior to the current two months, product supplied data in thousand barrels per day for “other” petroleum products are from the PSA, PSM, and earlier publications (see sources for Table 3.5). “Other” petroleum products include pentanes plus, petrochemical feedstocks, special naphthas, still gas (refinery gas), waxes, and miscellaneous products; beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components; beginning in 1983, also includes crude oil burned as fuel; and beginning in 2005, also includes naphtha-type jet fuel. These data are converted to trillion Btu by multiplying by the appropriate heat content factors in MER Table A1. Total “Other” petroleum product supplied is the sum of the data in trillion Btu for the individual products.

For the current two months, total “Other” petroleum products supplied is calculated by first estimating total petroleum products supplied (product supplied data in thousand barrels per day for total petroleum from Table 3.5 are converted to trillion Btu by multiplying by the total petroleum consumption heat content factor in Table A3), and then subtracting data in trillion Btu (from Table 3.6) for asphalt and road oil, aviation gasoline, distillate fuel oil, jet fuel, kerosene, total LPG, lubricants, motor gasoline, petroleum coke, and residual fuel oil.

Total Petroleum

Total petroleum products supplied is the sum of the data in trillion Btu for the products (except “Propane”) shown in Table 3.6.

Tables 3.7a–3.7c Sources

Petroleum consumption data for 1949–1972 are from the following sources:

1949–1959: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports, and U.S. Energy Information Administration (EIA) estimates.

1960–1972: EIA, State Energy Data System.

Petroleum consumption data beginning in 1973 are derived from data for “petroleum products supplied” from the following sources:

1973–1975: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement Annual*, annual reports.

1976–1980: EIA, Energy Data Reports, *Petroleum Statement Annual*, annual reports.

1981–2011: EIA, *Petroleum Statement Annual*, annual reports.

2012 and 2013: EIA, *Petroleum Supply Monthly*, monthly reports.

Beginning in 1973, energy-use allocation procedures by individual product are as follows:

Asphalt and Road Oil

All consumption of asphalt and road oil is assigned to the industrial sector.

Aviation Gasoline

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

Distillate Fuel Oil

Distillate fuel oil consumption is assigned to the sectors as follows:

Distillate Fuel Oil Consumed by the Electric Power Sector

See sources for Table 7.4b. For 1973–1979, electric utility consumption of distillate fuel oil 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 1980–2000, electric utility consumption of distillate fuel oil is assumed to be the amount of light oil (fuel oil nos. 1 and 2, plus small amounts of kerosene and jet fuel) consumed.

Distillate Fuel Oil Consumed by the End-Use Sectors, Annually

The aggregate end-use amount is total distillate fuel oil supplied minus the amount consumed by the electric power sector. The end-use total consumed annually is allocated to the individual end-use sectors (residential, commercial, industrial, and transportation) 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, “Annual Fuel Oil and Kerosene Sales Report”

(previously Form EIA-172). Shares for the current year are based on the most recent Sales report.

Following are notes on the individual sector groupings:

Beginning in 1979, the residential sector sales total is directly from the Sales reports. Through 1978, 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.

Beginning in 1979, the commercial sector sales total is directly from the Sales reports. Through 1978, 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.

Beginning in 1979, the industrial sector sales total is the sum of the sales for industrial, farm, oil company, off-highway diesel, and all other uses. Through 1978, 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 sales total is the sum of the sales for railroad, vessel bunkering, on-highway diesel, and military uses for all years.

Distillate Fuel Oil Consumed by the End-Use Sectors, Monthly

Residential sector and commercial sector 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. (For each month of the current year, the residential and commercial consumption increase from the same month in the previous year is based on the percent increase in that month's No. 2 heating oil sales from the same month in the previous year.) The years' No. 2 heating oil 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." Beginning in 1994, 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.

A distillate fuel oil "balance" is calculated as total distillate fuel oil supplied minus the amount consumed by the electric power sector, residential sector, commercial sector, and for highway use.

Industrial sector monthly consumption is estimated by multiplying each month's distillate fuel oil "balance" by the annual industrial consumption share of the annual distillate fuel oil "balance."

Total transportation sector monthly consumption is estimated as total distillate fuel oil supplied minus the amount consumed by the residential, commercial, industrial, and electric power sectors.

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 Form FERC-423 (formerly Form FPC-423) were used as estimates of this consumption. Through 2004, all remaining jet fuel (kerosene-type and naphtha-type) is assigned to the transportation sector. Beginning in 2005, kerosene-type jet fuel is assigned to the transportation sector, while naphtha-type jet fuel is classified under "Other Petroleum Products," which is assigned to the industrial sector.

Kerosene

Kerosene product supplied is allocated to 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, "Annual Fuel Oil and Kerosene Sales Report" (previously Form EIA-172).

Beginning in 1979, the residential sector sales total is directly from the Sales reports. Through 1978, each year's sales category called "heating" is allocated to the residential, commercial, and industrial sectors in proportion to the 1979 shares.

Beginning in 1979, the commercial sector sales total is directly from the Sales reports. Through 1978, each year's sales category called "heating" is allocated to the residential, commercial, and industrial sectors in proportion to the 1979 shares.

Beginning in 1979, the industrial sector sales total is the sum of the sales for industrial, farm, and all other uses. Through 1978, each year's sales category called "heating" is allocated to the residential, commercial and industrial sectors in proportion to the 1979 shares, and the 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 sectors combined are converted from thousand gallons per year to thousand barrels per year and are assumed to be the annual consumption of LPG by the combined sectors. Beginning in 2003, residential sector LPG consumption is assumed to equal propane retail sales, with the remainder of the combined residential and commercial LPG consumption being assigned to the commercial sector. Through 2002, residential sector LPG consumption is based on the average of the state residential shares for 2003–2008, with the remainder of the combined residential and commercial LPG consumption being assigned to the commercial 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 80 percent (in 2008).

LPG consumed annually by the industrial sector is estimated as the difference between LPG total product supplied and the sum of the estimated LPG consumption by the residential, commercial, and transportation sectors. The industrial sector LPG consumption 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, "Sales of Liquefied Petroleum Gases."

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

Portions of petroleum coke are consumed by the electric power sector (see sources for Table 7.4b) and the commercial sector (see sources for Table 7.4c). The remaining petroleum coke is assigned to the industrial sector.

Residual Fuel Oil

Residual fuel oil consumption is assigned to the sectors as follows:

Residual Fuel Oil Consumed by the Electric Power Sector

See sources for Table 7.4b. For 1973–1979, electric utility consumption of residual fuel oil is assumed to be the amount of petroleum consumed in steam-electric power plants. For 1980–2000, electric utility consumption of residual fuel oil is assumed to be the amount of heavy oil (fuel oil nos. 4, 5, and 6) consumed.

Residual Fuel Oil Consumed by the End-Use Sectors, Annually

The aggregate end-use amount is total residual fuel oil supplied minus the amount consumed by the electric power sector. The end-use total consumed annually is allocated to the individual end-use sectors (commercial, industrial, and transportation) in proportion to each sector's share of 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, "Annual Fuel Oil and Kerosene Sales Report" (previously Form EIA-172). Shares for the current year are based on the most recent Sales report.

Following are notes on the individual sector groupings:

Beginning in 1979, commercial sales data are directly from the Sales reports. Through 1978, each year's sales subtotal of the heating plus industrial category is allocated to the commercial and industrial sectors in proportion to the 1979 shares.

Beginning in 1979, industrial sales data are the sum of sales for industrial, oil company, and all other uses. Through 1978, each year's sales subtotal of the heating plus industrial category is allocated to the commercial and industrial sectors in proportion to the 1979 shares, and the 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 Oil Consumed by the End-Use Sectors, Monthly

Commercial sector 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. (For each month of the current year, the consumption increase from the same month in the previous year is based on the percent increase in that month's No. 2 heating oil sales from the same month in the previous year.) The years' No. 2 heating oil 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.

A residual fuel oil "balance" is calculated as total residual fuel oil supplied minus the amount consumed by the electric power sector, commercial sector, and by industrial combined-heat-and-power plants (see sources for Table 7.4c).

Transportation sector monthly consumption is estimated by multiplying each month's residual fuel oil "balance" by the annual transportation consumption share of the annual residual fuel oil "balance."

Total industrial sector monthly consumption is estimated as total residual fuel oil supplied minus the amount consumed by the commercial, transportation, and electric power sectors.

Other Petroleum Products

Consumption of all remaining petroleum products is assigned to the industrial sector. Other petroleum products include pentanes plus, petrochemical feedstocks, special naphthas, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1981, also includes

negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components. Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

Table 3.8a Sources

Distillate Fuel Oil, Kerosene, Petroleum Coke, and Residual Fuel Oil

Residential and/or commercial sector consumption data in thousand barrels per day for these petroleum products are from Table 3.7a, and are converted to trillion Btu by multiplying by the appropriate heat content factors in Table A1.

Liquefied Petroleum Gases (LPG)

Residential and commercial sector consumption data in thousand barrels per day for LPG are from Table 3.7a, and are converted to trillion Btu by multiplying by the propane heat content factor in Table A1.

Motor Gasoline

Commercial sector consumption data in thousand barrels per day for motor gasoline are from Table 3.7a, and are converted to trillion Btu by multiplying by the motor gasoline heat content factors in Table A3.

Total Petroleum

Residential sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under "Residential Sector" in Table 3.8a. Commercial sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under "Commercial Sector" in Table 3.8a.

Table 3.8b Sources

Asphalt and Road Oil, Distillate Fuel Oil, Kerosene, Lubricants, Petroleum Coke, and Residual Fuel Oil

Industrial sector consumption data in thousand barrels per day for these petroleum products are from Table 3.7b, and are converted to trillion Btu by multiplying by the appropriate heat content factors in Table A1.

Liquefied Petroleum Gases (LPG)

Industrial sector consumption data for LPG are calculated by subtracting LPG consumption data in trillion Btu for the residential (Table 3.8a), commercial (Table 3.8a), and transportation (Table 3.8c) sectors from total LPG consumption (Table 3.6).

Motor Gasoline

Industrial sector consumption data in thousand barrels per day for motor gasoline are from Table 3.7b, and are converted to trillion Btu by multiplying by the motor gasoline heat content factors in Table A3.

Other Petroleum Products

Industrial sector “Other” petroleum data are equal to the “Other” petroleum data in Table 3.6.

Total Petroleum

Industrial sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown in Table 3.8b.

Table 3.8c Sources**Aviation Gasoline, Distillate Fuel Oil, Lubricants, Petroleum Coke, and Residual Fuel Oil**

Transportation and/or electric power sector consumption data in thousand barrels per day for these petroleum products are from Table 3.7c, and are converted to trillion Btu by multiplying by the appropriate heat content factors in Table A1.

Jet Fuel

Transportation sector consumption data in thousand barrels

per day for kerosene-type jet fuel and, through 2004, naphtha-type jet fuel (see sources for Table 3.7c) are converted to trillion Btu by multiplying by the appropriate heat content factors in Table A1. Total transportation sector jet fuel consumption is the sum of the data in trillion Btu for kerosene-type and naphtha-type jet fuel.

Liquefied Petroleum Gases (LPG)

Transportation sector consumption data in thousand barrels per day for LPG are from Table 3.7c, and are converted to trillion Btu by multiplying by the propane heat content factor in Table A1.

Motor Gasoline

Transportation sector consumption data in thousand barrels per day for motor gasoline are from Table 3.7c, and are converted to trillion Btu by multiplying by the motor gasoline heat content factors in Table A3.

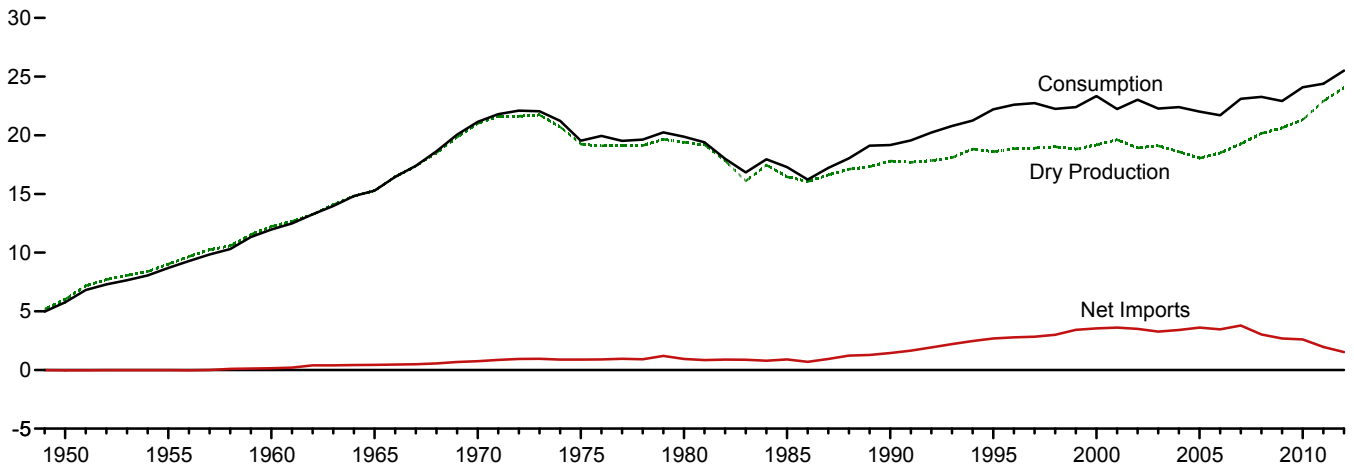
Total Petroleum

Transportation sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under “Transportation Sector” in Table 3.8c. Electric power sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under “Electric Power Sector” in Table 3.8c.

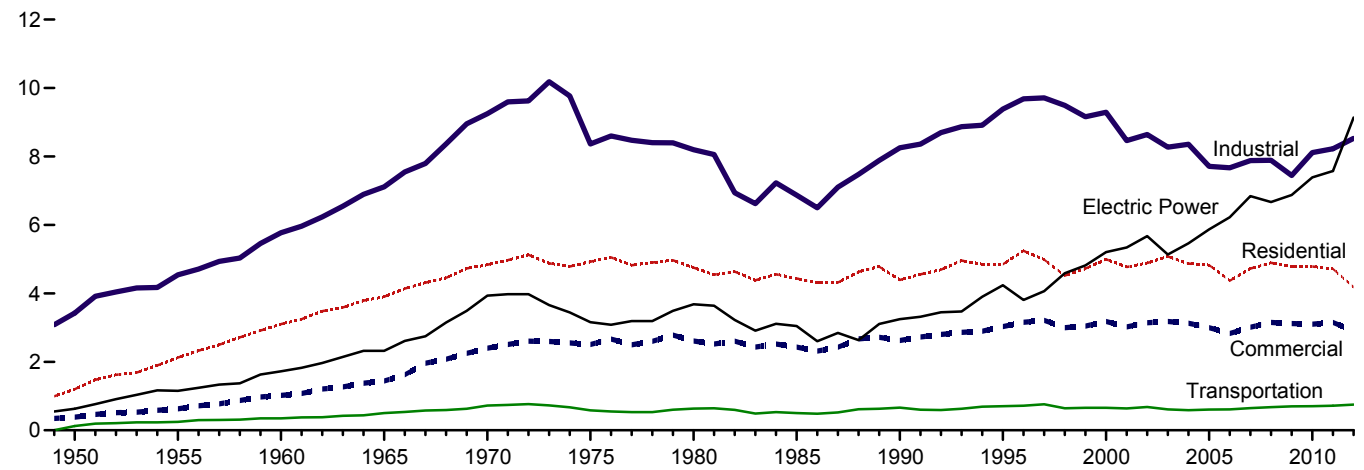
4. Natural Gas

Figure 4.1 Natural Gas
(Trillion Cubic Feet)

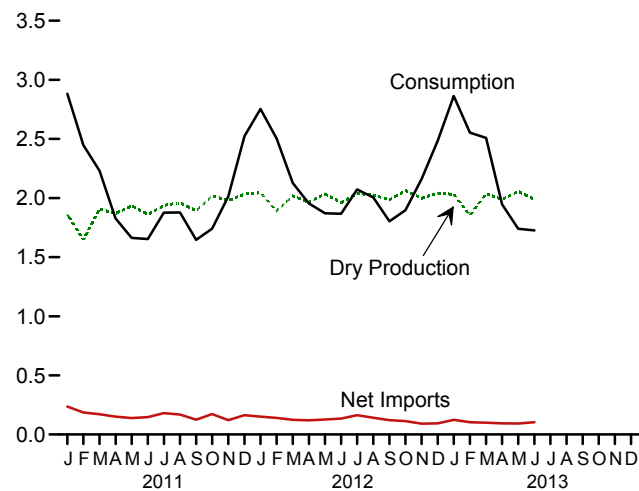
Overview, 1949–2012



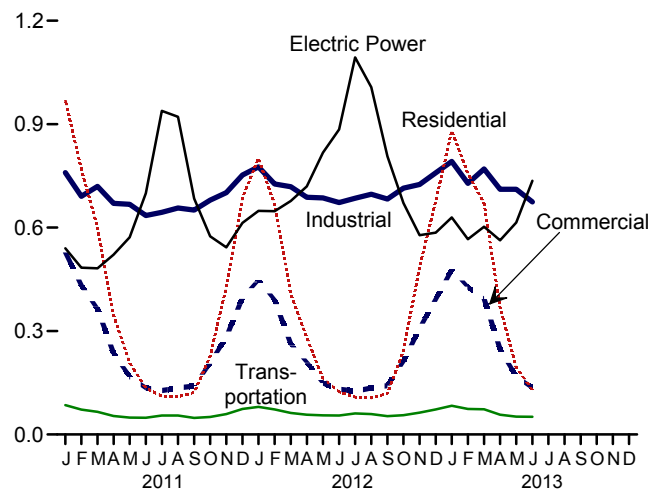
Consumption by Sector, 1949–2012



Overview, Monthly



Consumption by Sector, Monthly



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#naturalgas>.
Sources: Tables 4.1 and 4.3.

Table 4.1 Natural Gas Overview
(Billion Cubic Feet)

	Gross Withdrawals ^a	Marketed Production (Wet) ^b	Extraction Loss ^c	Dry Gas Production ^d	Supplemental Gaseous Fuels ^e	Trade			Net Storage Withdrawals ^f	Balancing Item ^g	Consumption ^h
						Imports	Exports	Net Imports			
1950 Total	8,480	ⁱ 6,282	260	ⁱ 6,022	NA	0	26	-26	-54	-175	5,767
1955 Total	11,720	ⁱ 9,405	377	ⁱ 9,029	NA	11	31	-20	-68	-247	8,694
1960 Total	15,088	ⁱ 12,771	543	ⁱ 12,228	NA	156	11	144	-132	-274	11,967
1965 Total	17,963	ⁱ 16,040	753	ⁱ 15,286	NA	456	26	430	-118	-319	15,280
1970 Total	23,786	ⁱ 21,921	906	ⁱ 21,014	NA	821	70	751	-398	-228	21,139
1975 Total	21,104	ⁱ 20,109	872	ⁱ 19,236	NA	953	73	880	-344	-235	19,538
1980 Total	21,870	20,180	777	19,403	155	985	49	936	23	-640	19,877
1985 Total	19,607	17,270	816	16,454	126	950	55	894	235	-428	17,281
1990 Total	21,523	18,594	784	17,810	123	1,532	86	1,447	-513	307	^j 19,174
1995 Total	23,744	19,506	908	18,599	110	2,841	154	2,687	415	396	22,207
2000 Total	24,174	20,198	1,016	19,182	90	3,782	244	3,538	829	-306	23,333
2001 Total	24,501	20,570	954	19,616	86	3,977	373	3,604	-1,166	99	22,239
2002 Total	23,941	19,885	957	18,928	68	4,015	516	3,499	467	65	23,027
2003 Total	24,119	19,974	876	19,099	68	3,944	680	3,264	-197	44	22,277
2004 Total	23,970	19,517	927	18,591	60	4,259	854	3,404	-114	461	22,403
2005 Total	23,457	18,927	876	18,051	64	4,341	729	3,612	52	236	22,014
2006 Total	23,535	19,410	906	18,504	66	4,186	724	3,462	-436	103	21,699
2007 Total	24,664	20,196	930	19,266	63	4,608	822	3,785	192	-203	23,104
2008 Total	25,636	21,112	953	20,159	61	3,984	963	3,021	34	2	23,277
2009 Total	26,057	21,648	1,024	20,624	65	3,751	1,072	2,679	-355	-103	22,910
2010 Total	26,816	22,382	1,066	21,316	65	3,741	1,137	2,604	-13	115	24,087
2011 January	2,299	1,953	92	1,861	5	372	136	236	811	-31	2,882
February	2,104	1,729	82	1,647	4	311	125	186	594	16	2,448
March	2,411	2,002	95	1,908	5	315	145	171	151	-3	2,232
April	2,350	1,961	93	1,868	5	278	127	151	-216	20	1,828
May	2,411	2,031	96	1,935	5	271	132	139	-405	-10	1,663
June	2,313	1,954	92	1,862	5	267	120	147	-346	-15	1,653
July	2,340	2,033	96	1,937	5	293	113	180	-248	3	1,877
August	2,370	2,057	97	1,960	5	280	111	169	-249	-7	1,878
September	2,358	1,987	94	1,893	5	252	127	125	-404	27	1,646
October	2,502	2,119	100	2,019	5	282	110	173	-391	-65	1,741
November	2,476	2,076	98	1,978	5	249	128	121	-41	-50	2,014
December	2,544	2,135	101	2,034	5	298	134	163	390	-69	2,524
Total	28,479	24,036	1,134	22,902	60	3,469	1,507	1,962	-354	-185	24,385
2012 January	2,573	^E 2,149	105	^E 2,044	6	281	130	151	545	9	2,754
February	2,378	^E 1,989	99	^E 1,890	5	270	130	140	459	9	2,504
March	2,537	^E 2,123	105	^E 2,017	6	265	141	124	-39	19	2,127
April	2,445	^E 2,065	102	^E 1,963	4	243	120	120	-137	5	1,956
May	2,530	^E 2,139	105	^E 2,034	4	259	133	126	-283	-11	1,871
June	2,420	^E 2,061	100	^E 1,962	5	260	125	135	-230	-4	1,868
July	2,461	^E 2,142	103	^E 2,039	5	281	118	163	-134	1	2,073
August	2,374	^E 2,130	104	^E 2,026	5	281	139	142	-168	(s)	2,004
September	2,432	^E 2,090	105	^E 1,985	5	258	137	121	-291	-16	1,804
October	2,576	^E 2,174	111	^E 2,063	5	253	140	113	-241	-44	1,897
November	2,503	^E 2,108	109	^E 1,999	5	234	142	92	125	-61	2,160
December	2,562	^E 2,149	107	^E 2,041	6	252	159	94	385	-39	2,486
Total	29,792	^E 25,319	1,257	^E 24,063	62	3,138	1,619	1,519	^R -9	-132	25,502
2013 January	^R 2,546	^{RE} 2,136	105	^{RE} 2,031	6	278	155	124	721	^R -18	2,864
February	^R 2,316	^{RE} 1,951	98	^E 1,853	5	237	133	104	604	^R -12	2,553
March	^R 2,546	^E 2,146	110	^E 2,036	6	248	149	100	381	-14	2,508
April	^R 2,483	^E 2,095	107	^E 1,988	5	220	126	95	-136	-4	1,947
May	^R 2,540	^{RE} 2,166	111	^{RE} 2,055	^R 5	235	142	93	-418	^R 5	1,740
June	2,443	^E 2,096	107	^E 1,989	3	237	134	103	-372	3	1,726
6-Month Total	14,875	^E 12,590	638	^E 11,953	30	1,456	838	618	779	-41	13,338
2012 6-Month Total	14,884	^E 12,527	617	^E 11,910	31	1,578	783	795	315	27	13,078
2011 6-Month Total	13,888	11,630	549	11,081	29	1,814	784	1,030	589	-23	12,706

^a Gases withdrawn from natural gas, crude oil, coalbed, and shale gas wells. Includes natural gas, natural gas plant liquids, and nonhydrocarbon gases; but excludes lease condensate.

^b Gross withdrawals minus repressuring, nonhydrocarbon gases removed, and vented and flared. See Note 1, "Natural Gas Production," at end of section.

^c See Note 2, "Natural Gas Extraction Loss," at end of section.

^d Marketed production (wet) minus extraction loss.

^e See Note 3, "Supplemental Gaseous Fuels," at end of section.

^f Net withdrawals from underground storage. For 1980–2011, also includes net withdrawals of liquefied natural gas in above-ground tanks. See Note 4, "Natural Gas Storage," at end of section.

^g See Note 5, "Natural Gas Balancing Item," at end of section. Beginning in 1980, excludes transit shipments that cross the U.S.-Canada border (i.e., natural gas delivered to its destination via the other country).

^h See Note 6, "Natural Gas Consumption," at end of section.

ⁱ Through 1979, may include unknown quantities of nonhydrocarbon gases.

^j For 1989–1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector" on Table 4.3. See Note 7, "Natural Gas Consumption, 1989–1992," at end of section.

^R=Revised. ^E=Estimate. (s)=Less than 0.5 billion cubic feet and greater than -0.5 billion cubic feet. NA=Not available.

Notes: • See Note 8, "Natural Gas Data Adjustments, 1993–2000," at end of section. • Through 1964, all volumes are shown on a pressure base of 14.65 psia (pounds per square inch absolute) at 60° Fahrenheit; beginning in 1965, the pressure base is 14.73 psia at 60° Fahrenheit. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia (except Alaska, for which underground storage is excluded from "Net Storage Withdrawals" through 2012).

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#naturalgas> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#naturalgas> for all available monthly and annual data beginning in 1973.

Sources: • **Imports and Exports:** Table 4.2. • **Consumption:** Table 4.3. • **Balancing Item:** Calculated as consumption minus dry gas production, supplemental gaseous fuels, net imports, and net storage withdrawals. • **All Other Data: 1949–2007**—U.S. Energy Information Administration (EIA), *Natural Gas Annual*, annual reports. **2008 forward**—EIA, *Natural Gas Monthly*, August 2013, Table 1.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 4.2 Natural Gas Trade by Country
(Billion Cubic Feet)

	Imports									Exports				
	Algeria ^a	Canada ^b	Egypt ^a	Mexico ^b	Nigeria ^a	Qatar ^a	Trinidad and Tobago ^a	Other ^{a,c}	Total	Canada ^b	Japan ^a	Mexico ^b	Other ^{a,d}	Total
1950 Total	0	0	0	0	0	0	0	0	0	3	0	23	0	26
1955 Total	0	11	0	(s)	0	0	0	0	11	11	0	20	0	31
1960 Total	0	109	0	47	0	0	0	0	156	6	0	6	0	11
1965 Total	0	405	0	52	0	0	0	0	456	18	0	8	0	26
1970 Total	1	779	0	41	0	0	0	0	821	11	44	15	0	70
1975 Total	5	948	0	0	0	0	0	0	953	10	53	9	0	73
1980 Total	86	797	0	102	0	0	0	0	985	(s)	45	4	0	49
1985 Total	24	926	0	0	0	0	0	0	950	(s)	53	2	0	55
1990 Total	84	1,448	0	0	0	0	0	0	1,532	17	53	16	0	86
1995 Total	18	2,816	0	7	0	0	0	0	2,841	28	65	61	0	154
2000 Total	47	3,544	0	12	13	46	99	21	3,782	73	66	106	0	244
2001 Total	65	3,729	0	10	38	23	98	14	3,977	167	66	141	0	373
2002 Total	27	3,785	0	2	8	35	151	8	4,015	189	63	263	0	516
2003 Total	53	3,437	0	0	50	14	378	11	3,944	271	66	343	0	680
2004 Total	120	3,607	0	0	12	12	462	46	4,259	395	62	397	0	854
2005 Total	97	3,700	73	9	8	3	439	11	4,341	358	65	305	0	729
2006 Total	17	3,590	120	13	57	0	389	0	4,186	341	61	322	0	724
2007 Total	77	3,783	115	54	95	18	448	18	4,608	482	47	292	2	822
2008 Total	0	3,589	55	43	12	3	267	15	3,984	559	39	365	0	963
2009 Total	0	3,271	160	28	13	13	236	29	3,751	701	31	338	3	1,072
2010 Total	0	3,280	73	30	42	46	190	81	3,741	739	33	333	32	1,137
2011 January	0	332	3	(s)	0	13	16	9	372	85	2	37	13	136
February	0	279	6	(s)	0	0	11	15	311	84	2	37	3	125
March	0	277	6	(s)	0	14	10	9	315	98	2	41	3	145
April	0	245	6	(s)	0	4	11	13	278	76	2	43	6	127
May	0	236	3	(s)	0	24	8	0	271	80	3	44	6	132
June	0	239	6	(s)	0	5	11	6	267	71	2	47	0	120
July	0	273	0	(s)	0	5	13	3	293	64	0	47	3	113
August	0	250	0	(s)	2	8	11	9	280	67	2	42	0	111
September	0	231	0	(s)	0	4	8	9	252	77	2	39	8	127
October	0	251	3	1	0	8	8	12	282	64	0	43	3	110
November	0	233	0	(s)	0	3	12	0	249	84	2	39	3	128
December	0	272	3	(s)	0	4	10	9	298	87	0	42	5	134
Total	0	3,117	35	3	2	91	129	92	3,469	937	18	500	52	1,507
2012 January	0	265	0	(s)	0	4	9	3	281	84	3	40	3	130
February	0	250	3	(s)	0	0	11	6	270	87	2	42	0	130
March	0	246	0	(s)	0	4	13	3	265	93	0	46	3	141
April	0	235	0	(s)	0	4	1	3	243	78	0	45	0	123
May	0	243	0	(s)	0	6	11	0	259	78	3	52	0	133
June	0	251	0	(s)	0	0	8	0	260	64	2	58	0	125
July	0	266	0	(s)	0	3	12	0	281	62	0	57	0	118
August	0	262	0	(s)	0	3	16	0	281	77	2	60	0	139
September	0	246	0	(s)	0	3	8	0	258	80	0	58	0	137
October	0	243	0	(s)	0	6	5	0	253	75	2	61	3	140
November	0	220	0	(s)	0	3	8	3	234	93	0	49	0	142
December	0	235	0	(s)	0	0	8	9	252	101	0	52	6	159
Total	0	2,963	3	(s)	0	34	112	26	3,138	971	14	620	14	1,619
2013 January	0	265	0	(s)	0	0	11	3	278	99	0	56	0	155
February	0	225	0	(s)	0	4	8	0	237	84	0	49	0	133
March	0	240	0	(s)	0	4	5	0	248	92	0	56	0	149
April	0	215	0	(s)	0	0	5	0	220	71	0	55	0	126
May	0	^R 230	0	(s)	0	0	6	0	235	82	0	60	0	142
June	0	229	0	(s)	0	0	8	0	237	76	0	58	0	134
6-Month Total	0	1,404	0	(s)	0	7	42	3	1,456	504	0	334	0	838
2012 6-Month Total	0	1,491	3	(s)	0	16	54	14	1,578	483	10	284	6	783
2011 6-Month Total	0	1,607	29	1	0	60	67	51	1,814	494	12	248	30	784

^a As liquefied natural gas.

^b By pipeline, except for very small amounts of liquefied natural gas imported from Canada in 1973, 1977, and 1981; exported to Mexico beginning in 1998; and exported to Canada in 2007, 2012, and 2013. See Note 9, "Natural Gas Imports and Exports," at end of section.

^c Australia in 1997–2001 and 2004; Brunei in 2002; Equatorial Guinea in 2007; Indonesia in 1986 and 2000; Malaysia in 1999 and 2002–2005; Norway in 2008–2012; Oman in 2000–2005; Peru in 2010 and 2011; United Arab Emirates in 1996–2000; Yemen in 2010 forward; and Other (unassigned) in 2004.

^d Brazil in 2010–2012; Chile in 2011; China in 2011; India in 2010–2012; Russia in 2007; South Korea in 2009–2011; Spain in 2010 and 2011; and United Kingdom in 2010 and 2011.

^R—Revised. (s)=Less than 500 million cubic feet.

Notes: • See Note 9, "Natural Gas Imports and Exports," at end of section.
• Through 1964, all volumes are shown on a pressure base of 14.65 psia (pounds

per square inch absolute) at 60° Fahrenheit; beginning in 1965, the pressure base is 14.73 psia at 60° Fahrenheit. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#naturalgas> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#naturalgas> for all available monthly and annual data beginning in 1973.

Sources: • **1949–1954:** U.S. Energy Information Administration (EIA) estimates based on Bureau of Mines, Minerals Yearbook, "Natural Gas" chapter. • **1955–1971:** Federal Power Commission data. • **1972–1987:** EIA, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." • **1988–2010:** EIA, *Natural Gas Annual*, annual reports. • **2011 forward:** EIA, *Natural Gas Monthly*, August 2013, Tables 4 and 5; and U.S. Department of Energy, Office of Fossil Energy, "Natural Gas Imports and Exports."

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 4.3 Natural Gas Consumption by Sector
(Billion Cubic Feet)

	End-Use Sectors										Electric Power Sector ^g	Total	
	Residential	Commercial ^a	Lease and Plant Fuel	Industrial			Transportation						
				Other Industrial			Pipelines ^d and Distribution ^e	Vehicle Fuel	Total				
				CHP ^b	Non-CHP ^c	Total				Total			
1950 Total	1,198	388	928	(h)	2,498	2,498	3,426	126	NA	126	629	5,767	
1955 Total	2,124	629	1,131	(h)	3,411	3,411	4,542	245	NA	245	1,153	8,694	
1960 Total	3,103	1,020	1,237	(h)	4,535	4,535	5,771	347	NA	347	1,725	11,967	
1965 Total	3,903	1,444	1,156	(h)	5,955	5,955	7,112	501	NA	501	2,321	15,280	
1970 Total	4,837	2,399	1,399	(h)	7,851	7,851	9,249	722	NA	722	3,932	21,139	
1975 Total	4,924	2,508	1,396	(h)	6,968	6,968	8,365	583	NA	583	3,158	19,538	
1980 Total	4,752	2,611	1,026	(h)	7,172	7,172	8,198	635	NA	635	3,682	19,877	
1985 Total	4,433	2,432	966	(h)	5,901	5,901	6,867	504	NA	504	3,044	17,281	
1990 Total	4,391	2,623	1,236	(h)	5,963	5,963	7,018	660	(s)	660	3,245	19,174	
1995 Total	4,850	3,031	1,220	(h)	6,906	6,906	8,164	700	5	705	4,237	22,207	
2000 Total	4,996	3,182	1,151	(h)	6,757	6,757	8,142	642	13	655	5,206	23,333	
2001 Total	4,771	3,023	1,119	(h)	6,035	6,035	7,344	625	15	640	5,342	22,239	
2002 Total	4,889	3,144	1,113	(h)	6,287	6,287	7,527	660	15	675	5,672	23,027	
2003 Total	5,079	3,179	1,122	(h)	6,007	6,007	7,150	591	18	609	5,135	22,277	
2004 Total	4,869	3,129	1,098	(h)	6,066	6,066	7,256	566	21	587	5,464	22,403	
2005 Total	4,827	2,999	1,112	(h)	5,518	5,518	6,601	584	23	607	5,869	22,014	
2006 Total	4,368	2,832	1,142	(h)	5,412	5,412	6,527	584	24	608	6,222	21,699	
2007 Total	4,722	3,013	1,226	(h)	5,604	5,604	6,655	621	25	646	6,841	23,104	
2008 Total	4,892	3,153	1,220	(h)	5,515	5,515	6,670	648	26	674	6,668	23,277	
2009 Total	4,779	3,119	1,275	(h)	5,178	5,178	6,167	670	27	697	6,873	22,910	
2010 Total	4,782	3,103	1,286	(h)	5,797	5,797	6,826	674	29	703	7,387	24,087	
2011 January	970	528	107	(h)	563	563	652	759	82	3	85	540	2,882
February	769	432	97	(h)	513	513	594	691	70	2	72	484	2,448
March	601	364	111	(h)	526	526	608	719	63	3	66	482	2,232
April	347	236	109	(h)	479	479	562	670	51	3	54	521	1,828
May	208	168	112	(h)	468	468	555	667	46	3	49	572	1,663
June	135	135	107	(h)	440	440	527	635	46	3	48	699	1,653
July	111	128	110	(h)	438	438	535	644	52	3	55	939	1,877
August	109	135	111	(h)	446	446	546	657	52	3	55	921	1,878
September	122	141	109	(h)	451	451	541	651	46	3	48	684	1,646
October	227	208	116	(h)	479	479	563	680	48	3	51	575	1,741
November	429	283	115	(h)	501	501	587	701	56	3	59	543	2,014
December	686	397	118	(h)	539	539	635	753	71	3	74	614	2,524
Total	4,714	3,154	1,323	(h)	5,842	5,842	6,905	8,227	684	32	716	7,574	24,385
2012 January	801	448	E 118	(h)	560	560	658	776	E 77	E 3	E 80	648	2,754
February	667	390	E 109	(h)	527	527	617	726	E 70	E 3	E 73	648	2,504
March	407	262	E 117	(h)	512	512	602	718	E 60	E 3	E 62	677	2,127
April	281	210	E 114	(h)	487	487	574	688	E 55	E 3	E 58	720	1,956
May	163	149	E 118	(h)	476	476	568	686	E 52	E 3	E 55	817	1,871
June	124	131	E 113	(h)	465	465	559	673	E 52	E 3	E 55	885	1,868
July	109	125	E 118	(h)	466	466	567	685	E 58	E 3	E 61	1,093	2,073
August	106	135	E 117	(h)	482	482	580	697	E 56	E 3	E 59	1,007	2,004
September	119	142	E 115	(h)	475	475	568	683	E 51	E 3	E 53	807	1,804
October	242	213	E 120	(h)	500	500	595	714	E 53	E 3	E 56	671	1,897
November	486	308	E 116	(h)	512	512	609	725	E 61	E 3	E 63	578	2,160
December	677	393	E 118	(h)	538	538	641	759	E 70	E 3	E 72	585	2,486
Total	4,180	2,907	E 1,393	(h)	5,998	5,998	7,138	8,531	E 715	E 33	E 748	9,137	25,502
2013 January	881	478	E 118	(h)	573	573	675	792	E 80	E 3	E 83	629	2,864
February	757	428	E 107	(h)	530	530	621	728	E 72	E 3	E 74	566	2,553
March	670	393	E 118	(h)	554	554	652	770	E 70	E 3	E 73	602	2,508
April	369	247	E 115	(h)	506	506	596	711	E 55	E 3	E 57	563	1,947
May	194	168	E 119	(h)	498	498	592	711	E 49	E 3	E 52	615	1,740
June	129	136	E 115	(h)	466	466	559	675	E 48	E 3	E 51	736	1,726
6-Month Total	3,000	1,849	E 693	(h)	3,127	3,127	3,695	4,388	E 374	E 16	E 390	3,712	13,338
2012 6-Month Total	2,442	1,591	E 689	(h)	3,025	3,025	3,578	4,268	E 367	E 16	E 383	4,395	13,078
2011 6-Month Total	3,029	1,863	E 644	(h)	2,989	2,989	3,498	4,142	E 358	E 16	E 374	3,298	12,706

^a All commercial sector fuel use, including that at commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Table 7.4c for CHP fuel use.

^b Industrial combined-heat-and-power (CHP) and a small number of industrial electricity-only plants.

^c All industrial sector fuel use other than that in "Lease and Plant Fuel" and "CHP."

^d Natural gas consumed in the operation of pipelines, primarily in compressors.

^e Natural gas used as fuel in the delivery of natural gas to consumers.

^f 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.

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

^h Included in "Non-CHP."

ⁱ For 1989–1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector." See Note 7, "Natural Gas Consumption, 1989–1992," at end of section.

E=Estimate. NA=Not available. (s)=Less than 500 million cubic feet.

Notes: • Data are for natural gas, plus a small amount of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of section.

• See Note 8, "Natural Gas Data Adjustments, 1993–2000," at end of section.

• See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.

Section 7. • Through 1964, all volumes are shown on a pressure base of 14.65 psia (pounds per square inch absolute) at 60° Fahrenheit; beginning in 1965, the pressure base is 14.73 psia at 60° Fahrenheit. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#naturalgas> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#naturalgas> for all available monthly and annual data beginning in 1973.

Sources: • Residential, Commercial, Lease and Plant Fuel, Other Industrial Total and Pipelines and Distribution: 1949–2007—U.S. Energy Information Administration (EIA), *Natural Gas Annual (NGA)*, annual reports and unpublished revisions. 2008 forward—EIA, *Natural Gas Monthly (NGM)*, August 2013, Table 2. • Industrial CHP: Table 7.4c. • Vehicle Fuel: 1990 and 1991—EIA, NGA 2000, (November 2001), Table 95. 1992–1998—EIA, "Alternatives to Traditional Transportation Fuels 1999" (October 1999), Table 10, and "Alternatives to Traditional Transportation Fuels 2003" (February 2004), Table 10. Data for compressed natural gas and liquefied natural gas in gasoline-equivalent gallons were converted to cubic feet by multiplying by the motor gasoline conversion factor (see Table A3) and dividing by the natural gas end-use sectors conversion factor (see Table A4). 1999–2007—EIA, NGA, annual reports. 2008 forward—EIA, NGM, August 2013, Table 2. • Electric Power Sector: Table 7.4b.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 4.4 Natural Gas in Underground Storage
(Volumes in Billion Cubic Feet)

	Natural Gas in Underground Storage, End of Period			Change in Working Gas From Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total ^a	Volume	Percent	Withdrawals	Injections	Net ^{b,c}
1950 Total	NA	NA	NA	NA	NA	175	230	-54
1955 Total	863	505	1,368	40	8.7	437	505	-68
1960 Total	NA	NA	2,184	NA	NA	713	844	-132
1965 Total	1,848	1,242	3,090	83	7.2	960	1,078	-118
1970 Total	2,326	1,678	4,004	257	18.1	1,459	1,857	-398
1975 Total	3,162	2,212	5,374	162	7.9	1,760	2,104	-344
1980 Total	3,642	2,655	6,297	-99	-3.6	1,910	1,896	14
1985 Total	3,842	2,607	6,448	-270	-9.4	2,359	2,128	231
1990 Total	3,868	3,068	6,936	555	22.1	1,934	2,433	-499
1995 Total	4,349	2,153	6,503	-453	-17.4	2,974	2,566	408
2000 Total	4,352	1,719	6,071	-806	-31.9	3,498	2,684	814
2001 Total	4,301	2,904	7,204	1,185	68.9	2,309	3,464	-1,156
2002 Total	4,340	2,375	6,715	-528	-18.2	3,138	2,670	468
2003 Total	4,303	2,563	6,866	187	7.9	3,099	3,292	-193
2004 Total	4,201	2,696	6,897	133	5.2	3,037	3,150	-113
2005 Total	4,200	2,635	6,835	-61	-2.3	3,057	3,002	55
2006 Total	4,211	3,070	7,281	435	16.5	2,493	2,924	-431
2007 Total	4,234	2,879	7,113	-191	-6.2	3,325	3,133	192
2008 Total	4,232	2,840	7,073	-39	-1.4	3,374	3,340	34
2009 Total	4,277	3,130	7,407	290	10.2	2,966	3,315	-349
2010 Total	4,301	3,111	7,412	-19	-6	3,274	3,291	-17
2011 January	4,303	2,306	6,609	2	.1	849	50	799
February	4,302	1,722	6,024	39	2.3	666	82	584
March	4,302	1,577	5,879	-75	-4.6	314	168	146
April	4,304	1,788	6,092	-223	-11.1	100	312	-212
May	4,304	2,187	6,491	-233	-9.6	58	458	-399
June	4,302	2,530	6,831	-210	-7.7	80	421	-340
July	4,300	2,775	7,075	-190	-6.4	116	359	-244
August	4,300	3,019	7,319	-134	-4.2	126	370	-244
September	4,301	3,416	7,717	-92	-2.6	55	454	-398
October	4,302	3,804	8,106	-47	-1.2	52	437	-385
November	4,300	3,843	8,143	74	2.0	184	221	-38
December	4,302	3,462	7,764	351	11.3	474	90	383
Total	4,302	3,462	7,764	351	11.3	3,074	3,422	-348
2012 January	4,307	R 2,915	R 7,222	R 609	R 26.4	R 620	R 75	545
February	4,307	2,455	6,762	733	R 42.5	R 515	R 56	459
March	4,325	2,477	6,802	900	57.1	R 203	R 242	-39
April	4,329	2,613	6,942	825	46.1	R 126	R 264	-137
May	4,334	2,890	R 7,224	R 703	32.2	R 73	R 356	-283
June	4,337	3,118	7,456	589	23.3	R 91	R 321	-230
July	4,339	3,246	7,585	471	17.0	129	263	-134
August	4,348	3,409	7,757	390	12.9	134	302	-168
September	4,352	3,693	8,045	278	8.1	67	358	-291
October	4,365	R 3,929	R 8,294	R 125	3.3	R 86	R 327	-241
November	4,372	3,799	8,172	-43	-1.1	R 281	R 156	125
December	4,371	3,413	7,784	-49	-1.4	490	105	385
Total	4,371	3,413	7,784	-49	-1.4	R 2,815	R 2,824	R -9
2013 January	4,373	2,703	7,076	R -212	-7.3	793	72	721
February	4,379	2,103	6,483	-351	-14.3	648	44	604
March	4,378	1,724	6,102	-753	-30.4	482	101	381
April	4,377	1,858	6,236	-755	-28.9	136	272	-136
May	4,381	2,272	6,653	-618	-21.4	49	467	-418
June	4,385	2,643	7,028	-475	-15.2	69	441	-372
6-Month Total	--	--	--	--	--	2,177	1,397	779
2012 6-Month Total	--	--	--	--	--	1,629	1,314	315
2011 6-Month Total	--	--	--	--	--	2,068	1,490	578

^a For total underground storage capacity at the end of each calendar year, see Note 4, "Natural Gas Storage," at end of section.

^b For 1980–2011, data differ from those shown on Table 4.1, which includes liquefied natural gas storage for that period.

^c Positive numbers indicate that withdrawals are greater than injections. Negative numbers indicate that injections are greater than withdrawals. Net withdrawals or injections may not equal the difference between applicable ending stocks. See Note 4, "Natural Gas Storage," at end of section.

R=Revised. -- =Not applicable. NA=Not available.

Notes: • Through 1964, all volumes are shown on a pressure base of 14.65 psia (pounds per square inch absolute) at 60° Fahrenheit; beginning in 1965, the pressure base is 14.73 psia at 60° Fahrenheit. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia (except Alaska, which is excluded through 2012).

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#naturalgas> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#naturalgas> for all available monthly

and annual data beginning in 1973.

Sources: • **Storage Activity: 1949–1975**—U.S. Energy Information Administration (EIA), *Natural Gas Annual 1994*, Volume 2, Table 9. **1976–1979**—EIA, *Natural Gas Production and Consumption 1979*, Table 1. **1980–1995**—EIA, *Historical Natural Gas Annual 1930 Through 2000*, Table 11. **1996–2007**—EIA, *Natural Gas Monthly (NGM)*, monthly issues. **2008 forward**—EIA, NGM, August 2013, Table 8. • **All Other Data: 1954–1974**—American Gas Association, *Gas Facts*, annual issues. **1975 and 1976**—Federal Energy Administration (FEA), Form FEA-G318-M-0, "Underground Gas Storage Report," and Federal Power Commission (FPC), Form FPC-8, "Underground Gas Storage Report." **1977 and 1978**—EIA, Form FEA-G318-M-0, "Underground Gas Storage Report," and Federal Energy Regulatory Commission (FERC), Form FERC-8, "Underground Gas Storage Report." **1979–1995**—EIA, Form EIA-191, "Underground Gas Storage Report," and FERC, Form FERC-8, "Underground Gas Storage Report." **1996–2007**—EIA, NGM, monthly issues. **2008 forward**—EIA, NGM, August 2013, Table 8.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Natural Gas

Note 1. Natural Gas Production. Final annual data are from the U.S. Energy Information Administration's (EIA) *Natural Gas Annual (NGA)*.

Data for the two most recent months presented are estimated. Some of the data for earlier months are also estimated or computed. For a discussion of computation and estimation procedures, see EIA's *Natural Gas Monthly (NGM)*.

Monthly data are considered preliminary until after publication of the NGA. Preliminary monthly data are gathered from reports to the Interstate Oil Compact Commission and the U.S. Minerals Management Service. Volumetric data are converted, as necessary, to a standard pressure base of 14.73 psia (pounds per square inch absolute) at 60° Fahrenheit. Unless there are major changes, data are not revised until after publication of the NGA.

Differences between annual data in the NGA and the sum of preliminary monthly data (January–December) are allocated proportionally to the months to create final monthly data.

Note 2. Natural Gas Extraction Loss. Extraction loss is the reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants—these natural gas plant liquids are transferred to petroleum supply.

Annual data are from EIA's *Natural Gas Annual (NGA)*, where they are estimated on the basis of the type and quantity of liquid products extracted from the gas stream and the calculated volume of such products at standard conditions. For a detailed explanation of the calculations used to derive estimated extraction losses, see the NGA.

Preliminary monthly data are estimated on the basis of extraction loss as an annual percentage of marketed production. This percentage is applied to each month's marketed production to estimate monthly extraction loss.

Monthly data are revised and considered final after publication of the NGA. Final monthly data are estimated by allocating annual extraction loss data to the months on the basis of total natural gas marketed production data from the NGA.

Note 3. Supplemental Gaseous Fuels. Supplemental gaseous fuels are any substances that, introduced into or commingled with natural gas, increase the volume available for disposition. Such substances include, but are not limited to, propane-air, refinery gas, coke oven gas, still gas, manufactured gas, biomass gas, and air or inert gases added for Btu stabilization.

Annual data beginning with 1980 are from EIA's *Natural Gas Annual (NGA)*. Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years. Monthly data are considered preliminary until

after publication of the NGA. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry gas production, net imports, and net withdrawals from storage. The ratio is applied to the monthly sum of the three elements to compute a monthly supplemental gaseous fuels figure.

Although the total amount of supplemental gaseous fuels consumed is known for 1980 forward, the amount consumed by each energy-use sector is estimated by EIA. These estimates are used to create natural gas (without supplemental gaseous fuels) data for Tables 1.3, 2.2, 2.3, 2.4, and 2.6 (note: to avoid double-counting in these tables, supplemental gaseous fuels are accounted for in their primary energy category: "Coal," "Petroleum," or "Biomass"). It is assumed that supplemental gaseous fuels are commingled with natural gas consumed by the residential, commercial, other industrial, and electric power sectors, but are not commingled with natural gas used for lease and plant fuel, pipelines and distribution, or vehicle fuel. The estimated consumption of supplemental gaseous fuels by each sector (residential, commercial, other industrial, and electric power) is calculated as that sector's natural gas consumption (see Table 4.3) divided by the sum of natural gas consumption by the residential, commercial, other industrial, and electric power sectors (see Table 4.3), and then multiplied by total supplemental gaseous fuels consumption (see Table 4.1). For estimated sectoral consumption of supplemental gaseous fuels in Btu, the residential, commercial, and other industrial values in cubic feet are multiplied by the "End-Use Sectors" conversion factors (see Table A4), and the electric power values in cubic feet are multiplied by the "Electric Power Sector" conversion factors (see Table A4). Total supplemental gaseous fuels consumption in Btu is calculated as the sum of the Btu values for the sectors.

Note 4. Natural Gas Storage. Natural gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals from the quantity in storage at the end of the previous period. The difference is due to changes in the quantity of native gas included in the base gas and/or losses in base gas due to migration from storage reservoirs.

Total underground storage capacity, which includes both active and inactive fields, at the end of each calendar year since 1975 (first year data were available), in billion cubic feet, was:

1975	...	6,280	1988	...	8,124	2001	...	8,182
1976	...	6,544	1989	...	8,120	2002	...	8,207
1977	...	6,678	1990	...	7,794	2003	...	8,206
1978	...	6,890	1991	...	7,993	2004	...	8,255
1979	...	6,929	1992	...	7,932	2005	...	8,268
1980	...	7,434	1993	...	7,989	2006	...	8,330
1981	...	7,805	1994	...	8,043	2007	...	8,402
1982	...	7,915	1995	...	7,953	2008	...	8,499
1983	...	7,985	1996	...	7,980	2009	...	8,656
1984	...	8,043	1997	...	8,332	2010	...	8,764
1985	...	8,087	1998	...	8,179	2011	...	8,849
1986	...	8,145	1999	...	8,229	2012	...	^P 9,011
1987	...	8,124	2000	...	8,241			

P= Preliminary.

Monthly underground storage data are collected from the Federal Energy Regulatory Commission Form FERC-8 (interstate data) and EIA Form EIA-191 (intrastate data). Beginning in January 1991, all data are collected on the revised Form EIA-191. Injection and withdrawal data from the FERC-8/EIA-191 survey are adjusted to correspond to data from Form EIA-176 following publication of EIA's *Natural Gas Annual* (NGA).

The final monthly and annual storage and withdrawal data for 1980–2011 include both underground and liquefied natural gas (LNG) storage. Annual data on LNG additions and withdrawals are from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying the ratio to the annual LNG data.

Note 5. Natural Gas Balancing Item. The balancing item for natural gas represents the difference between the sum of the components of natural gas supply and the sum of components of natural gas disposition. The differences may be due to quantities lost or to the effects of data reporting problems. Reporting problems include differences due to the net result of conversions of flow data metered at varying temperature and pressure bases and converted to a standard temperature and pressure base; the effect of variations in company accounting and billing practices; differences between billing cycle and calendar period time frames; and imbalances resulting from the merger of data reporting systems that vary in scope, format, definitions, and type of respondents.

Note 6. Natural Gas Consumption. Natural gas consumption statistics include data for the following: "Residential Sector": residential deliveries; "Commercial Sector": commercial deliveries, including to commercial combined-heat-and-power (CHP) and commercial electricity-only plants; "Industrial Sector": lease and plant fuel use, and other industrial deliveries, including to industrial CHP and industrial electricity-only plants; "Transportation Sector": pipelines and distribution use, and vehicle fuel use; and "Electric Power Sector": electric utility and independent power producer use.

Final data for series other than "Other Industrial CHP" and "Electric Power Sector" are from EIA's *Natural Gas Annual* (NGA). Monthly data are considered preliminary until after publication of the NGA. For more detailed information on the methods of estimating preliminary and final monthly data, see EIA's *Natural Gas Monthly*.

Note 7. Natural Gas Consumption, 1989–1992. Prior to 1993, deliveries to nonutility generators were not separately collected from natural gas companies on Form EIA-176, "Annual Report of Natural and Supplemental Gas Supply and Disposition." As a result, for 1989–1992, those volumes are probably included in both the industrial

and electric power sectors and double-counted in total consumption. In 1993, 0.28 trillion cubic feet was reported as delivered to nonutility generators.

Note 8. Natural Gas Data Adjustments, 1993–2000. For 1993–2000, the original data for natural gas delivered to industrial consumers (now "Other Industrial" in Table 4.3) included deliveries to both industrial users and independent power producers (IPPs). These data were adjusted to remove the estimated consumption at IPPs from "Other Industrial" and include it with electric utilities under "Electric Power Sector." (To estimate the monthly IPP consumption, the monthly pattern for Other Industrial CHP in Table 4.3 was used.)

For 1996–2000, monthly data for several natural gas series shown in EIA's Natural Gas Navigator (see http://www.eia.gov/dnav/ng/ng_cons_sum_dcu_nus_m.htm) were not reconciled and updated to be consistent with the final annual data in EIA's *Natural Gas Annual*. In the *Monthly Energy Review*, monthly data for these series were adjusted so that the monthly data sum to the final annual values. The Table 4.1 data series (and years) that were adjusted are: Gross Withdrawals (1996, 1997), Marketed Production (1997), Extraction Loss (1997, 1998, 2000), Dry Gas Production (1996, 1997), Supplemental Gaseous Fuels (1997–2000), Balancing Item (1997–2000), and Total Consumption (1997–2000). The Table 4.3 data series (and years) that were adjusted are: Lease and Plant Fuel (1997–2000), Total Industrial (1997–2000), Pipelines and Distribution (2000), Total Transportation (2000), and Total Consumption (1997–2000).

Note 9. Natural Gas Imports and Exports. The United States imports natural gas via pipeline from Canada and Mexico; and imports liquefied natural gas (LNG) via tanker from Algeria, Australia, Brunei, Egypt, Equatorial Guinea, Indonesia, Malaysia, Nigeria, Norway, Oman, Peru, Qatar, Trinidad and Tobago, the United Arab Emirates, and Yemen. In addition, very small amounts of LNG arrived from Canada in 1973 (667 million cubic feet), 1977 (572 million cubic feet), and 1981 (6 million cubic feet). The United States exports natural gas via pipeline to Canada and Mexico; and exports LNG via tanker to Brazil, China, Chile, India, Japan, Russia, South Korea, Spain, and United Kingdom. Also, small amounts of LNG have gone to Mexico since 1998 and to Canada in 2007, 2012, and 2013.

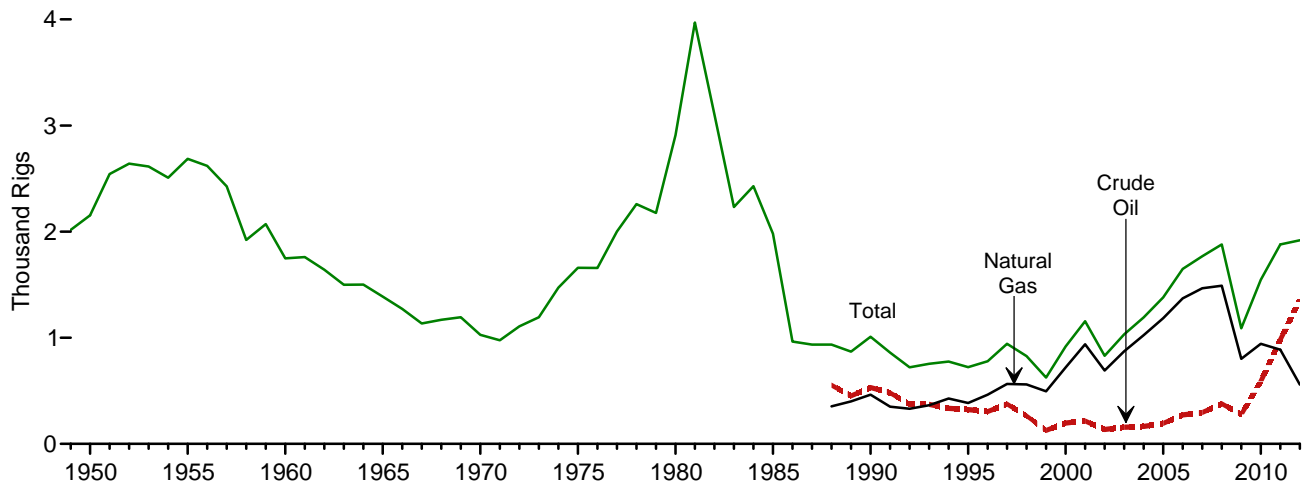
Annual and final monthly data are from the annual EIA Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," which requires data to be reported by month for the calendar year.

Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see EIA's *Natural Gas Monthly*. Preliminary data are revised after publication of EIA's *U.S. Imports and Exports of Natural Gas*.

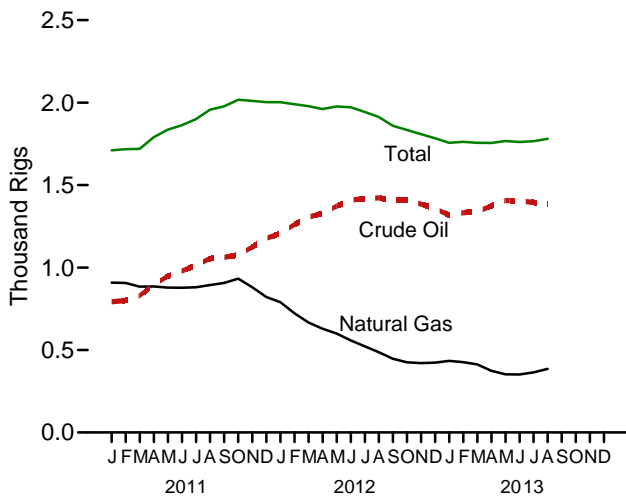
5. Crude Oil and Natural Gas Resource Development

Figure 5.1 Crude Oil and Natural Gas Resource Development Indicators

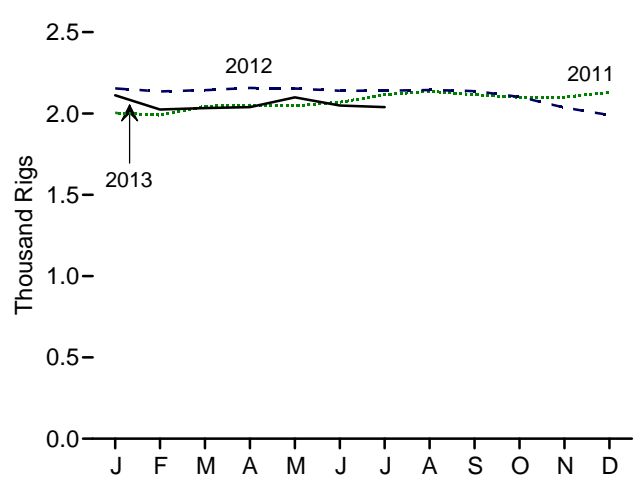
Rotary Rigs in Operation by Type, 1949–2012



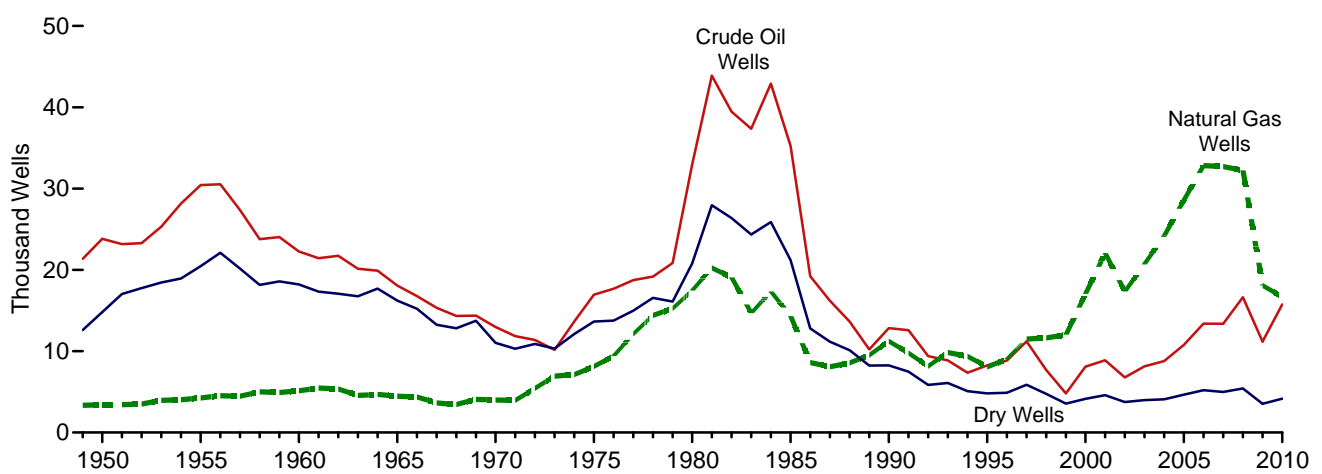
Rotary Rigs in Operation by Type, Monthly



Active Well Service Rig Count, Monthly



Total Wells Drilled by Type, 1949–2010



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#crude>.
Sources: Tables 5.1 and 5.2.

Table 5.1 Crude Oil and Natural Gas Drilling Activity Measurements
(Number of Rigs)

	Rotary Rigs in Operation ^a					Active Well Service Rig Count ^c
	By Site		By Type		Total ^b	
	Onshore	Offshore	Crude Oil	Natural Gas		
1950 Average	NA	NA	NA	NA	2,154	NA
1955 Average	NA	NA	NA	NA	2,686	NA
1960 Average	NA	NA	NA	NA	1,748	NA
1965 Average	NA	NA	NA	NA	1,388	NA
1970 Average	NA	NA	NA	NA	1,028	NA
1975 Average	1,554	106	NA	NA	1,660	2,486
1980 Average	2,678	231	NA	NA	2,909	4,089
1985 Average	1,774	206	NA	NA	1,980	4,716
1990 Average	902	108	532	464	1,010	3,658
1995 Average	622	101	323	385	723	3,041
2000 Average	778	140	197	720	918	2,692
2001 Average	1,003	153	217	939	1,156	2,267
2002 Average	717	113	137	691	830	1,830
2003 Average	924	108	157	872	1,032	1,967
2004 Average	1,095	97	165	1,025	1,192	2,064
2005 Average	1,287	94	194	1,184	1,381	2,222
2006 Average	1,559	90	274	1,372	1,649	2,364
2007 Average	1,695	72	297	1,466	1,768	2,388
2008 Average	1,814	65	379	1,491	1,879	2,515
2009 Average	1,046	44	278	801	1,089	1,722
2010 Average	1,514	31	591	943	1,546	1,854
2011 January	1,686	26	793	909	1,711	2,004
February	1,692	26	801	907	1,718	1,990
March	1,694	26	830	884	1,720	2,044
April	1,762	28	896	885	1,790	2,052
May	1,804	32	948	878	1,836	2,047
June	1,829	34	979	877	1,863	2,069
July	1,865	35	1,014	880	1,900	2,116
August	1,923	35	1,055	894	1,957	2,136
September	1,946	32	1,063	907	1,978	2,115
October	1,982	35	1,077	933	2,017	2,100
November	1,974	37	1,125	880	2,011	2,100
December	1,961	42	1,177	821	2,003	2,131
Average	1,846	32	984	887	1,879	2,075
2012 January	1,960	43	1,208	790	2,003	2,154
February	1,949	42	1,261	723	1,990	2,135
March	1,935	43	1,307	667	1,979	2,143
April	1,917	44	1,329	629	1,961	2,157
May	1,931	46	1,373	600	1,977	2,153
June	1,923	49	1,409	558	1,972	2,139
July	1,894	51	1,419	522	1,944	2,140
August	1,863	50	1,423	487	1,913	2,144
September	1,808	51	1,409	447	1,859	2,137
October	1,785	49	1,407	425	1,834	2,102
November	1,758	51	1,385	421	1,809	2,036
December	1,733	51	1,358	423	1,784	1,990
Average	1,871	48	1,357	558	1,919	2,113
2013 January	1,704	52	1,318	434	1,756	2,112
February	1,708	54	1,332	426	1,762	2,024
March	1,705	51	1,339	413	1,756	2,033
April	1,707	49	1,374	374	1,755	2,039
May	1,715	52	1,407	353	1,767	2,099
June	1,706	55	1,404	352	1,761	2,049
July	1,708	58	1,396	364	1,766	R 2,039
August	1,720	61	1,388	386	1,781	NA
8-Month Average	1,709	54	1,370	387	1,763	NA
2012 8-Month Average	1,920	46	1,344	617	1,966	2,144
2011 8-Month Average	1,784	30	917	889	1,814	2,057

^a Rotary rigs in operation are reported weekly. Monthly data are averages of 4- or 5-week reporting periods, not calendar months. Multi-month data are averages of the reported data over the covered months, not averages of the weekly data. Annual data are averages over 52 or 53 weeks, not calendar years. Published data are rounded to the nearest whole number.

^b Sum of rigs drilling for crude oil, rigs drilling for natural gas, and other rigs (not shown) drilling for miscellaneous purposes, such as service wells, injection wells, and stratigraphic tests. "Total" values may not equal the sum of "Onshore" and "Offshore" due to independent rounding.

^c The number of rigs doing true workovers (where tubing is pulled from the well), or doing rod string and pump repair operations, and that are, on average, crewed and working every day of the month.

R=Revised. NA=Not available.

Note: Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#resources> for all available annual data from 1949-1972. • See <http://www.eia.gov/totalenergy/data/monthly/#crude> for all available monthly and annual data beginning in 1973.

Sources: • **Rotary Rigs in Operation:** Baker Hughes, Inc., Houston, TX, *Rotary Rigs Running—by State*, used with permission. See <http://phx.corporate-ir.net/phoenix.zhtml?c=79687&p=iro-reportsother>. • **Active Well Service Rig Count:** Cameron International Corporation, Houston, TX. See <http://www.c-a-m.com/Forms/Product.aspx?prodID=cdc209c4-79a3-47e5-99c2-fd6da6d4aad6>.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 5.2 Crude Oil and Natural Gas Exploratory and Development Wells

	Wells Drilled												Total Footage Drilled Thousand Feet
	Exploratory				Development				Total				
	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total	
	Number												
1950 Total	1,583	431	8,292	10,306	22,229	3,008	6,507	31,744	23,812	3,439	14,799	42,050	157,358
1955 Total	2,236	874	11,832	14,942	28,196	3,392	8,620	40,208	30,432	4,266	20,452	55,150	226,182
1960 Total	1,321	868	9,515	11,704	20,937	4,281	8,697	33,915	22,258	5,149	18,212	45,619	192,176
1965 Total	946	515	8,005	9,466	17,119	3,967	8,221	29,307	18,065	4,482	16,226	38,773	174,882
1970 Total	757	477	6,162	7,396	12,211	3,534	4,869	20,614	12,968	4,011	11,031	28,010	138,556
1975 Total	982	1,248	7,129	9,359	15,966	6,879	6,517	29,362	16,948	8,127	13,646	38,721	180,494
1980 Total	1,777	2,099	9,081	12,957	31,182	15,362	11,704	58,248	32,959	17,461	20,785	71,205	316,943
1985 Total	1,680	1,200	8,954	11,834	33,581	13,124	12,257	58,962	35,261	14,324	21,211	70,796	314,409
1990 Total	778	811	3,652	5,241	12,061	10,435	4,593	27,089	12,839	11,246	8,245	32,330	156,044
1995 Total	570	558	2,024	3,152	7,678	7,524	2,790	17,992	8,248	8,082	4,814	21,144	117,156
2000 Total	288	657	1,341	2,286	7,802	16,394	2,805	27,001	8,090	17,051	4,146	29,287	144,425
2001 Total	357	1,052	1,733	3,142	8,531	21,020	2,865	32,416	8,888	22,072	4,598	35,558	180,141
2002 Total	258	844	1,282	2,384	6,517	16,498	2,472	25,487	6,775	17,342	3,754	27,871	145,159
2003 Total	350	997	1,297	2,644	7,779	19,725	2,685	30,189	8,129	20,722	3,982	32,833	177,239
2004 Total	383	1,671	1,350	3,404	8,406	22,515	2,732	33,653	8,789	24,186	4,082	37,057	204,279
2005 Total	539	2,141	1,462	4,142	10,240	26,449	3,191	39,880	10,779	28,590	4,653	44,022	240,307
2006 Total	646	2,456	1,547	4,649	12,739	30,382	3,659	46,780	13,385	32,838	5,206	51,429	282,675
2007 Total	808	2,794	1,582	5,184	12,563	29,925	3,399	45,887	13,371	32,719	4,981	51,071	301,515
2008													
January	88	208	144	440	1,111	2,321	272	3,704	1,199	2,529	416	4,144	25,306
February	82	230	107	419	1,080	2,261	247	3,588	1,162	2,491	354	4,007	24,958
March	66	216	127	409	1,132	2,363	271	3,766	1,198	2,579	398	4,175	26,226
April	68	189	130	387	1,177	2,415	281	3,873	1,245	2,604	411	4,260	26,920
May	88	206	124	418	1,317	2,449	240	4,006	1,405	2,655	364	4,424	27,947
June	63	195	139	397	1,428	2,540	299	4,267	1,491	2,735	438	4,664	28,739
July	79	163	171	413	1,439	2,695	344	4,478	1,518	2,858	515	4,891	29,140
August	67	165	144	376	1,448	2,735	379	4,562	1,515	2,900	523	4,938	28,942
September	52	166	164	382	1,488	2,667	355	4,510	1,540	2,833	519	4,892	28,960
October	80	243	173	496	1,549	2,841	373	4,763	1,629	3,084	546	5,259	31,505
November	97	192	160	449	1,361	2,418	334	4,113	1,458	2,610	494	4,562	29,276
December	67	172	132	371	1,206	2,196	313	3,715	1,273	2,368	445	4,086	26,222
Total	897	2,345	1,715	4,957	15,736	29,901	3,708	49,345	16,633	32,246	5,423	54,302	334,141
2009													
January	80	171	99	350	1,192	2,253	250	3,695	1,272	2,424	349	4,045	28,077
February	62	125	88	275	991	1,925	195	3,111	1,053	2,050	283	3,386	25,440
March	59	146	88	293	867	1,771	210	2,848	926	1,917	298	3,141	25,304
April	36	68	93	197	755	1,396	205	2,356	791	1,464	298	2,553	21,406
May	47	90	80	217	584	1,136	156	1,876	631	1,226	236	2,093	20,055
June	44	91	75	210	804	1,297	189	2,290	848	1,388	264	2,500	16,301
July	40	100	101	241	789	1,188	217	2,194	829	1,288	318	2,435	13,543
August	49	84	88	221	867	1,372	207	2,446	916	1,456	295	2,667	15,970
September	61	71	96	228	945	1,170	207	2,322	1,006	1,241	303	2,550	15,547
October	55	79	78	212	966	1,167	222	2,355	1,021	1,246	300	2,567	17,261
November	38	83	85	206	931	1,133	199	2,263	969	1,216	284	2,469	16,236
December	34	98	84	216	894	1,074	213	2,181	928	1,172	297	2,397	16,424
Total	605	1,206	1,055	2,866	10,585	16,882	2,470	29,937	11,190	18,088	3,525	32,803	231,562
2010													
January	55	91	81	227	898	1,264	169	2,331	953	1,355	250	2,558	15,304
February	44	71	67	182	871	1,096	144	2,111	915	1,167	211	2,293	16,862
March	59	85	88	232	1,062	1,224	216	2,502	1,121	1,309	304	2,734	15,102
April	49	78	77	204	1,173	1,152	249	2,574	1,222	1,230	326	2,778	17,904
May	48	107	86	241	1,282	1,208	255	2,745	1,330	1,315	341	2,986	17,987
June	61	100	90	251	1,385	1,250	302	2,937	1,446	1,350	392	3,188	19,408
July	46	103	105	254	1,386	1,443	390	3,219	1,432	1,546	495	3,473	20,847
August	56	104	94	254	1,434	1,402	314	3,150	1,490	1,506	408	3,404	22,923
September	57	73	88	218	1,374	1,358	288	3,000	1,431	1,431	356	3,218	23,037
October	75	87	117	279	1,502	1,463	283	3,248	1,577	1,550	400	3,527	22,123
November	62	114	103	279	1,400	1,352	263	3,015	1,462	1,466	366	3,294	24,561
December	57	92	70	219	1,317	1,379	243	2,939	1,374	1,471	313	3,158	23,189
Total	669	1,105	1,066	2,840	15,084	15,591	3,096	33,771	15,753	16,696	4,162	36,611	239,247

Notes: • Data are estimates. • For 1960–1969, data are for well completion reports received by the American Petroleum Institute during the reporting year; for all other years, data are for well completions in a given year. • Through 1989, these well counts include only the original drilling of a hole intended to discover or further develop already discovered crude oil or natural gas resources. Other drilling activities, such as drilling an old well deeper, drilling of laterals from the original well, drilling of service and injection wells, and drilling for resources other than crude oil or natural gas are excluded. Beginning in 1990, a new well is defined as the first hole in the ground whether it is lateral or not. Due to the methodology used to estimate ultimate well counts from the available partially reported data, the counts shown on this page are frequently revised. See Note, "Crude Oil and Natural Gas Exploratory and Development Wells," at end of section. • Geographic

coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#resources> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#crude> for all available monthly and annual data beginning in 1973.

Sources: • **1949–1965:** Gulf Publishing Company, *World Oil*, "Forecast-Review" issue. • **1966–1969:** American Petroleum Institute (API), *Quarterly Review of Drilling Statistics for the United States*, annual summaries and monthly reports. • **1970–1989:** U.S. Energy Information Administration (EIA) computations based on well reports submitted to the API. • **1990 forward:** EIA computations based on well reports submitted to IHS, Inc., Denver, CO.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2010, see the "Web Pages" cited above.

Data for 2011 forward in this table have been removed while EIA evaluates the quality of the data and the estimation methodology.

Crude Oil and Natural Gas Resource Development

Note. Crude Oil and Natural Gas Exploratory and Development Wells. Three well types are considered in the *Monthly Energy Review (MER)* drilling statistics: “completed for crude oil,” “completed for natural gas,” and “dry hole.” Wells that productively encounter both crude oil and natural gas are categorized as “completed for crude oil.” Both development wells and exploratory wells (new field wildcats, new pool tests, and extension tests) are included in the statistics. All other classes of wells drilled in connection with the search for producible hydrocarbons are excluded. If a lateral is drilled at the same time as the original hole it is not counted separately, but its footage is included.

Prior to the March 1985 MER, drilling statistics consisted of

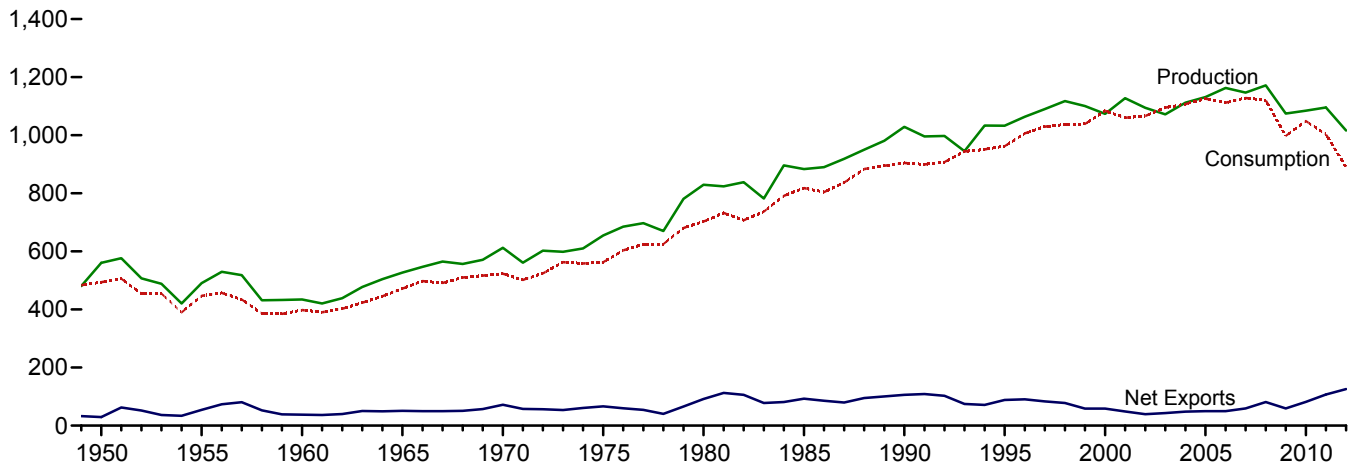
completion data for the above types and classes of wells as reported to the American Petroleum Institute (API) during a given month. Due to time lags between the date of well completion and the date of completion reporting to the API, as-reported well completions proved to be an inaccurate indicator of drilling activity. During 1982, for example, as-reported well completions rose, while the number of actual completions fell. Consequently, the drilling statistics published since the March 1985 MER are U.S. Energy Information Administration (EIA) estimates produced by statistically imputing well counts and footage based on the partial data available from the API. These estimates are subject to continuous revision as new data, some of which pertain to earlier months and years, become available. Additional information about the EIA estimation methodology may be found in “Estimating Well Completions,” a feature article published in the March 1985 MER.

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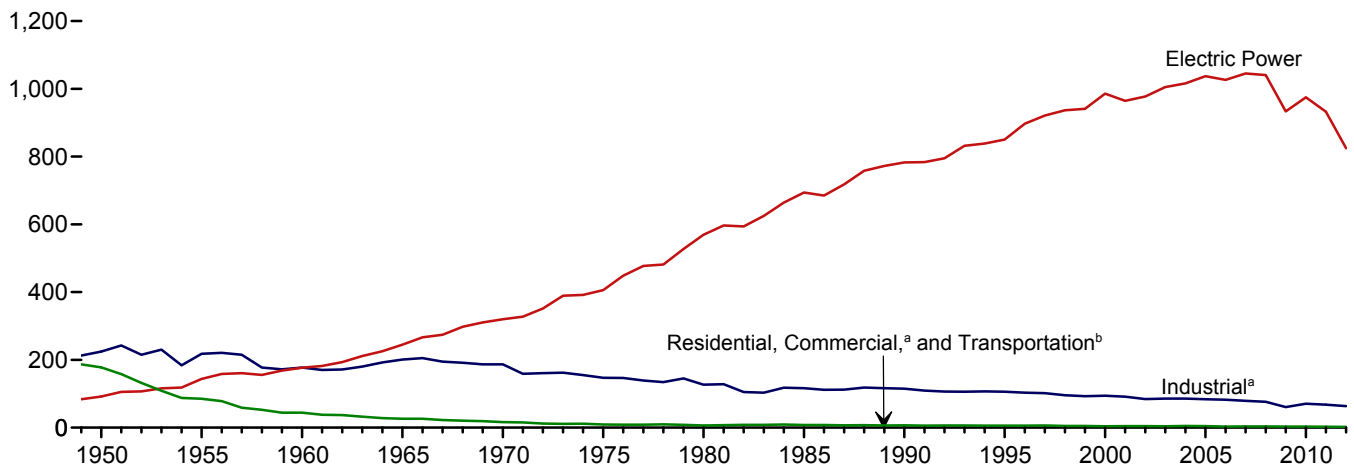
6. Coal

Figure 6.1 Coal
(Million Short Tons)

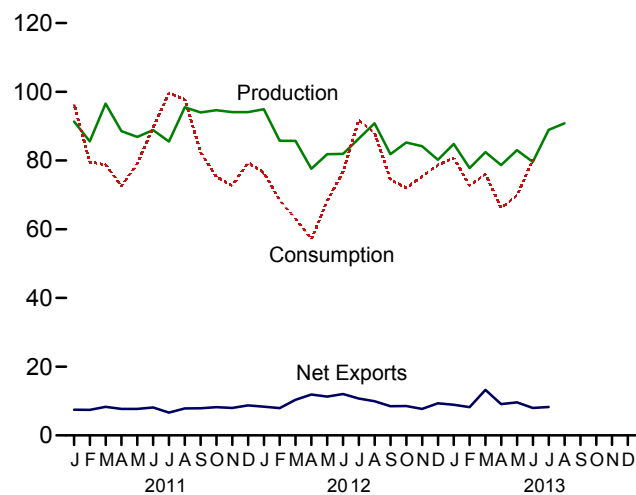
Overview, 1949–2012



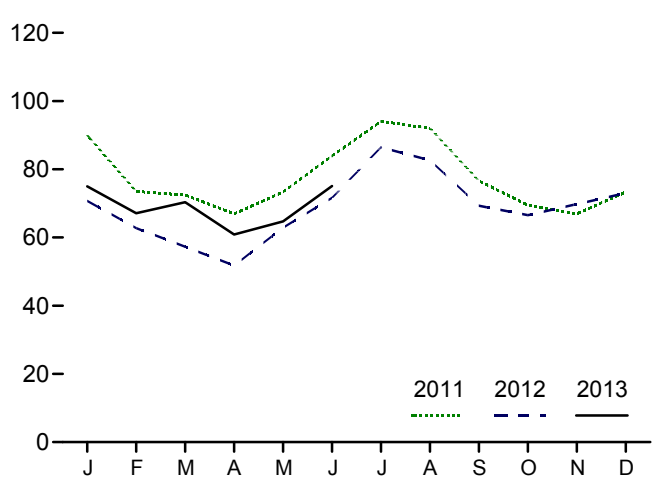
Consumption by Sector, 1949–2012



Overview, Monthly



Electric Power Sector Consumption, Monthly



^aIncludes combined-heat-and-power (CHP) plants and a small number of electricity-only-plants.

^bFor 1978 forward, small amounts of transportation sector use are included in "Industrial."

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#coal>.
Sources: Tables 6.1–6.2.

Table 6.1 Coal Overview
(Thousand Short Tons)

	Production ^a	Waste Coal Supplied ^b	Trade			Stock Change ^{d,e}	Losses and Unaccounted for ^{e,f}	Consumption
			Imports	Exports	Net Imports ^c			
1950 Total	560,388	NA	365	29,360	-28,995	27,829	9,462	494,102
1955 Total	490,838	NA	337	54,429	-54,092	-3,974	-6,292	447,012
1960 Total	434,329	NA	262	37,981	-37,719	-3,194	1,722	398,081
1965 Total	526,954	NA	184	51,032	-50,848	1,897	2,244	471,965
1970 Total	612,661	NA	36	71,733	-71,697	11,100	6,633	523,231
1975 Total	654,641	NA	940	66,309	-65,369	32,154	-5,522	562,640
1980 Total	829,700	NA	1,194	91,742	-90,548	25,595	10,827	702,730
1985 Total	883,638	NA	1,952	92,680	-90,727	-27,934	2,796	818,049
1990 Total	1,029,076	3,339	2,699	105,804	-103,104	26,542	-1,730	904,498
1995 Total	1,032,974	8,561	9,473	88,547	-79,074	-275	632	962,104
2000 Total	1,073,612	9,089	12,513	58,489	-45,976	-48,309	938	1,084,095
2001 Total	1,127,689	10,085	19,787	48,666	-28,879	41,630	7,120	1,060,146
2002 Total	1,094,283	9,052	16,875	39,601	-22,726	10,215	4,040	1,066,355
2003 Total	1,071,753	10,016	25,044	43,014	-17,970	-26,659	-4,403	1,094,861
2004 Total	1,112,099	11,299	27,280	47,998	-20,718	-11,462	6,887	1,107,255
2005 Total	1,131,498	13,352	30,460	49,942	-19,482	-9,702	9,092	1,125,978
2006 Total	1,162,750	14,409	36,246	49,647	-13,401	42,642	8,824	1,112,292
2007 Total	1,146,635	14,076	36,347	59,163	-22,816	5,812	4,085	1,127,998
2008 Total	1,171,809	14,146	34,208	81,519	-47,311	12,354	5,740	1,120,548
2009 Total	1,074,923	13,666	22,639	59,097	-36,458	39,668	14,985	997,478
2010 Total	1,084,368	13,651	19,353	81,716	-62,363	-13,039	182	1,048,514
2011 January	91,355	1,182	1,014	8,509	-7,496	-11,679	418	96,303
February	85,575	1,046	843	8,275	-7,432	-3,306	2,917	79,577
March	96,548	1,126	1,524	9,832	-8,308	3,991	6,608	78,767
April	88,563	996	1,136	8,843	-7,706	8,966	390	72,497
May	86,850	910	1,313	9,042	-7,730	2,393	-1,461	79,098
June	88,878	1,162	970	9,102	-8,132	-9,803	2,060	89,652
July	85,498	1,202	1,208	7,865	-6,657	-15,788	-3,788	99,618
August	95,495	1,181	1,545	9,387	-7,843	-10,739	1,809	97,762
September	94,013	1,117	835	8,723	-7,888	5,015	-113	82,341
October	94,643	1,078	917	9,159	-8,242	13,552	-1,334	75,261
November	94,109	1,133	807	8,808	-8,001	11,911	2,623	72,707
December	94,101	1,076	976	9,713	-8,737	5,698	1,377	79,365
Total	1,095,628	13,209	13,088	107,259	-94,171	211	11,506	1,002,948
2012 January	94,944	1,127	789	9,126	-8,337	2,882	8,413	76,439
February	85,763	917	534	8,460	-7,927	8,111	2,202	68,440
March	85,698	886	699	11,055	-10,356	9,769	3,326	63,133
April	77,624	746	623	12,529	-11,905	7,263	2,127	57,074
May	81,825	938	986	12,257	-11,271	467	2,773	68,252
June	81,911	905	719	12,749	-12,030	-5,275	-704	76,766
July	86,344	1,050	894	11,623	-10,729	-14,946	-99	91,710
August	90,839	992	667	10,597	-9,930	-7,254	1,092	88,063
September	81,846	800	855	9,344	-8,489	2,375	-2,696	74,478
October	85,244	766	868	9,421	-8,554	3,741	1,704	72,012
November	84,152	1,020	798	8,516	-7,718	1,821	247	75,386
December	80,208	893	727	10,068	-9,341	-974	-5,995	78,729
Total	1,016,399	11,040	9,159	125,746	-116,586	7,980	12,389	890,483
2013 January	84,828	974	654	9,572	-8,917	-6,426	2,581	80,730
February	77,766	912	385	8,627	-8,242	-5,952	3,725	72,664
March	82,464	1,101	390	13,637	-13,247	-5,677	-70	76,066
April	78,678	F 725	672	9,754	-9,082	1,461	2,680	66,180
May	83,018	F 892	670	10,478	-9,608	6,320	-1,862	69,843
June	79,613	RF 854	1,213	9,194	-7,981	R -8,372	R 644	R 80,214
July	88,909	NA	R 874	R 9,125	R -8,251	NA	NA	NA
August	90,830	NA	NA	NA	NA	NA	NA	NA
8-Month Total	666,105	NA	NA	NA	NA	NA	NA	NA
2012 8-Month Total	684,948	7,562	5,911	88,396	-82,485	1,016	19,129	589,878
2011 8-Month Total	718,761	8,805	9,553	70,857	-61,303	-35,965	8,953	693,275

^a Beginning in 2001, includes a small amount of refuse recovery (coal recaptured from a refuse mine and cleaned to reduce the concentration of noncombustible materials).

^b Waste coal (including fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste) consumed by the electric power and industrial sectors. Beginning in 1989, waste coal supplied is counted as a supply-side item to balance the same amount of waste coal included in "Consumption."

^c Net imports equal imports minus exports. A minus sign indicates exports are greater than imports.

^d A negative value indicates a decrease in stocks and a positive value indicates an increase. See Table 6.3 for stocks data coverage

^e In 1949, stock change is included in "Losses and Unaccounted for."

^f The difference between calculated coal supply and disposition, due to coal

quantities lost or to data reporting problems.

R=Revised. NA=Not available. F=Forecast.

Notes: • For methodology used to calculate production, consumption, and stocks, see Note 1, "Coal Production," Note 2, "Coal Consumption," and Note 3, "Coal Stocks," at end of section. • Data values preceded by "F" are derived from the U.S. Energy Information Administration's Short-Term Integrated Forecasting System. See Note 4, "Coal Forecast Values," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#coal> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#coal> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 6.2 Coal Consumption by Sector
(Thousand Short Tons)

	End-Use Sectors											Total
	Residential	Commercial			Coke Plants	Industrial			Transportation	Electric Power Sector ^{e,f}		
		CHP ^a	Other ^b	Total		CHP ^c	Non-CHP ^d	Total				
1950 Total	51,562	(^g)	63,021	63,021	104,014	(^h)	120,623	120,623	224,637	63,011	91,871	494,102
1955 Total	35,590	(^g)	32,852	32,852	107,743	(^h)	110,096	110,096	217,839	16,972	143,759	447,012
1960 Total	24,159	(^g)	16,789	16,789	81,385	(^h)	96,017	96,017	177,402	3,046	176,685	398,081
1965 Total	14,635	(^g)	11,041	11,041	95,286	(^h)	105,560	105,560	200,846	655	244,788	471,965
1970 Total	9,024	(^g)	7,090	7,090	96,481	(^h)	90,156	90,156	186,637	298	320,182	523,231
1975 Total	2,823	(^g)	6,587	6,587	83,598	(^h)	63,646	63,646	147,244	24	405,962	562,640
1980 Total	1,355	(^g)	5,097	5,097	66,657	(^h)	60,347	60,347	127,004	(^h)	569,274	702,730
1985 Total	1,711	(^g)	6,068	6,068	41,056	(^h)	75,372	75,372	116,429	(^h)	693,841	818,049
1990 Total	1,345	1,191	4,189	5,379	38,877	27,781	48,549	76,330	115,207	(^h)	1,782,567	904,498
1995 Total	755	1,419	3,633	5,052	33,011	29,363	43,693	73,055	106,067	(^h)	850,230	962,104
2000 Total	454	1,547	2,126	3,673	28,939	28,031	37,177	65,208	94,147	(^h)	985,821	1,084,095
2001 Total	481	1,448	2,441	3,888	26,075	25,755	39,514	65,268	91,344	(^h)	964,433	1,060,146
2002 Total	533	1,405	2,506	3,912	23,656	26,232	34,515	60,747	84,403	(^h)	977,507	1,066,355
2003 Total	551	1,816	1,869	3,685	24,248	24,846	36,415	61,261	85,509	(^h)	1,005,116	1,094,861
2004 Total	512	1,917	2,693	4,610	23,670	26,613	35,582	62,195	85,865	(^h)	1,016,268	1,107,255
2005 Total	378	1,922	2,420	4,342	23,434	25,875	34,465	60,340	83,774	(^h)	1,037,485	1,125,978
2006 Total	290	1,886	1,050	2,936	22,957	25,262	32,491	59,472	82,429	(^h)	1,026,636	1,112,292
2007 Total	353	1,927	1,247	3,173	22,715	22,537	34,078	56,615	79,331	(^h)	1,045,141	1,127,998
2008 Total	(ⁱ)	2,021	1,485	3,506	22,070	21,902	32,491	54,393	76,463	(^h)	1,040,580	1,120,548
2009 Total	(ⁱ)	1,798	1,412	3,210	15,326	19,766	25,549	45,314	60,641	(^h)	933,627	997,478
2010 Total	(ⁱ)	1,720	1,361	3,081	21,092	24,638	24,650	49,289	70,381	(^h)	975,052	1,048,514
2011 January	(ⁱ)	189	176	364	1,746	2,082	2,090	4,172	5,917	(^h)	90,021	96,303
February	(ⁱ)	173	161	335	1,623	1,800	2,345	4,145	5,769	(^h)	73,474	79,577
March	(ⁱ)	164	153	317	1,819	1,891	2,281	4,173	5,991	(^h)	72,458	78,767
April	(ⁱ)	124	86	210	1,668	1,787	1,902	3,689	5,357	(^h)	66,930	72,497
May	(ⁱ)	124	87	211	1,878	1,836	1,836	3,672	5,550	(^h)	73,338	79,098
June	(ⁱ)	130	91	222	1,846	1,843	1,833	3,676	5,522	(^h)	83,908	89,652
July	(ⁱ)	145	48	193	1,670	1,946	1,772	3,718	5,388	(^h)	94,037	99,618
August	(ⁱ)	129	43	172	1,863	1,962	1,753	3,715	5,578	(^h)	92,012	97,762
September	(ⁱ)	122	41	163	1,874	1,788	1,947	3,735	5,609	(^h)	76,569	82,341
October	(ⁱ)	110	72	182	1,784	1,748	2,088	3,836	5,621	(^h)	69,458	75,261
November	(ⁱ)	117	77	194	1,772	1,712	2,110	3,822	5,594	(^h)	66,919	72,707
December	(ⁱ)	139	91	230	1,891	1,923	1,962	3,885	5,776	(^h)	73,359	79,365
Total	(ⁱ)	1,668	1,125	2,793	21,434	22,319	23,919	46,238	67,671	(^h)	932,484	1,002,948
2012 January	(ⁱ)	162	92	254	1,701	1,913	1,851	3,764	5,465	(^h)	70,720	76,439
February	(ⁱ)	141	81	222	1,687	1,708	2,069	3,776	5,463	(^h)	62,755	68,440
March	(ⁱ)	135	77	211	1,895	1,707	2,020	3,727	5,622	(^h)	57,300	63,133
April	(ⁱ)	115	21	136	1,783	1,542	1,864	3,405	5,188	(^h)	51,751	57,074
May	(ⁱ)	121	22	143	1,857	1,689	1,695	3,384	5,241	(^h)	62,868	68,252
June	(ⁱ)	114	21	135	1,657	1,634	1,745	3,379	5,036	(^h)	71,595	76,766
July	(ⁱ)	118	11	129	1,676	1,773	1,703	3,476	5,152	(^h)	86,429	91,710
August	(ⁱ)	126	12	138	1,816	1,827	1,639	3,466	5,282	(^h)	82,643	88,063
September	(ⁱ)	116	11	127	1,552	1,613	1,865	3,478	5,030	(^h)	69,321	74,478
October	(ⁱ)	115	43	157	1,647	1,796	1,846	3,641	5,289	(^h)	66,565	72,012
November	(ⁱ)	134	50	185	1,715	1,728	1,961	3,689	5,403	(^h)	69,798	75,386
December	(ⁱ)	151	57	208	1,766	1,789	1,955	3,744	5,510	(^h)	73,011	78,729
Total	(ⁱ)	1,549	496	2,045	20,751	20,717	22,213	42,930	63,681	(^h)	824,758	890,483
2013 January	(ⁱ)	153	82	235	1,825	1,760	1,940	3,701	5,526	(^h)	74,968	80,730
February	(ⁱ)	144	77	222	1,644	1,626	2,086	3,712	5,357	(^h)	67,086	72,664
March	(ⁱ)	141	76	217	1,810	1,694	1,989	3,683	5,494	(^h)	70,355	76,066
April	(ⁱ)	114	F 147	F 261	F 1,624	F 1,509	F 1,927	F 3,436	F 5,060	(^h)	60,859	66,180
May	(ⁱ)	120	F 148	F 268	F 1,708	F 1,564	F 1,611	F 3,176	F 4,883	(^h)	64,692	69,843
June	(ⁱ)	111	F 128	F 239	F 1,721	F 1,554	F 1,604	F 3,158	F 4,879	(^h)	75,096	80,214
6-Month Total	(ⁱ)	784	F 659	F 1,443	F 10,333	F 9,708	F 11,158	F 20,865	F 31,198	(^h)	413,055	445,696
2012 6-Month Total	(ⁱ)	788	313	1,101	10,579	10,192	11,244	21,436	32,015	(^h)	376,990	410,106
2011 6-Month Total	(ⁱ)	905	754	1,659	10,580	11,239	12,287	23,526	34,105	(^h)	460,130	495,894

^a Commercial combined-heat-and-power (CHP) and a small number of commercial electricity-only plants, such as those at hospitals and universities. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

^b All commercial sector fuel use other than that in "Commercial CHP."

^c Industrial combined-heat-and-power (CHP) and a small number of industrial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

^d All industrial sector fuel use other than that in "Coke Plants" and "Industrial CHP."

^e 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.

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

^g Included in "Commercial Other."

^h Included in "Industrial Non-CHP."

ⁱ Beginning in 2008, residential coal consumption data are no longer collected by the U.S. Energy Information Administration (EIA).

E=Estimate. F=Forecast.

Notes: • CHP monthly values are from Table 7.4c; electric power sector monthly values are from Table 7.4b; all other monthly values are estimates derived from collected quarterly and annual data. See Note 2, "Coal Consumption," at end of section. • Data values preceded by "F" are derived from EIA's Short-Term Integrated Forecasting System. See Note 4, "Coal Forecast Values," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#coal> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#coal> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 6.3 Coal Stocks by Sector
(Thousand Short Tons)

	Producers and Distributors	End-Use Sectors					Electric Power Sector ^{c,d}	Total
		Residential ^a and Commercial	Industrial			Total		
			Coke Plants	Other ^b	Total			
1950 Year	NA	2,462	16,809	26,182	42,991	45,453	31,842	77,295
1955 Year	NA	998	13,422	15,880	29,302	30,300	41,391	71,691
1960 Year	NA	666	11,122	11,637	22,759	23,425	51,735	75,160
1965 Year	NA	353	10,640	13,122	23,762	24,115	54,525	78,640
1970 Year	NA	300	9,045	11,781	20,826	21,126	71,908	93,034
1975 Year	12,108	233	8,797	8,529	17,326	17,559	110,724	140,391
1980 Year	24,379	NA	9,067	11,951	21,018	21,018	183,010	228,407
1985 Year	33,133	NA	3,420	10,438	13,857	13,857	156,376	203,367
1990 Year	33,418	NA	3,329	8,716	12,044	12,044	156,166	201,629
1995 Year	34,444	NA	2,632	5,702	8,334	8,334	126,304	169,083
2000 Year	31,905	NA	1,494	4,587	6,081	6,081	^d 102,296	140,282
2001 Year	35,900	NA	1,510	6,006	7,516	7,516	138,496	181,912
2002 Year	43,257	NA	1,364	5,792	7,156	7,156	141,714	192,127
2003 Year	38,277	NA	905	4,718	5,623	5,623	121,567	165,468
2004 Year	41,151	NA	1,344	4,842	6,186	6,186	106,669	154,006
2005 Year	34,971	NA	2,615	5,582	8,196	8,196	101,137	144,304
2006 Year	36,548	NA	2,928	6,506	9,434	9,434	140,964	186,946
2007 Year	33,977	NA	1,936	5,624	7,560	7,560	151,221	192,758
2008 Year	34,688	498	2,331	6,007	8,338	8,336	161,589	205,112
2009 Year	47,718	529	1,957	5,109	7,066	7,595	189,467	244,780
2010 Year	49,820	552	1,925	4,525	6,451	7,003	174,917	231,740
2011 January	48,709	536	1,937	4,305	6,241	6,777	164,575	220,061
February	49,140	520	1,948	4,084	6,032	6,552	161,064	216,755
March	48,165	503	1,959	3,864	5,823	6,326	166,255	220,746
April	49,852	505	1,958	3,969	5,927	6,433	173,427	229,712
May	51,473	508	1,957	4,075	6,032	6,539	174,093	232,105
June	50,507	510	1,956	4,181	6,136	6,646	165,149	222,302
July	52,420	513	2,082	4,203	6,285	6,798	147,296	206,514
August	50,287	515	2,221	4,225	6,446	6,961	138,527	195,775
September	49,909	518	2,405	4,247	6,652	7,170	143,711	200,790
October	50,810	546	2,473	4,316	6,790	7,336	156,196	214,342
November	50,997	575	2,541	4,386	6,927	7,502	167,754	226,253
December	51,897	603	2,610	4,455	7,065	7,668	172,387	231,951
2012 January	F 48,424	587	2,507	4,285	6,791	7,379	179,030	234,833
February	F 49,954	572	2,403	4,114	6,517	7,089	185,901	242,944
March	F 51,458	557	2,300	3,943	6,244	6,800	194,455	252,713
April	F 51,705	566	2,299	4,038	6,337	6,903	201,368	259,976
May	F 51,253	575	2,297	4,134	6,431	7,006	202,184	260,443
June	F 51,007	585	2,295	4,229	6,524	7,109	197,052	255,168
July	F 49,859	589	2,329	4,327	6,656	7,244	183,119	240,222
August	F 48,343	592	2,363	4,424	6,787	7,379	177,246	232,968
September	F 47,181	596	2,396	4,522	6,918	7,514	180,648	235,343
October	F 46,885	592	2,438	4,508	6,946	7,538	184,661	239,084
November	F 46,711	587	2,480	4,493	6,973	7,561	186,633	240,905
December	F 47,424	583	2,522	4,479	7,001	7,584	184,923	239,931
2013 January	F 45,899	565	2,417	4,305	6,722	7,288	180,318	233,505
February	F 43,354	548	2,312	4,132	6,444	6,991	177,208	227,553
March	F 41,940	530	2,207	3,958	6,165	6,695	173,241	221,876
April	F 43,188	F 605	F 2,147	F 4,318	F 6,465	F 7,070	173,078	223,337
May	F 44,379	F 604	F 2,272	F 4,425	F 6,697	F 7,301	177,977	229,657
June	F 43,001	F 603	F 2,398	F 4,532	F 6,930	F 7,533	170,751	221,285

^a Through 1979, data are for the residential and commercial sectors. Beginning in 2008, data are for the commercial sector only.

^b Through 1979, data are for manufacturing plants and the transportation sector. For 1980–2007, data are for manufacturing plants only. Beginning in 2008, data are for manufacturing plants and coal transformation/processing plants.

^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 1998, data are for electric utilities only. Beginning in 1999, data are for electric utilities and independent power producers.

NA=Not available. F=Forecast.

Notes: • Stocks are at end of period. • Electric power sector monthly values

are from Table 7.5; producers and distributors monthly values are estimates derived from collected annual data; all other monthly values are estimates derived from collected quarterly values. • Data values preceded by "F" are derived from the U.S. Energy Information Administration's Short-Term Integrated Forecasting System. See Note 4, "Coal Forecast Values," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#coal> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#coal> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the “Web Pages” cited above.

Coal

Note 1. Coal Production. Preliminary monthly estimates of national coal production are the sum of weekly estimates developed by the U.S. Energy Information Administration (EIA) and published in the *Weekly Coal Production* report. When a week extends into a new month, production is allocated on a daily basis and added to the appropriate month. Weekly estimates are based on Association of American Railroads (AAR) data showing the number of railcars loaded with coal during the week by Class I and certain other railroads.

Through 2001, the weekly coal production model converted AAR data into short tons of coal by using the average number of short tons of coal per railcar loaded reported in the “Quarterly Freight Commodity Statistics” from the Surface Transportation Board. If an average coal tonnage per railcar loaded was not available for a specific railroad, the national average was used. To derive the estimate of total weekly production, the total rail tonnage for the week was divided by the ratio of quarterly production shipped by rail and total quarterly production. Data for the corresponding quarter of previous years were used to derive this ratio. This method ensured that the seasonal variations were preserved in the production estimates.

Beginning in 2002, the weekly coal production model uses statistical autoregressive methods to estimate national coal production as a function of railcar loadings of coal, and heating degree-days and cooling degree-days. On Thursday of each week, EIA receives from the AAR data for the previous week. The latest weekly national data for heating degree-days and cooling degree-days are obtained from the National Oceanic and Atmospheric Administration’s Climate Prediction Center. The weekly coal model is run and a national level coal production estimate is obtained. The weekly coal model is refit every quarter after preliminary coal data are available.

When preliminary quarterly data become available, the monthly and weekly estimates are adjusted to conform to the quarterly figures. The adjustment procedure uses state-level production data and is explained at <http://www.eia.gov/coal/production/weekly/>. Initial estimates of annual production published in January of the following year are based on preliminary production data covering the first nine months (three quarters) and weekly/monthly estimates for the fourth quarter. All quarterly, monthly, and weekly production figures are adjusted to conform to the final annual production data published in the *Monthly Energy Review* in the fall of the following year.

Note 2. Coal Consumption. Forecast data (designated by an “F”) are derived from forecasted values shown in EIA’s *Short-Term Energy Outlook* (DOE/EIA-0202) table titled “U.S. Coal Supply and Demand: Base Case.” The monthly estimates are based on the quarterly values, which are released in March, June, September, and December. The

estimates are revised quarterly as collected data become available from the data sources. Sector-specific information follows.

Residential and Commercial—Through 2007, coal consumption by the residential and commercial sectors is reported to EIA for the two sectors combined; EIA estimates the amount consumed by the sectors individually. To create the estimates, it is first assumed that an occupied coal-heated housing unit consumes fuel at the same Btu rate as an oil-heated housing unit. Then, for the years in which data are available on the number of occupied housing units by heating source (1973–1981 and subsequent odd-numbered years), residential consumption of coal is estimated using the following steps: a ratio is created of the number of occupied housing units heated by coal to the number of occupied housing units heated by oil; that ratio is then multiplied by the Btu quantity of oil consumed by the residential sector to derive an estimate of the Btu quantity of coal consumed by the residential sector; and, finally, the amount estimated as the residential sector consumption is subtracted from the residential and commercial sectors’ combined consumption to derive the commercial sector’s estimated consumption. Beginning in 2008, residential coal consumption data are not collected by EIA, and commercial coal consumption data are taken directly from reported data.

Industrial Coke Plants—Through 1979, monthly coke plant consumption data were taken directly from reported data. For 1980–1987, coke plant consumption estimates were derived by proportioning reported quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported. Beginning in 1988, monthly coke plant consumption estimates are derived from the reported quarterly data by using monthly ratios of raw steel production data from the American Iron and Steel Institute. The ratios are the monthly raw steel production from open hearth and basic oxygen process furnaces as a proportion of the quarterly production from those kinds of furnaces.

Industrial Other—Through 1977, monthly consumption data for the other industrial sector (all industrial users minus coke plants) were derived by using reported data to modify baseline consumption figures from the most recent Bureau of the Census Annual Survey of Manufactures or Census of Manufactures. For 1978 and 1979, monthly estimates were derived from data reported on Forms EIA-3 and EIA-6. For 1980–1987, monthly figures were estimated by proportioning quarterly data by using the ratios of monthly-to-quarterly consumption data in 1979, the last year in which monthly data were reported on Form EIA-3. Beginning in 1988, monthly consumption for the other industrial sector is estimated from reported quarterly data by using ratios derived from industrial production indices published by the Board of Governors of the Federal Reserve System. Indices for six major industry groups are used as the basis for calculating the ratios: food manufacturing, which is North American Industry Classification System (NAICS) code 311; paper manufacturing, NAICS

322; chemical manufacturing, NAICS 325; petroleum and coal products, NAICS 324; non-metallic mineral products manufacturing, NAICS 327; and primary metal manufacturing, NAICS 331. The monthly ratios are computed as the monthly sum of the weighted indices as a proportion of the quarterly sum of the weighted indices by using the 1977 proportion as the weights. Through 2007, quarterly consumption data for the other industrial sector were derived by adding beginning stocks at manufacturing plants to current receipts and subtracting ending stocks at manufacturing plants. In this calculation, current receipts are the greater of either reported receipts from manufacturing plants (Form EIA-3) or reported shipments to the other industrial sector (Form EIA-6), thereby ensuring that agriculture, forestry, fishing, and construction consumption data were included where appropriate. Beginning in 2008, quarterly consumption totals for other industrial coal include data for manufacturing and mining only. Over time, surveyed coal consumption data for agriculture, forestry, fishing, and construction dwindled to about 20–30 thousand short tons annually. Therefore, in 2008, EIA consolidated its programs by eliminating agriculture, forestry, fishing, and construction as surveyed sectors.

Electric Power Sector—Monthly consumption data for electric power plants are taken directly from reported data.

Note 3. Coal Stocks. Coal stocks data are reported by major end-use sector. Forecast data for the most recent months (designated by an “F”) are derived from forecasted values shown in EIA’s *Short-Term Energy Outlook* (DOE/EIA-0202) table titled “U.S. Coal Supply and Demand: Base Case.” The monthly estimates are based on the quarterly values (released in March, June, September, and December) or annual values. The estimates are revised as collected data become available from the data sources. Sector-specific information follows.

Producers and Distributors—Through 1997, quarterly stocks at producers and distributors were taken directly from reported data. Monthly data were estimated by using one-third of the current quarterly change to indicate the monthly change in stocks. Beginning in 1998, end-of-year stocks are taken from reported data. Monthly stocks are estimated by a model.

Residential and Commercial—Through 1979, stock estimates for the residential and commercial sector were taken directly from reported data. For 1980–2007, stock estimates were not collected. Beginning in 2008, quarterly commercial (excluding residential) stocks data are collected on Form EIA-3 (data for “Commercial and Institutional Coal Users”).

Industrial Coke Plants—Through 1979, monthly stocks at coke plants were taken directly from reported data. Beginning in 1980, coke plant stocks are estimated by using one-third of the current quarterly change to indicate the monthly

change in stocks. Quarterly stocks are taken directly from data reported on Form EIA-5.

Industrial Other—Through 1977, stocks for the other industrial sector were derived by using reported data to modify baseline figures from a one-time Bureau of Mines survey of consumers. For 1978–1982, monthly estimates were derived by judgmentally proportioning reported quarterly data based on representative seasonal patterns of supply and demand. Beginning in 1983, other industrial coal stocks are estimated as indicated above for coke plants. Quarterly stocks are taken directly from data reported on Form EIA-3 and therefore include only manufacturing industries; data for agriculture, forestry, fishing, mining, and construction stocks are not available.

Electric Power Sector—Monthly stocks data at electric power plants are taken directly from reported data.

Note 4. Coal Forecast Values. Data values preceded by “F” in this section are forecast values. They are derived from EIA’s Short-Term Integrated Forecasting System (STIFS). The model is driven primarily by data and assumptions about key macroeconomic variables, the world oil price, and weather. The coal forecast relies on other variables as well, such as alternative fuel prices (natural gas and oil) and power generation by sources other than fossil fuels, including nuclear and hydroelectric power. Each month, EIA staff review the model output and make adjustments, if appropriate, based on their knowledge of developments in the coal industry.

The STIFS model results are published monthly in EIA’s *Short-Term Energy Outlook*, which is accessible on the Web at <http://www.eia.gov/forecasts/steo/>.

Table 6.1 Sources

Production

1949–September 1977: U.S. Department of the Interior, Bureau of Mines, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977 forward: U.S. Energy Information Administration (EIA), *Weekly Coal Production*.

Waste Coal Supplied

1989–1997: EIA, Form EIA-867, “Annual Nonutility Power Producer Report.”

1998–2000: EIA, Form EIA-860B, “Annual Electric Generator Report—Nonutility.”

2001–2003: EIA, Form EIA-906, “Power Plant Report,” and Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing Plants.”

2004–2007: EIA, Form EIA-906, “Power Plant Report,” Form EIA-920, “Combined Heat and Power Plant Report,” and Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing Plants.”

2008 forward: EIA, Form EIA-923, “Power Plant Operations Report,” and Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing

Coal Plants and Commercial and Institutional Coal Users”; and, for forecast values, EIA, Short-Term Integrated Forecasting System.

Imports and Exports

1949 forward: U.S. Department of Commerce, Bureau of the Census, Monthly Reports IM 145 (Imports) and EM 545 (Exports).

Stock Change

1950 forward: Calculated from data in Table 6.3.

Losses and Unaccounted for

1949 forward: Calculated as the sum of production, imports, and waste coal supplied, minus exports, stock change, and consumption.

Consumption

1949 forward: Table 6.2.

Table 6.2 Sources

Residential and Commercial Total

Through 2007, coal consumption by the residential and commercial sectors combined is reported to the U.S. Energy Information Administration (EIA). EIA estimates the sectors individually using the method described in Note 2, “Consumption,” at the end of Section 6. Data for the residential and commercial sectors combined are from:

1949–1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*.

January–September 1977: DOI, BOM, Form 6-1400, “Monthly Coal Report, Retail Dealers—Upper Lake Docks.” October 1977–1979: EIA, Form EIA-2, “Monthly Coal Report, Retail Dealers—Upper Lake Docks.”

1980–1997: EIA, Form EIA-6, “Coal Distribution Report,” quarterly.

1998–2007: DOI, Mine Safety and Health Administration, Form 7000-2, “Quarterly Coal Consumption and Quality Report—Coke Plants.”

Commercial Total

Beginning in 2008, coal consumption by the commercial (excluding residential) sector is reported to EIA. Data for total commercial consumption are from:

2008 forward: EIA, Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users” (data for “Commercial and Institutional Coal Users”); and, for forecast values, EIA, Short-Term Integrated Forecasting System (STIFS).

Commercial CHP

1989 forward: Table 7.4c.

Commercial Other

1949 forward: Calculated as “Commercial Total” minus “Commercial CHP.”

Industrial Coke Plants

1949–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–1980: EIA, Form EIA-5/5A, “Coke and Coal Chemicals—Monthly/Annual Supplement.”

1981–1984: EIA, Form EIA-5/5A, “Coke Plant Report—Quarterly/Annual Supplement.”

1985 forward: EIA, Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants”; and, for forecast values, EIA, STIFS.

Other Industrial Total

1949–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–1979: EIA, Form EIA-3, “Monthly Coal Consumption Report—Manufacturing Plants.”

1980–1997: EIA, Form EIA-3, “Quarterly Coal Consumption Report—Manufacturing Plants,” and Form EIA-6, “Coal Distribution Report,” quarterly.

1998–2007: EIA, Form EIA-3, “Quarterly Coal Consumption Report—Manufacturing Plants,” Form EIA-6A, “Coal Distribution Report,” annual, and Form EIA-7A, “Coal Production Report,” annual.

2008 forward: EIA, Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users,” and Form EIA-7A, “Coal Production Report,” annual; and, for forecast values, EIA, STIFS.

Other Industrial CHP

1989 forward: Table 7.4c.

Other Industrial Non-CHP

1949 forward: Calculated as “Other Industrial Total” minus “Other Industrial CHP.”

Transportation

1949–1976: DOI, BOM, *Minerals Yearbook*.

January–September 1977: DOI, BOM, Form 6-1400, “Monthly Coal Report, Retail Dealers—Upper Lake Docks.”

October–December 1977: EIA, Form EIA-6, “Coal Distribution Report,” quarterly.

Electric Power

1949 forward: Table 7.4b.

Table 6.3 Sources

Producers and Distributors

1973–1979: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), Form 6-1419Q, “Distribution of Bituminous Coal and Lignite Shipments.”

1980–1997: U.S. Energy Information Administration (EIA), Form EIA-6, “Coal Distribution Report,” quarterly.

1998–2007: EIA, Form EIA-6A, “Coal Distribution Report,” annual.

2008 forward: EIA, Form EIA-7A, “Coal Production Report,” annual, and Form EIA-8A, “Coal Stocks Report,”

annual; and, for forecast values, EIA, Short-Term Integrated Forecasting System (STIFS).

Residential and Commercial

1949–1976: DOI, BOM, *Minerals Yearbook*.

January–September 1977: DOI, BOM, Form 6-1400, “Monthly Coal Report, Retail Dealers—Upper Lake Docks.”

October 1977–1979: EIA, Form EIA-2, “Monthly Coal Report, Retail Dealers—Upper Lake Docks.”

2008 forward: EIA, Form EIA-3, “Quarterly Coal Consumption and Quality Report, Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users” (data for “Commercial and Institutional Coal Users”); and, for forecast values, EIA, STIFS.

Industrial Coke Plants

1949–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–1980: EIA, Form EIA-5/5A, “Coke and Coal Chemicals—Monthly/Annual.”

1981–1984: EIA, Form EIA 5/5A, “Coke Plant Report—Quarterly/Annual Supplement.”

1985 forward: EIA, Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants” and, for forecast values, EIA, STIFS.

Industrial Other

1949–September 1977: DOI, BOM, *Minerals Yearbook* and *Minerals Industry Surveys*.

October 1977–1979: EIA, Form EIA-3, “Monthly Coal Consumption Report—Manufacturing Plants.”

1998–2007: EIA, Form EIA-3, “Quarterly Coal Consumption Report—Manufacturing Plants.”

2008 forward: EIA, Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Coal Users”; and, for forecast values, EIA, STIFS.

Electric Power

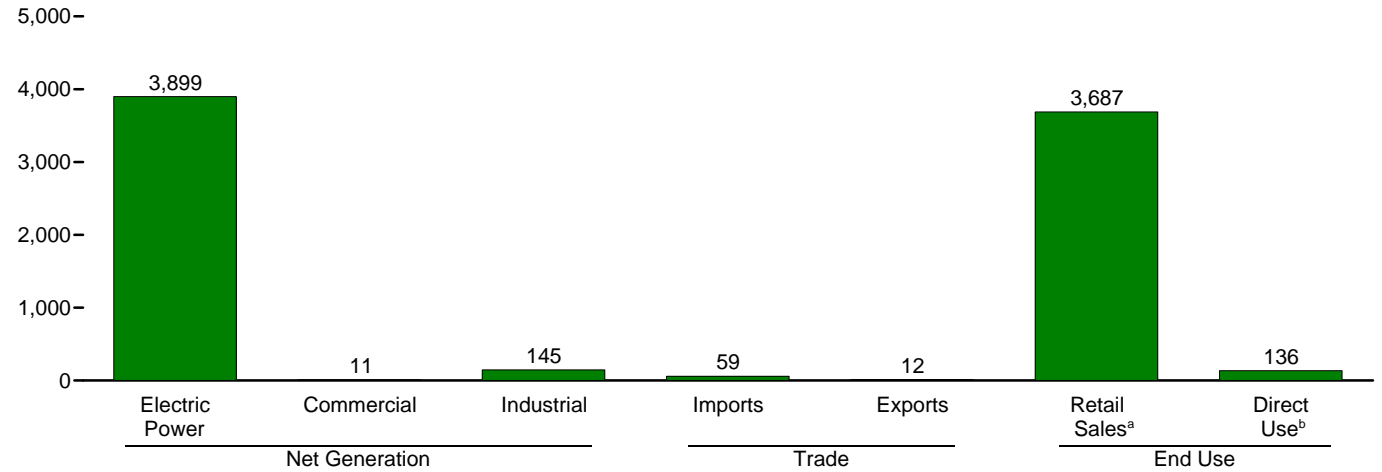
1949 forward: Table 7.5.

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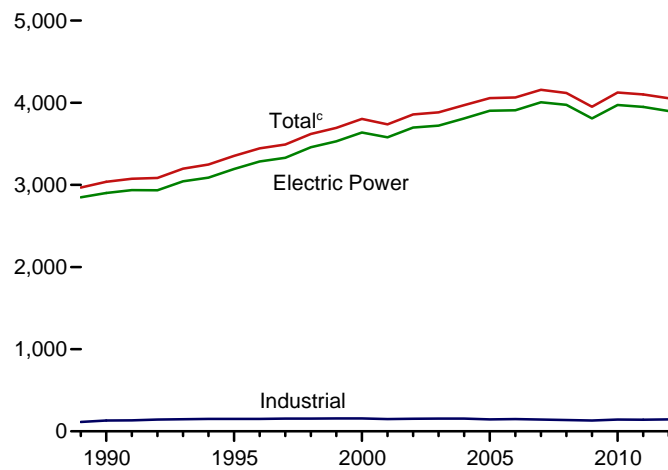
7. Electricity

Figure 7.1 Electricity Overview
(Billion Kilowatthours)

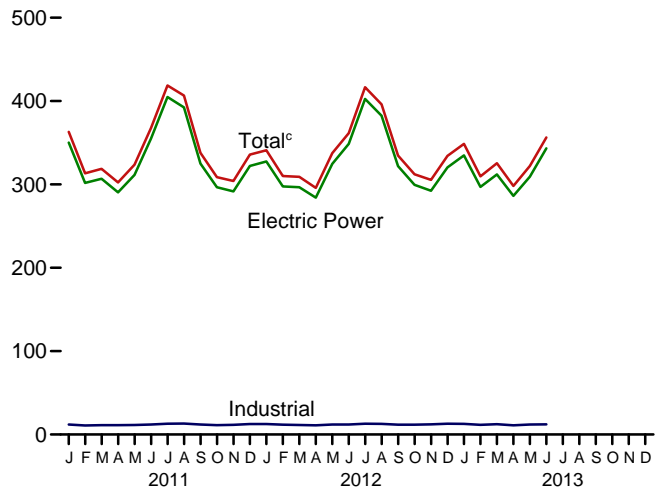
Overview, 2012



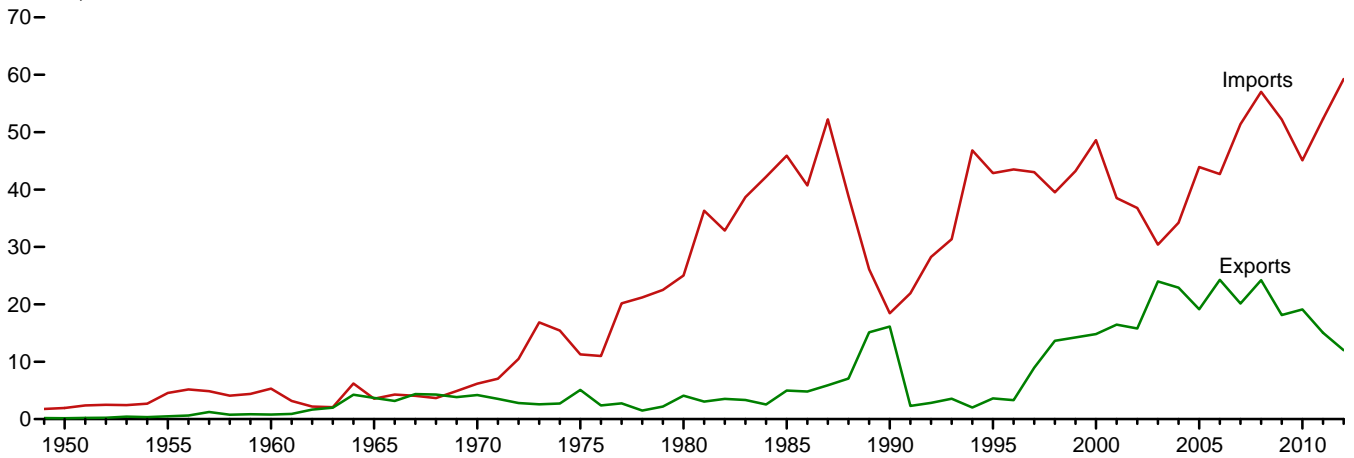
Net Generation by Sector, 1989–2012



Net Generation by Sector, Monthly



Trade, 1949–2012



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

^b See "Direct Use" in Glossary.

^c Includes commercial sector.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

Source: Table 7.1.

Table 7.1 Electricity Overview
(Billion Kilowatthours)

	Net Generation				Trade			T&D Losses ^e and Unaccounted for ^f	End Use		
	Electric Power Sector ^a	Com- mercial Sector ^b	Indus- trial Sector ^c	Total	Imports ^d	Exports ^d	Net Imports ^d		Retail Sales ^g	Direct Use ^h	Total
1950 Total	329	NA	5	334	2	(s)	2	44	291	NA	291
1955 Total	547	NA	3	550	5	(s)	4	58	497	NA	497
1960 Total	756	NA	4	759	5	1	5	76	688	NA	688
1965 Total	1,055	NA	3	1,058	4	4	(s)	104	954	NA	954
1970 Total	1,532	NA	3	1,535	6	4	2	145	1,392	NA	1,392
1975 Total	1,918	NA	3	1,921	11	5	6	180	1,747	NA	1,747
1980 Total	2,286	NA	3	2,290	25	4	21	216	2,094	NA	2,094
1985 Total	2,470	NA	3	2,473	46	5	41	190	2,324	NA	2,324
1990 Total	2,901	6	^c 131	3,038	18	16	2	203	2,713	125	2,837
1995 Total	3,194	8	151	3,353	43	4	39	229	3,013	151	3,164
2000 Total	3,638	8	157	3,802	49	15	34	244	3,421	171	3,592
2001 Total	3,580	7	149	3,737	39	16	22	202	3,394	163	3,557
2002 Total	3,698	7	153	3,858	37	16	21	248	3,465	166	3,632
2003 Total	3,721	7	155	3,883	30	24	6	228	3,494	168	3,662
2004 Total	3,808	8	154	3,971	34	23	11	266	3,547	168	3,716
2005 Total	3,902	8	145	4,055	44	19	25	269	3,661	150	3,811
2006 Total	3,908	8	148	4,065	43	24	18	266	3,670	147	3,817
2007 Total	4,005	8	143	4,157	51	20	31	298	3,765	126	3,890
2008 Total	3,974	8	137	4,119	57	24	33	287	3,733	132	3,865
2009 Total	3,810	8	132	3,950	52	18	34	261	3,597	127	3,724
2010 Total	3,972	9	144	4,125	45	19	26	265	3,754	132	3,886
2011 January	350	1	12	363	4	2	3	20	334	^E 11	345
February	302	1	11	313	4	2	2	9	297	^E 10	307
March	307	1	11	319	4	2	2	19	292	^E 10	302
April	291	1	11	302	4	2	2	19	275	^E 10	286
May	311	1	11	324	5	1	4	29	288	^E 11	299
June	355	1	12	368	4	1	3	31	329	^E 11	340
July	405	1	13	419	6	1	5	41	371	^E 12	383
August	392	1	13	407	6	1	5	26	373	^E 12	385
September	325	1	12	338	4	1	3	4	326	^E 11	337
October	297	1	11	309	4	1	3	13	288	^E 11	299
November	292	1	12	304	3	1	2	20	275	^E 11	286
December	322	1	13	336	4	1	3	26	302	^E 12	314
Total	3,949	10	142	4,101	52	15	37	255	3,750	133	3,883
2012 January	328	1	12	341	4	1	3	22	311	^E 12	323
February	298	1	12	310	4	1	3	16	286	^E 11	297
March	297	1	11	309	4	1	3	19	283	^E 11	293
April	284	1	11	296	5	1	4	19	270	^E 10	281
May	325	1	12	338	5	1	4	35	295	^E 11	307
June	349	1	12	362	5	1	4	30	324	^E 11	336
July	403	1	13	417	7	1	6	40	370	^E 12	382
August	383	1	13	396	6	1	5	26	364	^E 12	376
September	322	1	12	335	5	1	4	10	318	^E 11	329
October	299	1	12	312	4	1	4	15	290	^E 11	301
November	293	1	12	306	5	1	4	19	279	^E 11	291
December	320	1	13	334	4	1	3	30	296	^E 12	308
Total	3,899	11	145	4,054	59	12	47	279	3,687	^E 136	3,823
2013 January	335	1	13	349	5	1	4	23	317	^E 12	329
February	297	1	12	310	5	1	4	14	289	^E 11	300
March	312	1	12	325	5	1	4	23	294	^E 12	306
April	286	1	11	298	5	1	3	16	275	^E 10	285
May	309	1	12	322	5	1	5	29	286	^E 11	297
June	343	1	12	356	6	1	5	32	317	^E 11	329
6-Month Total	1,883	5	72	1,960	31	6	25	139	1,779	^E 68	1,847
2012 6-Month Total	1,879	5	71	1,955	28	7	21	140	1,770	^E 66	1,836
2011 6-Month Total	1,916	5	68	1,989	25	9	16	126	1,815	^E 64	1,879

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

^b Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^c Industrial combined-heat-and-power (CHP) and industrial electricity-only plants. Through 1988, data are for industrial hydroelectric power only.

^d Electricity transmitted across U.S. borders. Net imports equal imports minus exports.

^e Transmission and distribution losses (electricity losses that occur between the point of generation and delivery to the customer). See Note 2, "Electrical System Energy Losses," at end of Section 2.

^f Data collection frame differences and nonsampling error.

^g Electricity retail sales to ultimate customers by electric utilities and, beginning

in 1996, other energy service providers.

^h Use of electricity that is 1) self-generated, 2) produced by either the same entity that consumes the power or an affiliate, and 3) used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of station use.

^E=Estimate. NA=Not available. (s)=Less than 0.5 billion kilowatthours.

Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.
• Totals may not equal sum of components due to independent rounding.
• Geographic coverage is the 50 states and the District of Columbia.

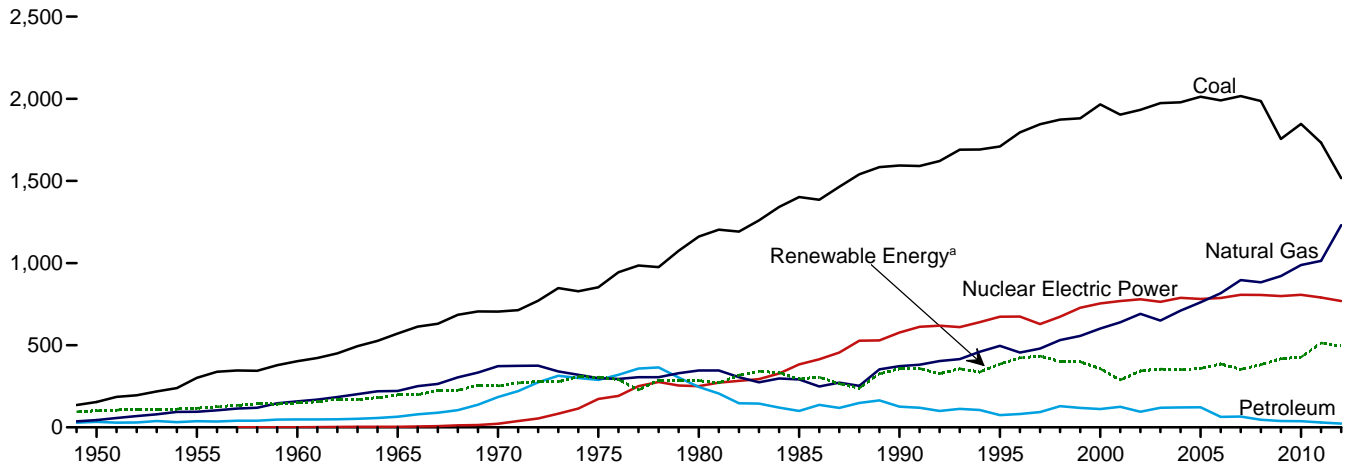
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

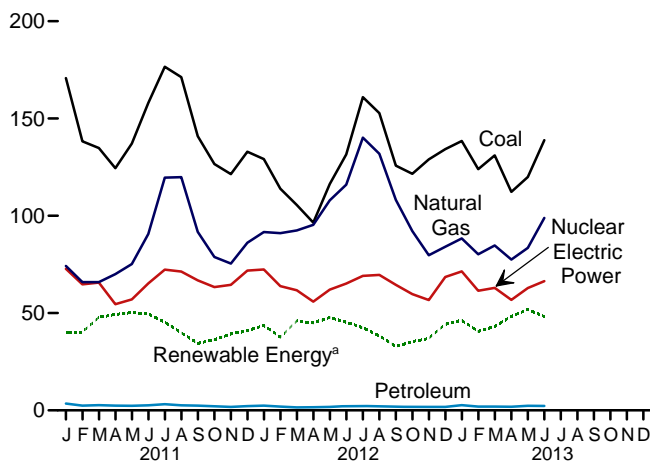
Selected years of data from 1949 through 1972 have been added to this table.
For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 7.2 Electricity Net Generation
(Billion Kilowatthours)

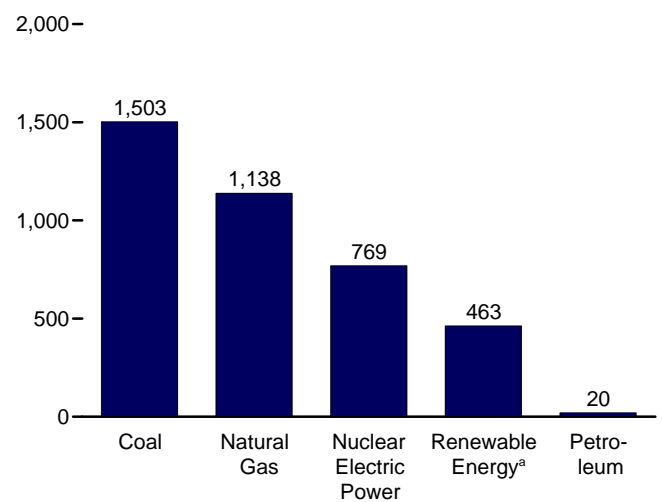
Total (All Sectors), Major Sources, 1949–2012



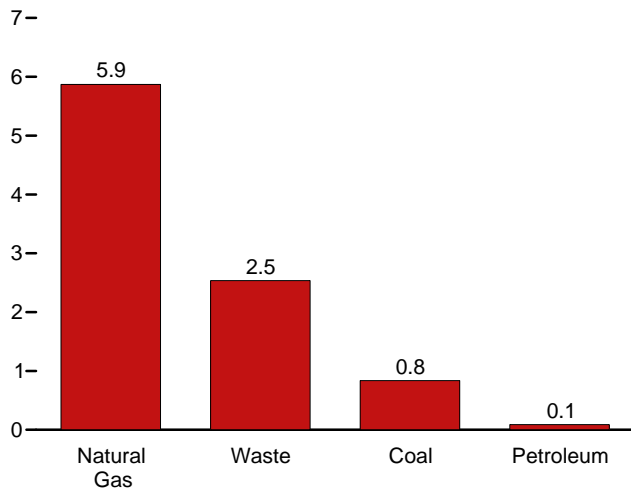
Total (All Sectors), Major Sources, Monthly



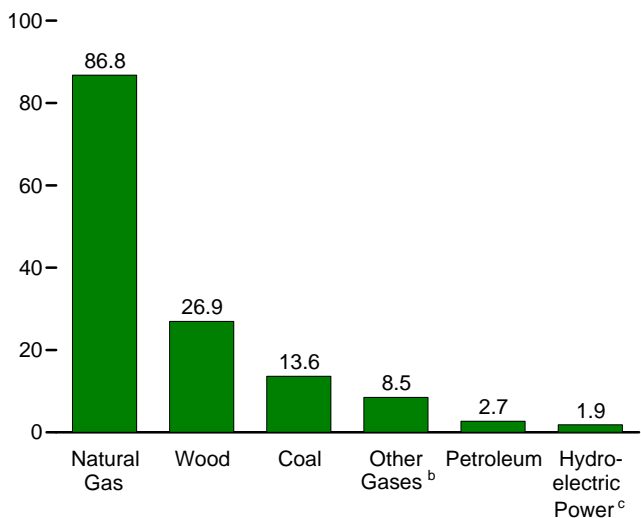
Electric Power Sector, Major Sources, 2012



Commercial Sector, Major Sources, 2012



Industrial Sector, Major Sources, 2012



^a Conventional hydroelectric power, wood, waste, geothermal, solar/PV, and wind.

^b Blast furnace gas, and other manufactured and waste gases derived from fossil fuels.

^c Conventional hydroelectric power.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.
Sources: Tables 7.2a–7.2c.

Table 7.2a Electricity Net Generation: Total (All Sectors)
(Sum of Tables 7.2b and 7.2c; Million Kilowatthours)

	Fossil Fuels				Nuclear Electric Power	Hydro-electric Pumped Storage ^e	Renewable Energy					Total ⁱ	
	Coal ^a	Petroleum ^b	Natural Gas ^c	Other Gases ^d			Conventional Hydro-electric Power ^f	Biomass		Geo-thermal	Solar/PV ^g		Wind
								Wood ^g	Waste ^h				
1950 Total	154,520	33,734	44,559	NA	0	()	100,885	390	NA	NA	NA	NA	334,088
1955 Total	301,363	37,138	95,285	NA	0	()	116,236	276	NA	NA	NA	NA	550,299
1960 Total	403,067	47,987	157,970	NA	518	()	149,440	140	NA	33	NA	NA	759,156
1965 Total	570,926	64,801	221,559	NA	3,657	()	196,984	269	NA	189	NA	NA	1,058,386
1970 Total	704,394	184,183	372,890	NA	21,804	()	250,957	136	220	525	NA	NA	1,535,111
1975 Total	852,786	289,095	299,778	NA	172,505	()	303,153	18	174	3,246	NA	NA	1,920,755
1980 Total	1,161,562	245,994	346,240	NA	251,116	()	279,182	275	158	5,073	NA	NA	2,289,600
1985 Total	1,402,128	100,202	291,946	NA	383,691	()	284,311	743	640	9,325	11	6	2,473,002
1990 Total ^k	1,594,011	126,460	372,765	10,383	576,862	-3,508	292,866	32,522	13,260	15,434	367	2,789	3,037,827
1995 Total	1,709,426	74,554	496,058	13,870	673,402	-2,725	310,833	36,521	20,405	13,378	497	3,164	3,353,487
2000 Total	1,966,265	111,221	601,038	13,955	753,893	-5,539	275,573	37,595	23,131	14,093	493	5,593	3,802,105
2001 Total	1,903,956	124,880	639,129	9,039	768,826	-8,223	216,961	35,200	14,548	13,741	543	6,737	3,736,644
2002 Total	1,933,130	94,567	691,006	11,463	780,064	-8,743	264,329	38,665	15,044	14,491	555	10,354	3,858,452
2003 Total	1,973,737	119,406	649,908	15,600	763,733	-8,535	275,806	37,529	15,812	14,424	534	11,187	3,883,185
2004 Total	1,978,301	121,145	710,100	15,252	788,528	-8,488	268,417	38,117	15,421	14,811	575	14,144	3,970,555
2005 Total	2,012,873	122,225	760,960	13,464	781,986	-6,558	270,321	38,856	15,420	14,692	550	17,811	4,055,423
2006 Total	1,990,511	64,166	816,441	14,177	787,219	-6,558	289,246	38,762	16,099	14,568	508	26,589	4,064,702
2007 Total	2,016,456	65,739	896,590	13,453	806,425	-6,896	247,510	39,014	16,525	14,637	612	34,450	4,156,745
2008 Total	1,985,801	46,243	882,981	11,707	806,208	-6,288	254,831	37,300	17,734	14,840	864	55,363	4,119,388
2009 Total	1,755,904	38,937	920,979	10,632	798,855	-4,627	273,445	36,500	18,443	15,009	891	73,886	3,950,331
2010 Total	1,847,290	37,061	987,697	11,313	806,968	-5,501	260,203	37,172	18,917	15,219	1,212	94,652	4,125,060
2011 January	170,803	3,457	74,254	930	72,743	-426	25,531	3,290	1,515	1,347	40	8,550	363,105
February	138,311	2,434	65,924	807	64,789	-247	24,131	2,937	1,427	1,215	85	10,452	313,293
March	134,845	2,692	65,947	945	65,662	-349	31,134	3,081	1,565	1,337	122	10,545	318,710
April	124,488	2,424	70,029	918	54,547	-466	31,194	2,798	1,503	1,239	164	12,422	302,400
May	137,102	2,378	75,243	875	57,013	-418	32,587	2,794	1,563	1,318	191	11,772	323,627
June	158,055	2,594	90,691	1,013	65,270	-567	32,151	3,230	1,632	1,215	223	10,985	367,727
July	176,586	3,154	119,624	1,098	72,345	-708	31,285	3,262	1,690	1,269	191	7,489	418,693
August	171,281	2,594	119,856	1,087	71,339	-663	25,764	3,384	1,692	1,275	229	7,474	406,541
September	140,941	2,424	91,739	1,004	66,849	-553	21,378	3,178	1,589	1,226	186	6,869	337,961
October	126,627	2,062	78,819	941	63,337	-572	19,787	2,954	1,631	1,281	159	10,525	308,727
November	121,463	1,783	75,441	943	64,474	-441	20,681	3,088	1,684	1,271	107	12,439	304,119
December	132,929	2,186	86,122	1,005	71,837	-496	23,732	3,353	1,731	1,324	121	10,656	335,753
Total	1,733,430	30,182	1,013,689	11,566	790,204	-5,905	319,355	37,449	19,222	15,316	1,818	120,177	4,100,656
2012 January	129,115	2,444	91,641	980	72,381	-330	23,359	3,366	1,629	1,415	86	13,806	340,919
February	113,908	1,926	91,091	1,005	63,847	-226	20,361	3,126	1,537	1,339	137	11,164	310,151
March	105,546	1,561	92,503	1,010	61,729	-268	25,770	2,938	1,663	1,413	249	13,897	309,040
April	96,466	1,564	95,346	980	55,871	-242	26,136	2,666	1,668	1,335	346	12,812	295,940
May	116,345	1,727	107,927	969	62,081	-343	28,542	2,997	1,713	1,422	511	12,573	337,530
June	131,569	2,056	116,015	945	65,140	-475	26,611	3,060	1,687	1,380	561	11,944	361,506
July	160,938	2,288	140,202	968	69,129	-587	26,758	3,296	1,769	1,421	522	8,724	416,515
August	152,743	2,072	131,828	1,024	69,602	-496	23,146	3,311	1,676	1,388	464	8,287	396,108
September	125,767	1,864	108,206	893	64,511	-401	17,562	3,143	1,628	1,377	462	8,680	334,735
October	121,587	1,861	92,141	820	59,743	-351	16,207	3,073	1,660	1,413	431	12,514	312,157
November	128,992	1,779	79,707	759	56,713	-390	18,834	3,216	1,633	1,429	314	11,513	305,548
December	134,230	1,757	84,103	858	68,584	-549	23,248	3,350	1,762	1,459	258	14,175	334,335
Total	1,517,203	22,900	1,230,708	11,212	769,331	-4,658	276,535	37,540	20,025	16,791	4,342	140,089	4,054,485
2013 January	138,447	2,669	88,375	919	71,406	-442	25,123	3,299	1,587	1,444	288	14,535	348,642
February	123,936	1,926	80,250	804	61,483	-275	20,493	3,032	1,392	1,322	441	13,884	309,601
March	131,032	1,962	84,713	915	62,947	-358	20,573	3,194	1,667	1,425	619	15,638	325,372
April	112,293	1,840	77,502	853	56,767	-264	24,764	2,594	1,594	1,372	683	17,299	298,261
May	119,943	2,356	83,491	973	62,848	-326	28,553	3,013	1,718	1,396	764	16,370	322,118
June	138,872	2,282	98,912	917	66,430	-298	27,331	3,134	1,673	1,427	880	13,771	356,400
6-Month Total	764,524	13,034	513,243	5,380	381,881	-1,963	146,838	18,266	9,631	8,386	3,677	91,497	1,960,395
2012 6-Month Total	692,947	11,279	594,522	5,889	381,049	-1,885	150,779	18,153	9,897	8,304	1,891	76,195	1,955,086
2011 6-Month Total	863,604	15,980	442,088	5,488	380,024	-2,473	176,729	18,130	9,204	7,671	825	64,726	1,988,862

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^b Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^c Natural gas, plus a small amount of supplemental gaseous fuels.

^d Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

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

^f Through 1989, hydroelectric pumped storage is included in "Conventional Hydroelectric Power."

^g Wood and wood-derived fuels.

^h Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

ⁱ Solar thermal and photovoltaic (PV) energy.

^j Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^k Through 1988, all data except hydroelectric are for electric utilities only; hydroelectric data through 1988 include industrial plants as well as electric utilities. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

NA=Not available.

Notes: • See Note 1, "Coverage of Electricity Statistics," at end of section.

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

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

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity>

for all available annual data from 1949-1972. • See

<http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly

and annual data beginning in 1973.

Sources: See sources for Tables 7.2b and 7.2c.

Selected years of data from 1949 through 1972 have been added to this table.
For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 7.2b Electricity Net Generation: Electric Power Sector
(Subset of Table 7.2a; Million Kilowatthours)

	Fossil Fuels				Nuclear Electric Power	Hydroelectric Pumped Storage ^e	Renewable Energy					Total ^j	
	Coal ^a	Petroleum ^b	Natural Gas ^c	Other Gases ^d			Conventional Hydroelectric Power ^f	Biomass		Geo-thermal	Solar/PV ^g		Wind
								Wood ^g	Waste ^h				
1950 Total	154,520	33,734	44,559	NA	0	()	95,938	390	NA	NA	NA	NA	329,141
1955 Total	301,363	37,138	95,285	NA	0	()	112,975	276	NA	NA	NA	NA	547,038
1960 Total	403,067	47,987	157,970	NA	518	()	145,833	140	NA	33	NA	NA	755,549
1965 Total	570,926	64,801	221,559	NA	3,657	()	193,851	269	NA	189	NA	NA	1,055,252
1970 Total	704,394	184,183	372,890	NA	21,804	()	247,714	136	220	525	NA	NA	1,531,868
1975 Total	852,786	289,095	299,778	NA	172,505	()	300,047	18	174	3,246	NA	NA	1,917,649
1980 Total	1,161,562	245,994	346,240	NA	251,116	()	276,021	275	158	5,073	NA	NA	2,286,439
1985 Total	1,402,128	100,202	291,946	NA	383,691	()	281,149	743	640	9,325	11	6	2,469,841
1990 Total ^k	1,572,109	118,864	309,486	621	576,862	-3,508	289,753	7,032	11,500	15,434	367	2,789	2,901,322
1995 Total	1,686,056	68,146	419,179	1,927	673,402	-2,725	305,410	7,597	17,986	13,378	497	3,164	3,194,230
2000 Total	1,943,111	105,192	517,978	2,028	753,893	-5,539	271,338	8,916	20,307	14,093	493	5,593	3,637,529
2001 Total	1,882,826	119,149	554,940	566	768,826	-8,823	213,749	8,294	12,944	13,741	543	6,737	3,580,053
2002 Total	1,910,613	89,733	607,683	1,970	780,064	-8,743	260,491	9,009	13,145	14,491	555	10,354	3,698,458
2003 Total	1,952,714	113,697	567,303	2,647	763,733	-8,535	271,512	9,528	13,808	14,424	534	11,187	3,721,159
2004 Total	1,957,188	114,678	627,172	3,568	788,528	-8,488	265,064	9,736	13,062	14,811	575	14,144	3,808,360
2005 Total	1,992,054	116,482	683,829	3,777	781,986	-6,558	267,040	10,370	13,031	14,692	550	17,811	3,902,192
2006 Total	1,969,737	59,708	734,417	4,254	787,219	-6,558	286,254	10,341	13,927	14,568	508	26,589	3,908,077
2007 Total	1,998,390	61,306	814,752	4,042	806,425	-6,896	245,843	10,711	14,294	14,637	612	34,450	4,005,343
2008 Total	1,968,838	42,881	802,372	3,200	806,208	-6,288	253,096	10,638	15,379	14,840	864	55,363	3,974,349
2009 Total	1,741,123	35,811	841,006	3,058	798,855	-4,627	271,506	10,738	15,954	15,009	891	73,886	3,809,837
2010 Total	1,827,738	34,679	901,389	2,967	806,968	-5,501	258,455	11,446	16,376	15,219	1,206	94,636	3,972,386
2011 January	169,390	3,229	66,932	243	72,743	-426	25,386	981	1,247	1,347	37	8,547	350,234
February	137,082	2,255	59,380	207	64,789	-247	23,970	886	1,180	1,215	81	10,448	301,798
March	133,584	2,526	59,362	252	65,662	-349	30,945	897	1,299	1,337	116	10,540	306,808
April	123,272	2,257	63,257	244	54,547	-466	31,008	705	1,251	1,239	155	12,417	290,519
May	135,820	2,218	68,175	242	57,013	-418	32,386	760	1,296	1,318	181	11,767	311,401
June	156,716	2,438	83,426	259	65,270	-567	31,999	936	1,365	1,215	210	10,981	354,929
July	175,129	3,006	111,502	262	72,345	-708	31,173	1,048	1,413	1,269	181	7,486	404,802
August	169,798	2,449	111,540	264	71,339	-663	25,666	1,038	1,407	1,275	218	7,471	392,471
September	139,648	2,272	84,300	252	66,849	-553	21,254	916	1,319	1,226	177	6,865	325,143
October	125,442	1,894	71,962	240	63,337	-572	19,660	807	1,354	1,281	151	10,519	296,704
November	120,323	1,632	68,262	227	64,474	-441	20,533	800	1,403	1,271	103	12,431	291,657
December	131,686	2,025	78,193	247	71,837	-496	23,552	959	1,455	1,324	117	10,649	322,237
Total	1,717,891	28,202	926,290	2,939	790,204	-5,905	317,531	10,733	15,989	15,316	1,727	120,121	3,948,701
2012 January	127,857	2,144	83,819	237	72,381	-330	23,181	952	1,349	1,415	83	13,798	327,525
February	112,775	1,727	83,629	233	63,847	-226	20,201	879	1,264	1,339	132	11,157	297,543
March	104,379	1,358	85,311	241	61,729	-268	25,580	830	1,394	1,413	240	13,888	296,736
April	95,403	1,344	88,356	234	55,871	-242	25,973	642	1,395	1,335	334	12,804	284,075
May	115,212	1,541	100,212	226	62,081	-343	28,357	802	1,426	1,422	493	12,565	324,644
June	130,371	1,842	108,256	228	65,140	-475	26,476	869	1,414	1,380	544	11,936	348,626
July	159,516	2,071	131,757	237	69,129	-587	26,646	989	1,467	1,421	506	8,719	402,532
August	151,372	1,813	123,795	244	69,602	-496	23,045	1,016	1,379	1,388	451	8,282	362,523
September	124,585	1,626	100,681	225	64,511	-401	17,467	892	1,348	1,377	447	8,675	322,061
October	120,392	1,635	84,574	206	59,743	-351	16,097	829	1,360	1,413	417	12,507	299,443
November	127,836	1,522	71,950	183	56,713	-390	18,595	906	1,335	1,429	305	11,508	292,512
December	133,034	1,498	75,731	224	68,584	-549	23,026	959	1,444	1,459	252	14,167	320,482
Total	1,502,732	20,122	1,138,072	2,719	769,331	-4,658	274,644	10,566	16,574	16,791	4,203	140,004	3,898,702
2013 January	137,301	2,433	80,113	221	71,406	-442	24,776	937	1,306	1,444	282	14,526	334,889
February	122,808	1,786	72,832	176	61,483	-275	20,118	841	1,140	1,322	425	13,875	297,059
March	129,859	1,764	76,762	195	62,947	-358	20,273	913	1,372	1,425	596	15,628	312,006
April	111,270	1,645	70,376	207	56,767	-264	24,508	612	1,320	1,372	656	17,288	286,342
May	118,791	2,131	75,890	245	62,848	-326	28,228	832	1,438	1,396	733	16,360	309,215
June	137,672	2,083	91,172	261	66,430	-298	27,030	872	1,380	1,427	846	13,762	343,298
6-Month Total ...	757,701	11,843	467,146	1,305	381,881	-1,963	144,933	5,007	7,957	8,386	3,538	91,440	1,882,809
2012 6-Month Total ...	685,997	9,957	549,584	1,399	381,049	-1,885	149,768	4,974	8,242	8,304	1,826	76,148	1,879,149
2011 6-Month Total ...	855,865	14,924	400,531	1,446	380,024	-2,473	175,693	5,165	7,637	7,671	781	64,700	1,915,688

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^b Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^c Natural gas, plus a small amount of supplemental gaseous fuels.

^d Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

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

^f Through 1989, hydroelectric pumped storage is included in "Conventional Hydroelectric Power."

^g Wood and wood-derived fuels.

^h Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

ⁱ Solar thermal and photovoltaic (PV) energy.

^j Includes batteries, chemicals, hydrogen, pitch, purchased steam, sulfur,

miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

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

NA=Not available.

Notes: • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 7.2c Electricity Net Generation: Commercial and Industrial Sectors
(Subset of Table 7.2a; Million Kilowatthours)

	Commercial Sector ^a					Industrial Sector ^b							
	Coal ^c	Petro- leum ^d	Natural Gas ^e	Biomass	Total ^g	Coal ^c	Petro- leum ^d	Natural Gas ^e	Other Gases ^h	Hydro- electric Power ⁱ	Biomass		Total ^k
				Waste ^f							Wood ^j	Waste ^f	
1950 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,946	NA	NA	4,946
1955 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,261	NA	NA	3,261
1960 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,607	NA	NA	3,607
1965 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,134	NA	NA	3,134
1970 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,244	NA	NA	3,244
1975 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,106	NA	NA	3,106
1980 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,161	NA	NA	3,161
1985 Total	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,161	NA	NA	3,161
1990 Total	796	589	3,272	812	5,837	21,107	7,008	60,007	9,641	2,975	25,379	949	130,830
1995 Total	998	379	5,162	1,519	8,232	22,372	6,030	71,717	11,943	5,304	28,868	900	151,025
2000 Total	1,097	432	4,262	1,985	7,903	22,056	5,597	78,798	11,927	4,135	28,652	839	156,673
2001 Total	995	438	4,434	1,007	7,416	20,135	5,293	79,755	8,454	3,145	26,888	596	149,175
2002 Total	992	431	4,310	1,053	7,415	21,525	4,403	79,013	9,493	3,825	29,643	846	152,580
2003 Total	1,206	423	3,899	1,289	7,496	19,817	5,285	78,705	12,953	4,222	27,988	715	154,530
2004 Total	1,340	499	3,969	1,562	8,270	19,773	5,967	78,959	11,684	3,248	28,367	797	153,925
2005 Total	1,353	375	4,249	1,657	8,492	19,466	5,368	72,882	9,687	3,195	28,271	733	144,739
2006 Total	1,310	235	4,355	1,599	8,371	19,464	4,223	77,669	9,923	2,899	28,400	572	148,254
2007 Total	1,371	189	4,257	1,599	8,273	16,694	4,243	77,580	9,411	1,590	28,287	631	143,128
2008 Total	1,261	142	4,188	1,534	7,926	15,703	3,219	76,421	8,507	1,676	26,641	821	137,113
2009 Total	1,096	163	4,225	1,748	8,165	13,686	2,963	75,748	7,574	1,868	25,292	740	132,329
2010 Total	1,111	124	4,725	1,672	8,592	18,441	2,258	81,583	8,343	1,668	25,706	869	144,082
2011 January	108	21	421	186	817	1,304	207	6,901	687	143	2,307	82	12,054
February	104	11	367	169	725	1,125	168	6,177	600	160	2,048	78	10,770
March	100	7	373	188	753	1,161	160	6,212	693	187	2,181	78	11,149
April	77	4	357	179	706	1,139	163	6,416	674	184	2,090	73	11,175
May	82	5	471	202	867	1,199	156	6,597	633	198	2,033	66	11,359
June	90	3	463	200	860	1,249	152	6,802	753	150	2,292	67	11,938
July	104	7	605	205	1,023	1,353	141	7,517	836	109	2,312	71	12,868
August	94	7	571	210	985	1,389	138	7,745	823	96	2,343	76	13,085
September	84	7	487	195	870	1,209	145	6,953	752	122	2,260	75	11,948
October	65	6	438	190	799	1,120	162	6,419	700	126	2,146	86	11,224
November	62	7	437	195	800	1,077	143	6,742	715	146	2,286	86	11,663
December	78	6	499	195	874	1,165	155	7,429	758	178	2,392	81	12,642
Total	1,049	89	5,487	2,315	10,080	14,490	1,891	81,911	8,624	1,799	26,691	917	141,875
2012 January	84	7	528	203	913	1,175	294	7,293	743	175	2,412	77	12,480
February	78	5	499	202	875	1,055	194	6,963	771	157	2,246	72	11,733
March	70	5	476	199	853	1,097	197	6,716	769	186	2,106	70	11,452
April	64	6	468	202	843	998	214	6,522	745	160	2,022	72	11,022
May	70	6	480	210	880	1,063	180	7,235	742	182	2,193	77	12,006
June	68	10	493	202	880	1,130	204	7,266	717	131	2,188	71	12,000
July	78	12	553	219	980	1,344	205	7,892	731	109	2,304	82	13,003
August	71	10	498	220	917	1,299	249	7,535	779	97	2,293	77	12,669
September	58	8	480	211	869	1,124	231	7,045	668	92	2,249	69	11,805
October	43	9	471	219	855	1,152	217	7,096	614	107	2,241	81	11,860
November	72	7	447	217	845	1,085	250	7,309	576	236	2,308	81	12,191
December	81	6	478	231	911	1,115	252	7,894	634	218	2,388	88	12,942
Total	837	90	5,870	2,536	10,621	13,634	2,688	86,767	8,490	1,851	26,949	915	145,162
2013 January	77	15	522	208	923	1,069	221	7,740	698	344	2,359	73	12,831
February	89	10	459	186	848	1,039	130	6,958	627	371	2,189	67	11,693
March	71	5	476	220	900	1,102	193	7,475	720	297	2,279	75	12,466
April	58	6	414	199	808	965	189	6,712	646	252	1,980	75	11,111
May	67	6	449	204	857	1,085	219	7,152	728	319	2,179	76	12,047
June	78	6	467	213	903	1,122	193	7,272	656	295	2,260	80	12,199
6-Month Total	440	49	2,787	1,229	5,240	6,382	1,143	43,310	4,075	1,878	13,247	445	72,346
2012 6-Month Total	434	38	2,943	1,217	5,244	6,516	1,284	41,995	4,488	990	13,166	437	70,693
2011 6-Month Total	562	50	2,451	1,124	4,729	7,177	1,006	39,106	4,040	1,022	12,952	442	68,445

^a Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^b Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

^c Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^d Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^e Natural gas, plus a small amount of supplemental gaseous fuels.

^f Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^g Includes a small amount of conventional hydroelectric power, other gases, photovoltaic (PV) energy, wind, wood, and other, which are not separately displayed.

^h Blast furnace gas, and other manufactured and waste gases derived from

fossil fuels. Through 2010, also includes propane gas.

ⁱ Conventional hydroelectric power.

^j Wood and wood-derived fuels.

^k Includes photovoltaic (PV) energy, wind, batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

NA=Not available.

Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.
• Totals may not equal sum of components due to independent rounding.
• Geographic coverage is the 50 states and the District of Columbia.

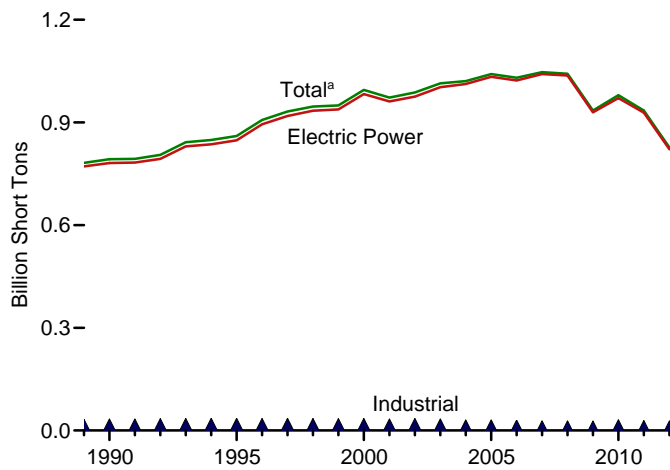
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

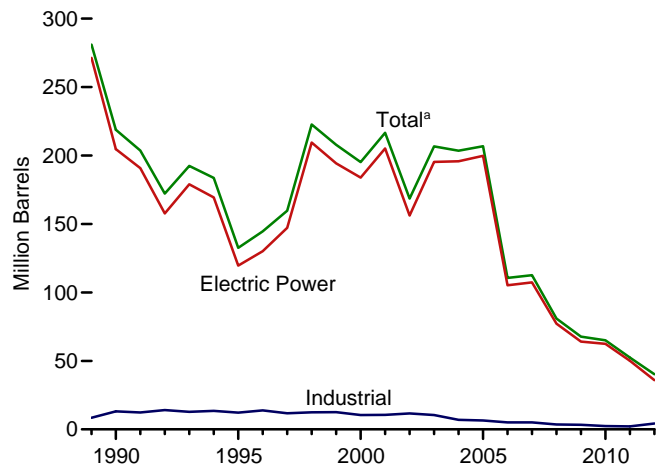
Selected years of data from 1949 through 1972 have been added to this table.
For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 7.3 Consumption of Selected Combustible Fuels for Electricity Generation

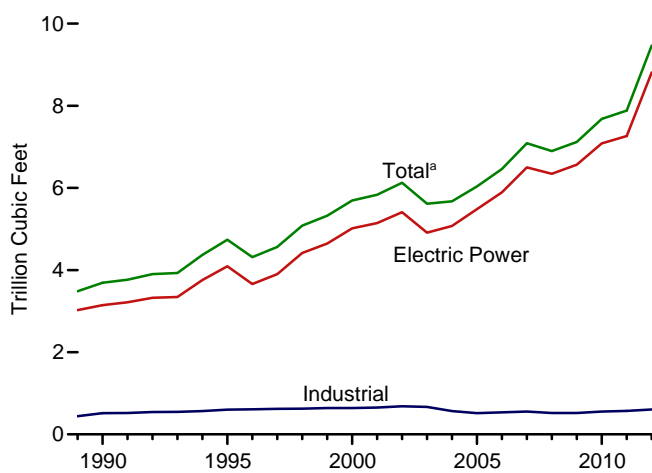
Coal by Sector, 1989–2012



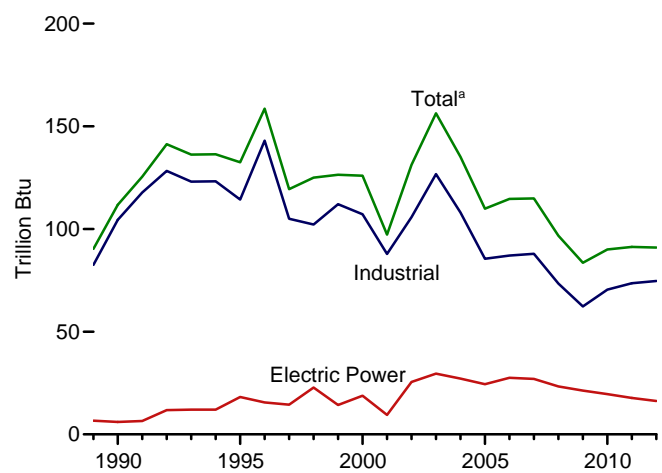
Petroleum by Sector, 1989–2012



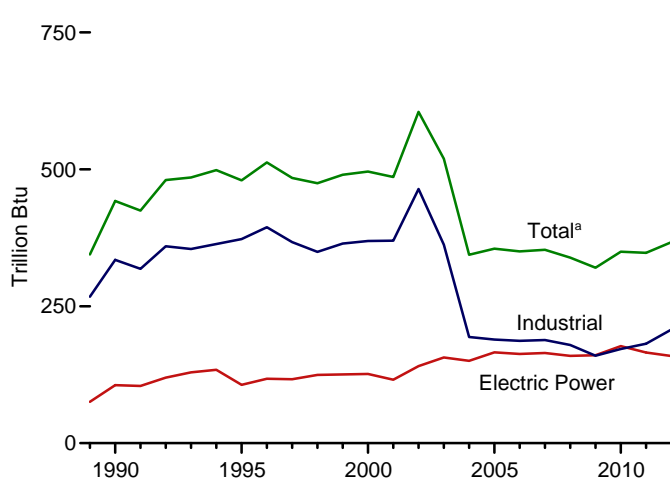
Natural Gas by Sector, 1989–2012



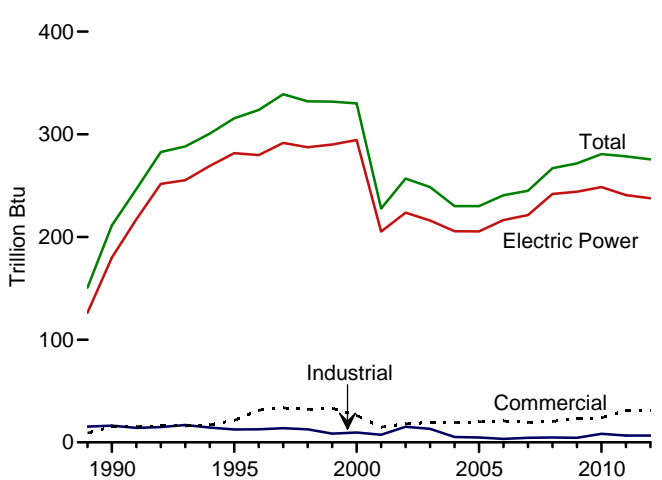
Other Gases^b by Sector, 1989–2012



Wood by Sector, 1989–2012



Waste by Sector, 1989–2012



^a Includes commercial sector.

^b Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.
Sources: Tables 7.3a–7.3c.

Table 7.3a Consumption of Combustible Fuels for Electricity Generation: Total (All Sectors) (Sum of Tables 7.3b and 7.3c)

	Coal ^a Thousand Short Tons	Petroleum					Natural Gas ^f Billion Cubic Feet	Other Gases ^g	Biomass		Other ^j
		Distillate Fuel Oil ^b Thousand Barrels	Residual Fuel Oil ^c Thousand Barrels	Other Liquids ^d Thousand Barrels	Petroleum Coke ^e Thousand Short Tons	Total ^e Thousand Barrels			Wood ^h	Waste ⁱ	
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	792,457	18,143	190,652	437	1,914	218,800	3,692	112	442	211	36
1995 Total	860,594	19,615	95,507	680	3,355	132,578	4,738	133	480	316	42
2000 Total	994,933	31,675	143,381	1,450	3,744	195,228	5,691	126	496	330	46
2001 Total	972,691	31,150	165,312	855	3,871	216,672	5,832	97	486	228	160
2002 Total	987,583	23,286	109,235	1,894	6,836	168,597	6,126	131	605	257	191
2003 Total	1,014,058	29,672	142,518	2,947	6,303	206,653	5,616	156	519	249	193
2004 Total	1,020,523	20,163	142,088	2,856	7,677	203,494	5,675	135	344	230	183
2005 Total	1,041,448	20,651	141,518	2,968	8,330	206,785	6,036	110	355	230	173
2006 Total	1,030,556	13,174	58,473	2,174	7,363	110,634	6,462	115	350	241	172
2007 Total	1,046,795	15,683	63,833	2,917	6,036	112,615	7,089	115	353	245	168
2008 Total	1,042,335	12,832	38,191	2,822	5,417	80,932	6,896	97	339	267	172
2009 Total	934,683	12,658	28,576	2,328	4,821	67,668	7,121	84	320	272	170
2010 Total	979,684	14,050	23,997	2,056	4,994	65,071	7,680	90	350	281	184
2011 January	90,208	1,347	1,723	255	552	6,086	564	7	31	22	16
February	73,614	913	1,020	144	431	4,230	505	6	28	21	15
March	72,645	907	1,113	140	517	4,746	503	7	29	23	17
April	67,128	1,005	1,333	111	336	4,130	546	7	25	22	17
May	73,522	973	1,230	88	357	4,078	599	7	26	23	18
June	84,156	968	1,249	138	432	4,514	727	8	30	24	18
July	94,304	1,138	1,550	238	510	5,476	967	9	31	25	19
August	92,297	831	1,313	146	464	4,610	951	9	32	25	18
September	76,790	736	942	156	454	4,105	712	8	30	23	17
October	69,605	753	938	143	338	3,522	600	7	27	24	17
November	67,059	768	917	147	257	3,115	568	8	28	24	17
December	73,610	892	922	138	365	3,775	642	8	31	25	18
Total	934,938	11,231	14,251	1,844	5,012	52,387	7,884	91	348	279	205
2012 January	70,846	816	994	78	465	4,213	675	8	33	22	15
February	62,906	689	760	118	354	3,340	673	8	31	21	14
March	57,442	599	875	128	234	2,771	702	8	28	23	15
April	51,893	789	799	141	202	2,741	742	8	26	23	14
May	62,978	907	839	166	245	3,138	844	8	29	24	16
June	71,750	899	1,299	177	265	3,698	911	8	30	23	15
July	86,667	894	1,608	174	291	4,131	1,123	8	32	25	16
August	82,862	723	1,143	154	319	3,617	1,034	8	33	23	16
September	69,490	681	836	112	313	3,196	834	7	31	22	15
October	66,745	776	937	148	266	3,188	699	7	29	23	15
November	69,977	737	782	118	298	3,126	609	6	31	23	15
December	73,144	687	816	126	300	3,128	618	7	33	24	16
Total	826,700	9,196	11,687	1,639	3,552	40,285	9,465	91	367	276	181
2013 January	75,110	1,027	1,547	246	375	4,696	660	7	32	22	14
February	67,213	663	1,000	135	308	3,337	594	6	29	20	13
March	70,467	658	829	102	359	3,381	632	8	32	23	15
April	60,957	674	826	116	335	3,289	588	7	25	22	14
May	64,814	827	807	118	464	4,074	642	8	29	24	15
June	75,241	671	903	92	470	4,016	766	8	30	24	17
6-Month Total	413,803	4,520	5,912	809	2,310	22,793	3,882	45	177	135	89
2012 6-Month Total	377,815	4,699	5,565	808	1,765	19,900	4,548	47	177	136	89
2011 6-Month Total	461,273	6,113	7,668	877	2,625	27,783	3,444	43	168	134	100

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal syngas.

^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

^e Petroleum coke is converted from short tons to barrels by multiplying by 5.

^f Natural gas, plus a small amount of supplemental gaseous fuels.

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

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

Notes: • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.

Sources: See sources for Tables 7.3b and 7.3c.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 7.3b Consumption of Combustible Fuels for Electricity Generation: Electric Power Sector (Subset of Table 7.3a)

	Coal ^a Thousand Short Tons	Petroleum					Natural Gas ^f Billion Cubic Feet	Other Gases ^g	Biomass		Other ⁱ
		Distillate Fuel Oil ^b Thousand Barrels	Residual Fuel Oil ^c Thousand Barrels	Other Liquids ^d Thousand Barrels	Petroleum Coke ^e Thousand Short Tons	Total ^e Thousand Barrels			Wood ^h	Waste ⁱ	
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	781,301	16,394	183,285	25	1,008	204,745	3,147	6	106	180	(s)
1995 Total	847,854	18,066	88,895	441	2,452	119,663	4,094	18	106	282	2
2000 Total	982,713	29,722	138,047	403	3,155	183,946	5,014	19	126	294	1
2001 Total	961,523	29,056	159,150	374	3,308	205,119	5,142	9	116	205	109
2002 Total	975,251	21,810	104,577	1,243	5,705	156,154	5,408	25	141	224	137
2003 Total	1,003,036	27,441	137,361	1,937	5,719	195,336	4,909	30	156	216	136
2004 Total	1,012,459	18,793	138,831	2,511	7,135	195,809	5,075	27	150	206	131
2005 Total	1,033,567	19,450	138,337	2,591	7,877	199,760	5,485	24	166	205	116
2006 Total	1,022,802	12,578	56,347	1,783	6,905	105,235	5,891	28	163	216	117
2007 Total	1,041,346	15,135	62,072	2,496	5,523	107,316	6,502	27	165	221	117
2008 Total	1,036,891	12,318	37,222	2,608	5,000	77,149	6,342	23	159	242	122
2009 Total	929,692	11,848	27,768	2,110	4,485	64,151	6,567	21	160	244	115
2010 Total	971,245	13,677	23,560	1,848	4,679	62,477	7,085	20	177	249	116
2011 January	89,681	1,314	1,660	238	524	5,833	512	1	15	19	10
February	73,167	886	977	127	409	4,033	459	1	14	18	10
March	72,148	882	1,082	124	495	4,563	457	2	14	20	11
April	66,643	989	1,302	96	312	3,948	498	1	11	19	11
May	73,010	955	1,206	72	333	3,899	548	1	12	20	11
June	83,622	951	1,223	123	409	4,344	675	2	14	21	12
July	93,724	1,117	1,524	223	491	5,317	909	2	16	21	12
August	91,707	812	1,287	130	440	4,430	893	2	16	21	12
September	76,286	714	915	140	428	3,911	659	1	14	20	11
October	69,165	727	906	128	312	3,321	551	1	13	20	11
November	66,642	745	889	132	232	2,926	518	1	12	21	11
December	73,063	868	891	123	339	3,579	586	1	15	22	12
Total	928,857	10,961	13,861	1,655	4,726	50,105	7,265	18	166	241	133
2012 January	70,382	797	958	62	382	3,727	620	1	15	19	11
February	62,486	674	725	102	306	3,032	621	1	14	17	10
March	57,010	582	845	119	183	2,463	652	1	12	20	10
April	51,504	766	773	113	153	2,415	693	1	10	20	10
May	62,569	885	808	158	196	2,831	789	1	12	21	11
June	71,310	871	1,276	159	215	3,380	856	1	13	20	11
July	86,138	867	1,579	166	237	3,796	1,063	1	15	21	12
August	82,344	696	1,119	147	247	3,195	977	1	15	20	11
September	69,048	656	812	101	247	2,807	781	1	14	19	11
October	66,287	749	914	125	213	2,851	645	1	12	20	11
November	69,550	717	760	112	223	2,704	553	1	13	20	11
December	72,738	669	792	115	226	2,706	559	1	14	21	11
Total	821,365	8,929	11,362	1,479	2,827	35,907	8,810	16	159	238	129
2013 January	74,704	1,001	1,501	232	322	4,343	602	1	14	19	10
February	66,822	646	965	129	283	3,156	541	1	13	17	9
March	70,060	640	802	93	304	3,057	576	2	14	19	11
April	60,601	652	802	104	280	2,958	538	1	9	19	10
May	64,409	809	782	100	402	3,702	589	2	12	21	11
June	74,819	654	880	87	411	3,673	711	2	13	20	12
6-Month Total	411,415	4,401	5,732	745	2,002	20,889	3,555	9	75	115	63
2012 6-Month Total	375,260	4,576	5,385	713	1,435	17,848	4,232	8	76	117	64
2011 6-Month Total	458,271	5,977	7,450	780	2,483	26,620	3,149	9	80	115	65

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal syngas.

^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

^e Petroleum coke is converted from short tons to barrels by multiplying by 5.

^f Natural gas, plus a small amount of supplemental gaseous fuels.

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

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

NA=Not available. (s)=Less than 0.5 trillion Btu.
Notes: • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 7.3c Consumption of Selected Combustible Fuels for Electricity Generation: Commercial and Industrial Sectors (Subset of Table 7.3a)

	Commercial Sector ^a				Industrial Sector ^b						
	Coal ^c	Petroleum ^d	Natural Gas ^e	Biomass	Coal ^c	Petroleum ^d	Natural Gas ^e	Other Gases ^g	Biomass		Other ⁱ
				Waste ^f					Wood ^h	Waste ^f	
Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu				
1990 Total	417	953	28	15	10,740	13,103	517	104	335	16	36
1995 Total	569	649	43	21	12,171	12,265	601	114	373	13	40
2000 Total	514	823	37	26	11,706	10,459	640	107	369	10	45
2001 Total	532	1,023	36	15	10,636	10,530	654	88	370	7	44
2002 Total	477	834	33	18	11,855	11,608	685	106	464	15	43
2003 Total	582	894	38	19	10,440	10,424	668	127	362	13	46
2004 Total	377	766	33	19	7,687	6,919	566	108	194	5	41
2005 Total	377	585	34	20	7,504	6,440	518	85	189	5	46
2006 Total	347	333	35	21	7,408	5,066	536	87	187	3	45
2007 Total	361	258	34	19	5,089	5,041	554	88	188	4	41
2008 Total	369	166	33	20	5,075	3,617	520	73	179	5	39
2009 Total	317	190	34	23	4,674	3,328	520	62	160	4	42
2010 Total	314	172	39	24	8,125	2,422	555	70	172	8	55
2011 January	40	27	4	3	487	226	48	6	16	1	4
February	39	16	3	2	409	180	43	5	14	1	4
March	37	11	3	3	460	173	43	5	15	1	5
April	25	5	3	2	460	177	45	6	14	1	5
May	25	5	4	3	487	174	47	6	14	1	5
June	27	5	4	3	507	165	48	7	16	1	5
July	32	14	5	3	548	145	53	7	16	1	5
August	29	12	5	3	562	168	54	7	16	1	5
September	26	13	4	3	479	181	49	6	15	1	4
October	21	10	4	3	419	191	45	6	15	1	5
November	21	11	4	3	397	179	47	6	16	1	5
December	26	9	4	3	521	187	51	6	16	1	5
Total	347	137	47	31	5,735	2,145	572	74	182	7	57
2012 January	29	9	4	3	435	476	50	6	18	1	3
February	27	7	4	3	393	301	48	7	17	1	3
March	25	8	4	3	407	300	46	7	15	1	3
April	22	10	4	2	366	316	45	6	16	1	3
May	24	9	4	3	385	298	51	6	17	1	3
June	26	15	4	2	413	303	51	6	17	1	3
July	30	18	5	3	500	318	55	6	18	1	3
August	28	16	4	2	491	407	53	7	18	1	3
September	24	12	4	3	418	377	50	6	17	1	3
October	20	13	4	3	438	324	50	5	17	1	3
November	26	11	4	3	401	412	51	5	18	1	3
December	28	9	4	3	378	412	55	6	19	1	3
Total	310	136	49	31	5,026	4,243	606	75	207	7	36
2013 January	31	22	4	3	375	331	54	6	18	1	3
February	29	13	4	3	362	168	49	5	17	(s)	3
March	28	8	4	3	379	316	52	6	18	1	3
April	24	9	4	3	332	322	47	5	16	1	3
May	27	9	4	3	379	363	49	7	16	1	3
June	29	9	4	3	393	334	51	6	17	1	3
6-Month Total	167	70	24	16	2,220	1,834	303	36	102	3	18
2012 6-Month Total	154	57	25	15	2,400	1,994	291	39	101	3	17
2011 6-Month Total	193	69	21	15	2,809	1,094	273	35	88	3	28

^a Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^b Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

^c Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^d Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^e Natural gas, plus a small amount of supplemental gaseous fuels.

^f Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous

technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

(s)=Less than 0.5 trillion Btu.

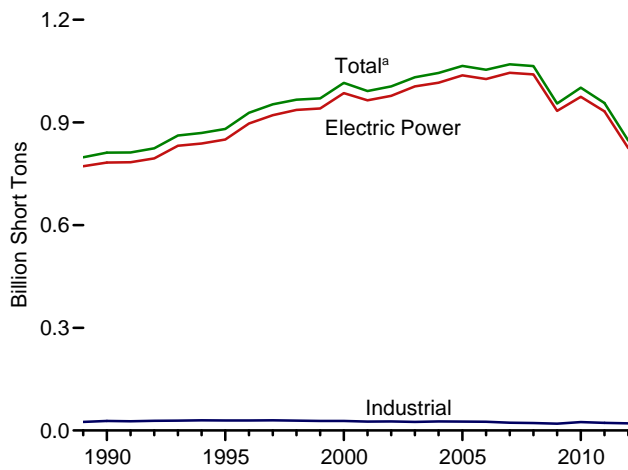
Notes: • Data are for fuels consumed to produce electricity. Through 1988, data are not available. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available data beginning in 1989.

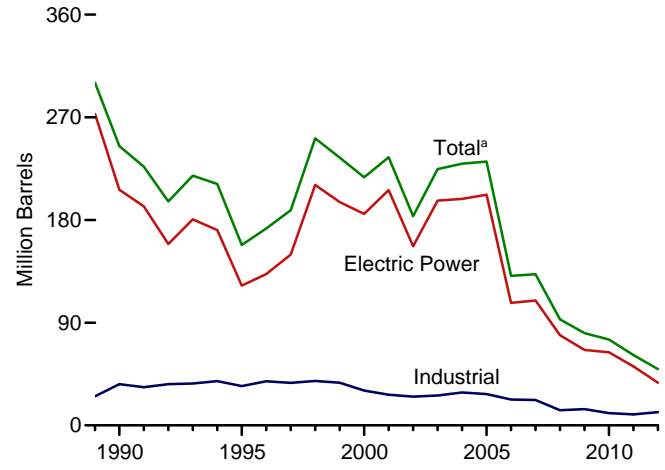
Sources: • **1989–1997:** U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003:** EIA, Form EIA-906, "Power Plant Report." • **2004–2007:** EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward:** EIA, Form EIA-923, "Power Plant Operations Report."

Figure 7.4 Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output

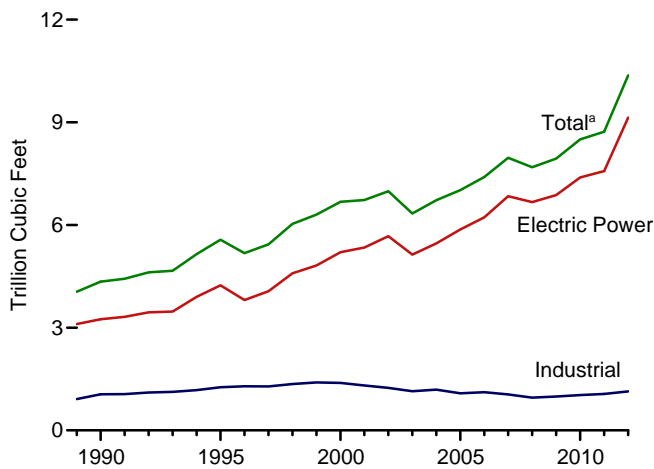
Coal by Sector, 1989–2012



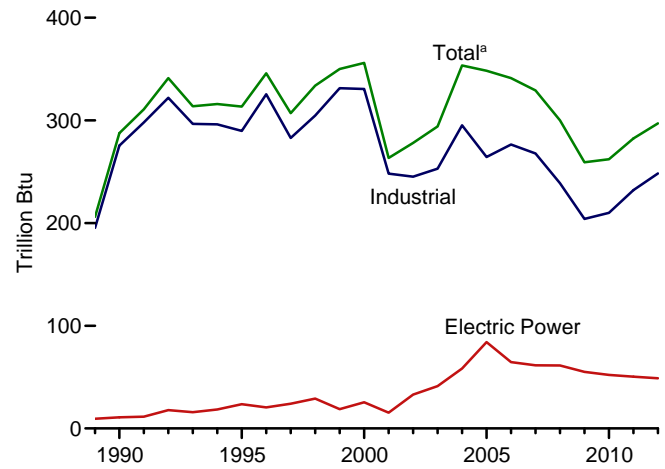
Petroleum by Sector, 1989–2012



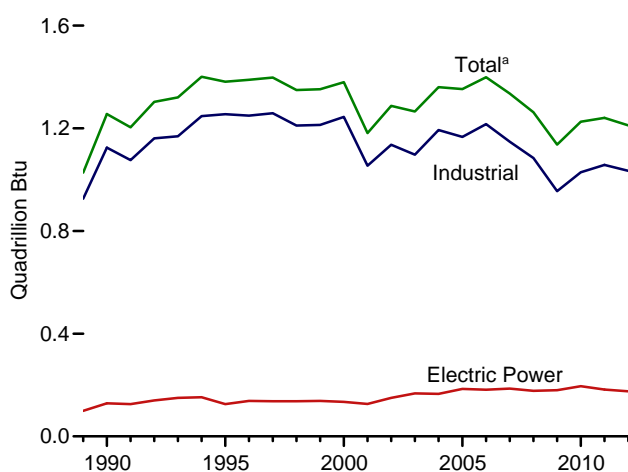
Natural Gas by Sector, 1989–2012



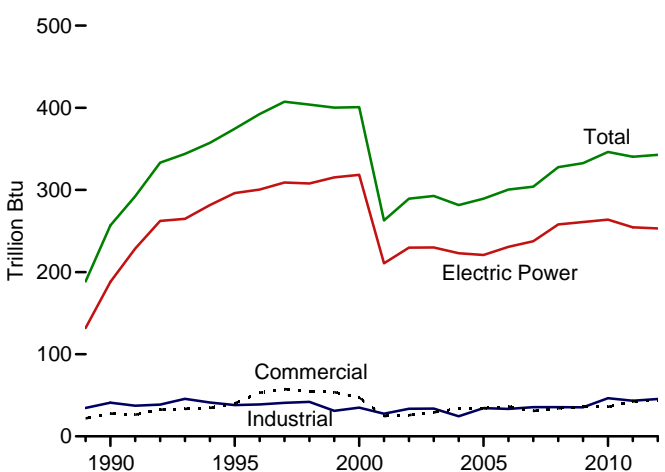
Other Gases^b by Sector, 1989–2012



Wood by Sector, 1989–2012



Waste by Sector, 1989–2012



^a Includes commercial sector.

^b Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.
Sources: Tables 7.4a–7.4c.

Table 7.4a Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Total (All Sectors) (Sum of Tables 7.4b and 7.4c)

	Coal ^a Thousand Short Tons	Petroleum					Natural Gas ^f Billion Cubic Feet	Other Gases ^g	Biomass		Other ⁱ
		Distillate Fuel Oil ^b Thousand Barrels	Residual Fuel Oil ^c Thousand Barrels	Other Liquids ^d Thousand Barrels	Petroleum Coke ^e Thousand Short Tons	Total ^e Thousand Barrels			Wood ^h Trillion Btu	Waste ^j Trillion Btu	
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	811,538	20,194	209,081	1,332	2,832	244,765	4,346	288	1,256	257	86
1995 Total	881,012	21,697	112,168	1,322	4,590	158,140	5,572	313	1,382	374	97
2000 Total	1,015,398	34,572	156,673	2,904	4,669	217,494	6,677	356	1,380	401	109
2001 Total	991,635	33,724	177,137	1,418	4,532	234,940	6,731	263	1,182	263	229
2002 Total	1,005,144	24,749	118,637	3,257	7,353	183,409	6,986	278	1,287	289	252
2003 Total	1,031,778	31,825	152,859	4,576	7,067	224,593	6,337	294	1,266	293	262
2004 Total	1,044,798	23,520	157,478	4,764	8,721	229,364	6,727	353	1,360	282	254
2005 Total	1,065,281	24,446	156,915	4,270	9,113	231,193	7,021	348	1,353	289	237
2006 Total	1,053,783	14,655	69,846	3,396	8,622	131,005	7,404	341	1,399	300	247
2007 Total	1,069,606	17,042	74,616	4,237	7,299	132,389	7,962	329	1,336	304	239
2008 Total	1,064,503	14,137	43,477	3,765	6,314	92,948	7,689	300	1,263	328	212
2009 Total	955,190	14,800	33,672	3,218	5,828	80,830	7,938	259	1,137	333	228
2010 Total	1,001,411	15,247	26,944	2,777	6,053	75,231	8,502	262	1,226	346	237
2011 January	92,292	1,411	2,123	329	645	7,087	636	23	111	28	20
February	75,447	986	1,247	213	521	5,052	570	22	99	26	19
March	74,514	965	1,327	201	603	5,506	570	24	104	28	22
April	68,841	1,034	1,537	166	428	4,876	610	22	96	26	21
May	75,298	1,016	1,416	146	452	4,838	666	23	95	27	22
June	85,881	1,001	1,450	191	521	5,246	794	24	104	28	23
July	96,128	1,169	1,738	292	599	6,194	1,045	25	107	29	24
August	94,103	855	1,515	204	545	5,298	1,030	25	107	29	23
September	78,479	770	1,136	207	545	4,837	782	24	104	28	21
October	71,317	797	1,147	201	429	4,289	666	24	100	30	22
November	68,748	805	1,118	201	345	3,848	636	23	103	30	22
December	75,422	926	1,123	189	460	4,537	718	24	111	31	23
Total	956,470	11,735	16,877	2,540	6,092	61,610	8,724	282	1,241	340	261
2012 January	72,795	847	1,188	131	561	4,970	755	26	109	28	18
February	64,604	710	892	168	449	4,015	746	25	101	26	16
March	59,142	626	994	198	360	3,617	775	27	96	29	17
April	53,407	814	920	219	317	3,538	814	25	91	27	17
May	64,678	938	991	206	355	3,909	917	26	100	29	18
June	73,344	943	1,458	234	365	4,458	987	25	100	28	18
July	88,319	937	1,767	205	385	4,836	1,203	25	105	29	18
August	84,597	754	1,303	180	412	4,297	1,113	26	103	28	18
September	71,050	705	973	146	406	3,854	908	23	101	27	17
October	68,476	803	1,087	214	379	3,999	774	22	98	29	17
November	71,660	765	931	148	405	3,868	682	22	100	30	17
December	74,951	712	961	164	418	3,927	696	25	106	32	18
Total	847,023	9,555	13,465	2,214	4,811	49,287	10,370	297	1,211	343	209
2013 January	76,882	1,066	1,716	298	505	5,603	739	25	107	30	17
February	68,856	700	1,165	160	422	4,135	665	22	96	26	16
March	72,191	697	972	133	463	4,117	708	24	104	29	18
April	62,481	707	976	162	432	4,007	660	23	93	28	17
May	66,376	855	970	165	532	4,650	715	25	99	29	17
June	76,761	703	1,054	121	545	4,603	836	23	102	29	19
6-Month Total	423,547	4,728	6,854	1,038	2,899	27,115	4,323	142	601	171	103
2012 6-Month Total	387,970	4,878	6,442	1,156	2,406	24,506	4,995	153	598	167	103
2011 6-Month Total	472,273	6,414	9,101	1,245	3,169	32,605	3,846	138	609	164	127

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

^e Petroleum coke is converted from short tons to barrels by multiplying by 5.

^f Natural gas, plus a small amount of supplemental gaseous fuels.

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes

non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.

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

Notes: • See Note 1, "Coverage of Electricity Statistics," at end of section.

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

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

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972.

• See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.

Sources: See sources for Tables 7.4b and 7.4c.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 7.4b Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output: Electric Power Sector (Subset of Table 7.4a)

	Coal ^a	Petroleum					Natural Gas ^f	Other Gases ^g	Biomass		Other ^j
		Distillate Fuel Oil ^b	Residual Fuel Oil ^c	Other Liquids ^d	Petroleum Coke ^e	Total ^e			Wood ^h	Waste ⁱ	
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	782,567	16,567	184,915	26	1,008	206,550	3,245	11	129	188	(s)
1995 Total	850,230	18,553	90,023	499	2,674	122,447	4,237	24	125	296	2
2000 Total	985,821	30,016	138,513	454	3,275	185,358	5,206	25	134	318	1
2001 Total	964,433	29,274	159,504	377	3,427	206,291	5,342	15	126	211	113
2002 Total	977,507	21,876	104,773	1,267	5,816	156,996	5,672	33	150	230	143
2003 Total	1,005,116	27,632	138,279	2,026	5,799	196,932	5,135	41	167	230	140
2004 Total	1,016,268	19,107	139,816	2,713	7,372	198,498	5,464	58	165	223	138
2005 Total	1,037,485	19,675	139,409	2,685	8,083	202,184	5,869	84	185	221	123
2006 Total	1,026,636	12,646	57,345	1,870	7,101	107,365	6,222	65	182	231	125
2007 Total	1,045,141	15,327	63,086	2,594	5,685	109,431	6,841	61	186	237	124
2008 Total	1,040,580	12,547	38,241	2,670	5,119	79,056	6,668	61	177	258	131
2009 Total	933,627	12,035	28,782	2,210	4,611	66,081	6,873	55	180	261	124
2010 Total	975,052	13,790	24,503	1,877	4,777	64,055	7,387	52	196	264	124
2011 January	90,021	1,322	1,745	239	529	5,953	540	4	17	21	11
February	73,474	911	1,024	127	417	4,148	484	4	16	19	11
March	72,458	885	1,153	124	506	4,692	482	5	15	21	12
April	66,930	991	1,384	96	321	4,078	521	4	12	20	12
May	73,338	957	1,286	72	344	4,034	572	4	13	21	12
June	83,908	954	1,303	123	419	4,474	699	4	16	22	12
July	94,037	1,120	1,609	223	501	5,458	939	4	17	22	13
August	92,012	816	1,375	130	451	4,575	921	4	17	22	13
September	76,569	716	1,002	140	439	4,052	684	4	15	21	12
October	69,458	730	990	128	319	3,445	575	4	14	22	12
November	66,919	748	968	134	241	3,052	543	4	14	22	12
December	73,359	870	965	123	350	3,707	614	4	16	23	12
Total	932,484	11,021	14,803	1,658	4,837	51,667	7,574	50	182	255	143
2012 January	70,720	800	1,050	63	393	3,877	648	4	16	21	12
February	62,755	676	787	102	317	3,149	648	4	15	19	10
March	57,300	585	895	119	194	2,568	677	4	14	21	11
April	51,751	769	836	113	162	2,526	720	4	11	20	11
May	62,868	890	889	158	207	2,971	817	4	13	22	12
June	71,595	874	1,362	159	221	3,497	885	4	15	21	12
July	86,429	871	1,656	166	246	3,922	1,093	4	16	22	12
August	82,643	699	1,199	147	256	3,324	1,007	4	16	21	12
September	69,321	659	889	101	257	2,933	807	4	15	20	11
October	66,565	753	997	125	222	2,982	671	4	14	21	11
November	69,798	720	841	112	232	2,832	578	3	15	22	11
December	73,011	672	874	115	236	2,841	585	4	16	23	12
Total	824,758	8,968	12,272	1,480	2,940	37,420	9,137	49	176	253	139
2013 January	74,968	1,007	1,551	232	332	4,449	629	4	16	21	11
February	67,086	656	1,030	130	292	3,273	566	3	14	18	10
March	70,355	644	883	93	314	3,191	602	3	15	21	11
April	60,859	656	884	105	290	3,095	563	4	11	20	11
May	64,692	811	868	100	411	3,833	615	4	14	21	12
June	75,096	656	959	87	417	3,785	736	4	15	21	13
6-Month Total	413,055	4,430	6,175	746	2,055	21,626	3,712	22	84	124	68
2012 6-Month Total	376,990	4,594	5,818	714	1,492	18,587	4,395	25	84	124	69
2011 6-Month Total	460,130	6,021	7,895	781	2,536	27,379	3,298	25	89	122	70

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

^e Petroleum coke is converted from short tons to barrels by multiplying by 5.

^f Natural gas, plus a small amount of supplemental gaseous fuels.

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and

tire-derived fuels).

^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

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

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

Notes: • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 7.4c Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output: Commercial and Industrial Sectors (Subset of Table 7.4a)

	Commercial Sector ^a				Industrial Sector ^b						
	Coal ^c	Petroleum ^d	Natural Gas ^e	Biomass	Coal ^c	Petroleum ^d	Natural Gas ^e	Other Gases ^g	Biomass		Other ⁱ
				Waste ^f					Wood ^h	Waste ^f	
	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu			
1990 Total	1,191	2,056	46	28	27,781	36,159	1,055	275	1,125	41	86
1995 Total	1,419	1,245	78	40	29,363	34,448	1,258	290	1,255	38	95
2000 Total	1,547	1,615	85	47	28,031	30,520	1,386	331	1,244	35	108
2001 Total	1,448	1,832	79	25	25,755	26,817	1,310	248	1,054	27	101
2002 Total	1,405	1,250	74	26	26,232	25,163	1,240	245	1,136	34	92
2003 Total	1,816	1,449	58	29	24,846	26,212	1,144	253	1,097	34	103
2004 Total	1,917	2,009	72	34	26,613	28,857	1,191	295	1,193	24	94
2005 Total	1,922	1,630	68	34	25,875	27,380	1,084	264	1,166	34	94
2006 Total	1,886	935	68	36	25,262	22,706	1,115	277	1,216	33	102
2007 Total	1,927	752	70	31	22,537	22,207	1,050	268	1,148	36	98
2008 Total	2,021	671	66	34	21,902	13,222	955	239	1,084	35	60
2009 Total	1,798	521	76	36	19,766	14,228	990	204	955	35	82
2010 Total	1,720	437	86	36	24,638	10,740	1,029	210	1,029	47	91
2011 January	189	103	7	3	2,082	1,031	90	18	94	4	7
February	173	48	6	3	1,800	856	81	18	83	4	7
March	164	26	6	3	1,891	788	82	19	88	4	8
April	124	8	6	3	1,787	791	83	18	84	3	8
May	124	12	7	4	1,836	791	87	19	82	3	8
June	130	9	7	4	1,843	764	88	20	88	3	8
July	145	23	9	4	1,946	714	97	20	90	3	9
August	129	20	9	4	1,962	703	99	20	90	3	8
September	122	23	8	4	1,788	762	91	20	88	3	7
October	110	14	7	4	1,748	830	85	20	86	4	8
November	117	28	7	4	1,712	767	86	19	90	5	8
December	139	19	8	4	1,923	812	96	20	95	4	8
Total	1,668	333	87	43	22,319	9,610	1,063	232	1,057	43	94
2012 January	162	27	9	4	1,913	1,065	98	21	93	4	4
February	141	20	8	4	1,708	847	90	21	86	4	3
March	135	23	8	4	1,707	1,026	90	22	82	4	4
April	115	16	7	3	1,542	997	87	21	80	4	3
May	121	17	7	4	1,689	921	93	22	87	4	4
June	114	29	8	3	1,634	932	94	21	85	3	4
July	118	38	8	4	1,773	876	101	21	89	4	4
August	126	32	8	3	1,827	942	98	22	86	4	4
September	116	25	8	3	1,613	896	93	19	85	4	4
October	115	28	8	4	1,796	989	95	18	85	4	4
November	134	25	7	4	1,728	1,011	97	19	86	4	4
December	151	23	8	4	1,789	1,064	103	21	90	5	4
Total	1,549	302	94	44	20,717	11,566	1,139	248	1,034	45	45
2013 January	153	53	8	4	1,760	1,101	102	21	91	4	4
February	144	34	7	4	1,626	827	91	19	82	4	4
March	141	21	8	4	1,694	905	98	20	89	4	4
April	114	18	7	4	1,509	894	90	19	82	4	4
May	120	18	7	4	1,564	800	94	21	85	4	3
June	111	18	7	4	1,554	799	93	19	87	4	4
6-Month Total	784	163	44	23	9,708	5,326	568	120	516	24	22
2012 6-Month Total	788	132	47	22	10,192	5,788	553	128	513	21	22
2011 6-Month Total	905	206	39	21	11,239	5,021	509	113	520	21	45

^a Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

^b Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

^c Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

^d Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

^e Natural gas, plus a small amount of supplemental gaseous fuels.

^f Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.

^h Wood and wood-derived fuels.

ⁱ Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

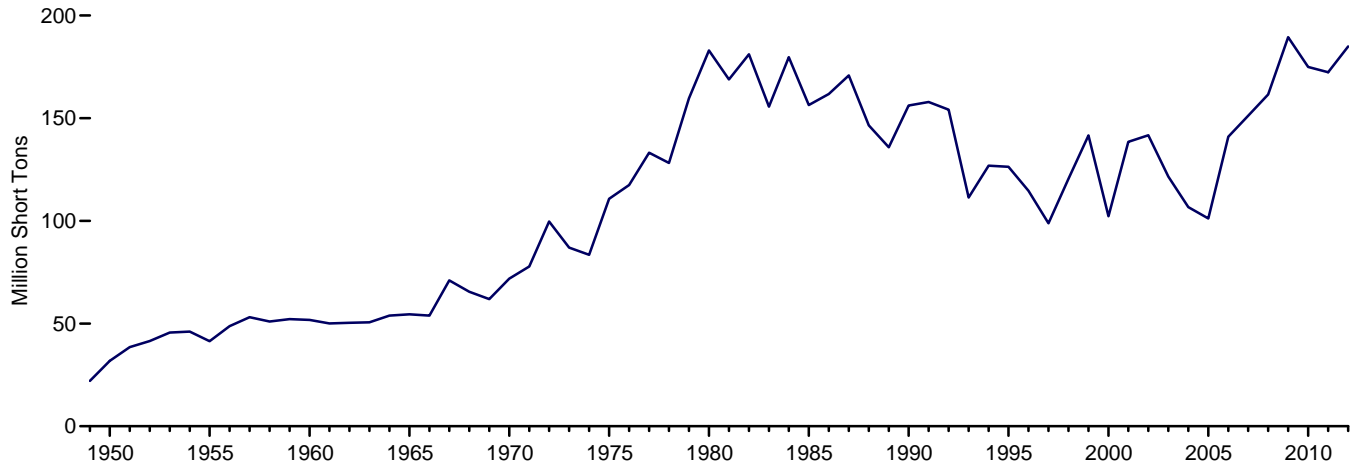
Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available data beginning in 1989.

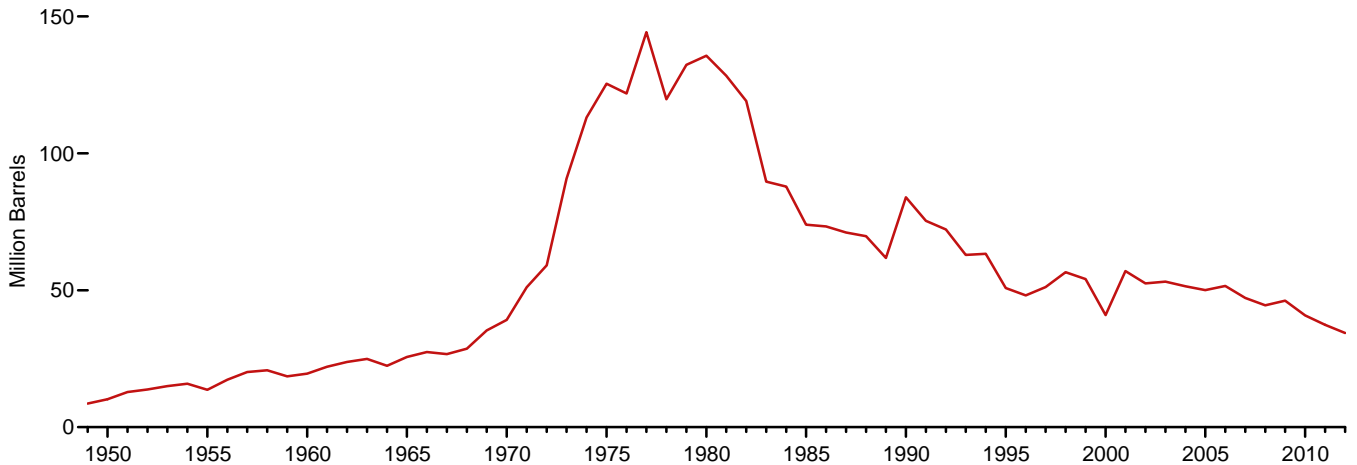
Sources: • **1989–1997:** U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003:** EIA, Form EIA-906, "Power Plant Report." • **2004–2007:** EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward:** EIA, Form EIA-923, "Power Plant Operations Report."

Figure 7.5 Stocks of Coal and Petroleum: Electric Power Sector

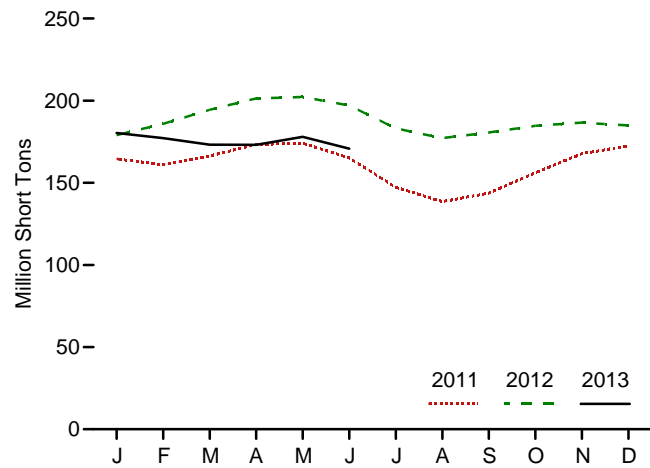
Coal, 1949–2012



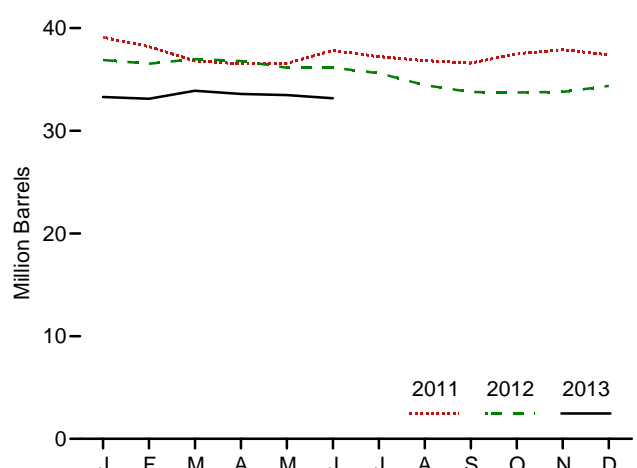
Total Petroleum, 1949–2012



Coal, Monthly



Total Petroleum, Monthly



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.
Source: Table 7.5.

Table 7.5 Stocks of Coal and Petroleum: Electric Power Sector

	Coal ^a	Petroleum				
		Distillate Fuel Oil ^b	Residual Fuel Oil ^c	Other Liquids ^d	Petroleum Coke ^e	Total ^{e,f}
		Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels
1950 Year	31,842	NA	NA	NA	NA	10,201
1955 Year	41,391	NA	NA	NA	NA	13,671
1960 Year	51,735	NA	NA	NA	NA	19,572
1965 Year	54,525	NA	NA	NA	NA	25,647
1970 Year	71,908	NA	NA	NA	239	39,151
1975 Year	110,724	16,432	108,825	NA	31	125,413
1980 Year	183,010	30,023	105,351	NA	52	135,635
1985 Year	156,376	16,386	57,304	NA	49	73,933
1990 Year	156,166	16,471	67,030	NA	94	83,970
1995 Year	126,304	15,392	35,102	NA	65	50,821
2000 Year ^g	102,296	15,127	24,748	NA	211	40,932
2001 Year	138,496	20,486	34,594	NA	390	57,031
2002 Year	141,714	17,413	25,723	800	1,711	52,490
2003 Year	121,567	19,153	25,820	779	1,484	53,170
2004 Year	106,669	19,275	26,596	879	937	51,434
2005 Year	101,137	18,778	27,624	1,012	530	50,062
2006 Year	140,964	18,013	28,823	1,380	674	51,583
2007 Year	151,221	18,395	24,136	1,902	554	47,203
2008 Year	161,589	17,761	21,088	1,955	739	44,498
2009 Year	189,467	17,886	19,068	2,257	1,394	46,181
2010 Year	174,917	16,758	16,629	2,319	1,019	40,800
2011 January	164,575	16,613	16,012	2,492	799	39,111
February	161,064	16,565	15,552	2,545	707	38,198
March	166,255	16,367	15,405	2,546	495	36,794
April	173,427	16,153	15,181	2,561	526	36,525
May	174,093	15,997	15,209	2,539	563	36,558
June	165,149	16,379	16,359	2,601	496	37,820
July	147,296	16,170	16,111	2,622	463	37,218
August	138,527	16,162	15,843	2,631	437	36,822
September	143,711	16,311	15,726	2,628	385	36,593
October	156,196	16,567	16,044	2,681	440	37,495
November	167,754	16,729	15,964	2,744	494	37,906
December	172,387	16,649	15,491	2,707	508	37,387
2012 January	179,030	16,712	15,232	2,735	443	36,893
February	185,901	16,532	15,121	2,778	420	36,532
March	194,455	16,423	15,244	2,815	500	36,984
April	201,368	16,325	15,082	2,856	507	36,795
May	202,184	16,232	14,747	2,872	459	36,147
June	197,052	16,152	14,500	2,900	519	36,145
July	183,119	16,581	13,728	2,941	474	35,617
August	177,246	16,023	13,509	2,840	413	34,439
September	180,648	15,920	13,317	2,748	358	33,773
October	184,661	15,813	13,148	2,774	398	33,725
November	186,633	15,837	13,039	2,808	423	33,796
December	184,923	16,061	12,995	2,841	495	34,371
2013 January	180,318	16,092	12,222	2,763	444	33,296
February	177,208	16,163	11,992	2,754	444	33,127
March	173,241	16,133	12,983	2,758	406	33,906
April	173,078	15,994	12,529	2,790	455	33,589
May	177,977	15,951	12,483	2,823	444	33,476
June	170,751	16,054	12,199	2,871	409	33,171

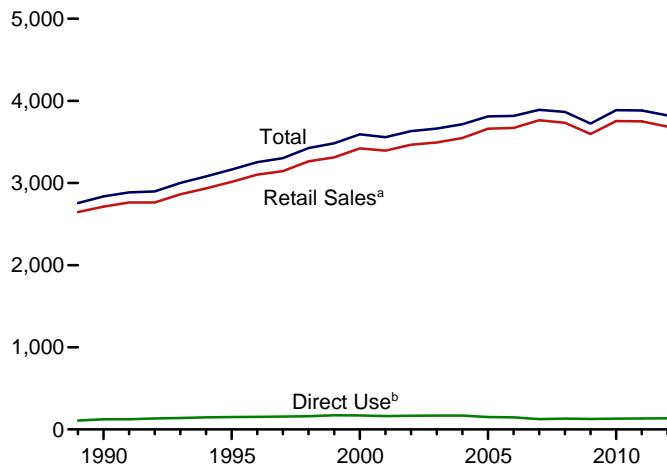
^a Anthracite, bituminous coal, subbituminous coal, and lignite.
^b Fuel oil nos. 1, 2 and 4. For 1973–1979, data are for gas turbine and internal combustion plant stocks of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.
^c Fuel oil nos. 5 and 6. For 1973–1979, data are for steam plant stocks of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.
^d Jet fuel and kerosene. Through 2003, data also include a small amount of waste oil.
^e Petroleum coke is converted from short tons to barrels by multiplying by 5.
^f Distillate fuel oil and residual fuel oil. Beginning in 1970, also includes petroleum coke. Beginning in 2002, also includes other liquids.
^g Through 1998, data are for electric utilities only. Beginning in 1999, data are for electric utilities and independent power producers.
 NA=Not available.
 Notes: • 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. • Stocks

are at end of period. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
 Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.
 Sources: • **1949–September 1977:** Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977–1981:** Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1982–1988:** U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." • **1989–1997:** EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000:** EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003:** EIA, Form EIA-906, "Power Plant Report." • **2004–2007:** EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward:** EIA, Form EIA-923, "Power Plant Operations Report."

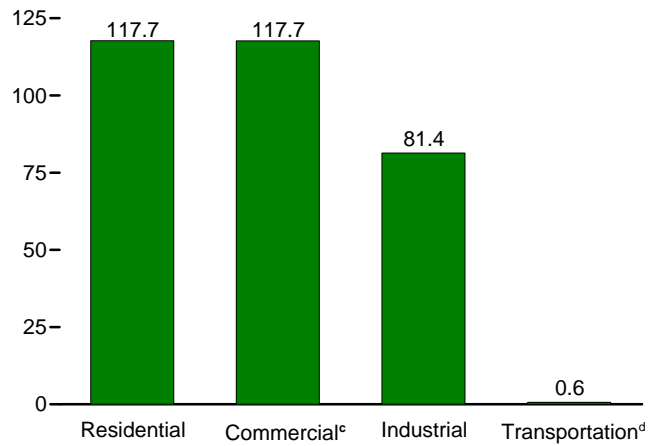
Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Figure 7.6 Electricity End Use
(Billion Kilowatthours)

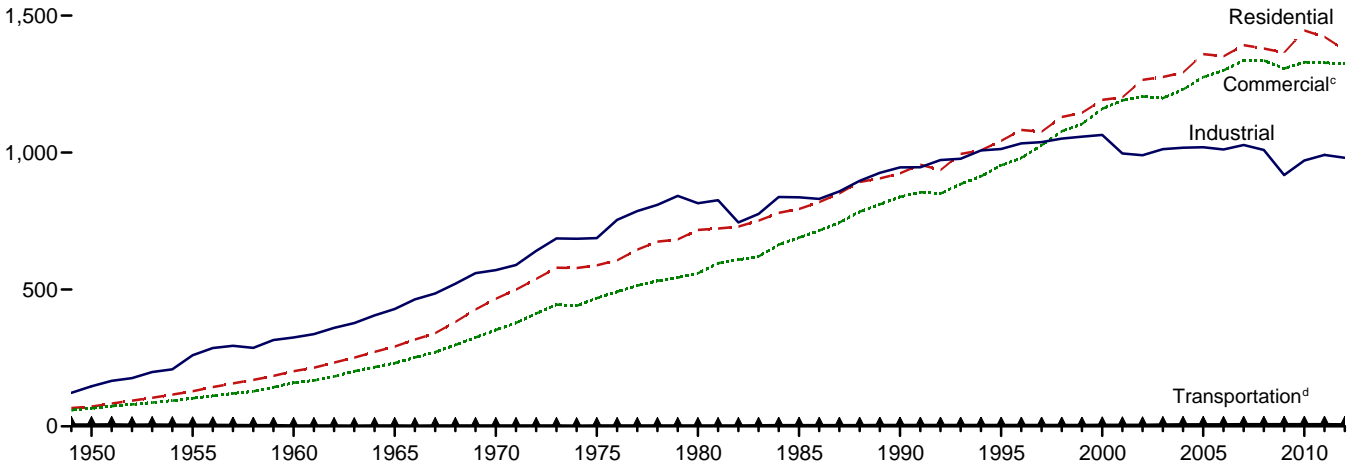
Electricity End Use Overview, 1989–2012



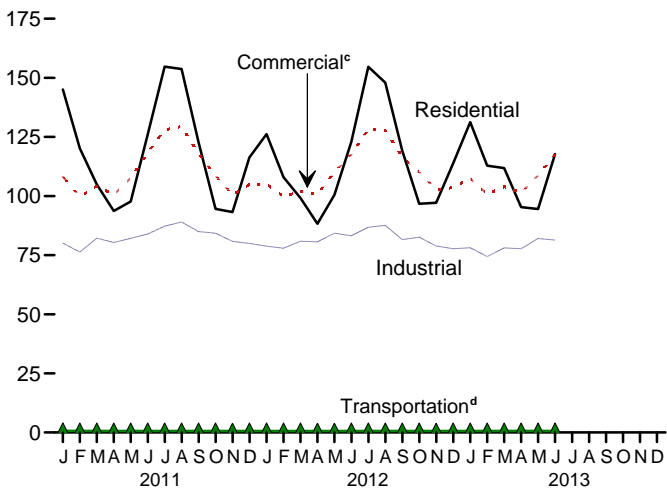
Retail Sales^a by Sector, June 2013



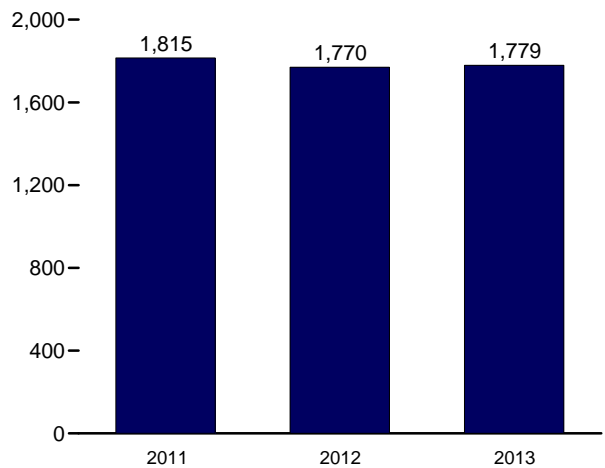
Retail Sales^a by Sector, 1949–2012



Retail Sales^a by Sector, Monthly



Retail Sales^a Total, January–June



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

^b See “Direct Use” in Glossary.

^c Commercial sector, including public street and highway lighting, inte-

departmental sales, and other sales to public authorities.

^d Transportation sector, including sales to railroads and railways.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

Source: Table 7.6.

Table 7.6 Electricity End Use
(Million Kilowatthours)

	Retail Sales ^a					Direct Use ^f	Total End Use ^g	Discontinued Retail Sales Series	
	Residential	Commercial ^b	Industrial ^c	Transportation ^d	Total Retail Sales ^e			Commercial (Old) ^h	Other (Old) ⁱ
1950 Total	72,200	^E 65,971	146,479	^E 6,793	291,443	NA	291,443	50,637	22,127
1955 Total	128,401	^E 102,547	259,974	^E 5,826	496,748	NA	496,748	79,389	28,984
1960 Total	201,463	^E 159,144	324,402	^E 3,066	688,075	NA	688,075	130,702	31,508
1965 Total	291,013	^E 231,126	428,727	^E 2,923	953,789	NA	953,789	200,470	33,580
1970 Total	466,291	^E 352,041	570,854	^E 3,115	1,392,300	NA	1,392,300	306,703	48,452
1975 Total	588,140	^E 468,296	687,680	^E 2,974	1,747,091	NA	1,747,091	403,049	68,222
1980 Total	717,495	558,643	815,067	3,244	2,094,449	NA	2,094,449	488,155	73,732
1985 Total	793,934	689,121	836,772	4,147	2,323,974	NA	2,323,974	605,989	87,279
1990 Total	924,019	838,263	945,522	4,751	2,712,555	124,529	2,837,084	751,027	91,988
1995 Total	1,042,501	953,117	1,012,693	4,975	3,013,287	150,677	3,163,963	862,685	95,407
2000 Total	1,192,446	1,159,347	1,064,239	5,382	3,421,414	170,943	3,592,357	1,055,232	109,496
2001 Total	1,201,607	1,190,518	996,609	5,724	3,394,458	162,649	3,557,107	1,083,069	113,174
2002 Total	1,265,180	1,204,531	990,238	5,517	3,465,466	166,184	3,631,650	1,104,497	105,552
2003 Total	1,275,824	1,198,728	1,012,373	6,810	3,493,734	168,295	3,662,029	--	--
2004 Total	1,291,982	1,230,425	1,017,850	7,224	3,547,479	168,470	3,715,949	--	--
2005 Total	1,359,227	1,275,079	1,019,156	7,506	3,660,969	150,016	3,810,984	--	--
2006 Total	1,351,520	1,299,744	1,011,298	7,358	3,669,919	146,927	3,816,845	--	--
2007 Total	1,392,241	1,336,315	1,027,832	8,173	3,764,561	125,670	3,890,231	--	--
2008 Total	1,379,981	1,335,981	1,009,300	7,700	3,732,962	132,197	3,865,159	--	--
2009 Total	1,364,474	1,307,168	917,442	7,781	3,596,865	126,938	3,723,803	--	--
2010 Total	1,445,708	1,330,199	970,873	7,712	3,754,493	131,910	3,886,403	--	--
2011 January	145,054	108,243	80,077	710	334,084	^E 11,245	345,329	--	--
February	120,121	99,789	76,332	637	296,879	^E 10,042	306,922	--	--
March	104,921	104,263	82,196	664	292,044	^E 10,398	302,442	--	--
April	93,700	100,505	80,356	629	275,190	^E 10,380	285,570	--	--
May	97,688	107,624	82,095	619	288,026	^E 10,681	298,707	--	--
June	125,983	118,169	83,941	643	328,736	^E 11,181	339,917	--	--
July	154,729	128,063	87,245	650	370,686	^E 12,136	382,822	--	--
August	153,739	129,371	89,014	625	372,749	^E 12,292	385,041	--	--
September	122,720	117,951	84,959	634	326,263	^E 11,199	337,462	--	--
October	94,585	108,655	84,287	616	288,144	^E 10,504	298,647	--	--
November	93,220	100,552	80,858	590	275,220	^E 10,888	286,108	--	--
December	116,341	104,873	79,956	656	301,826	^E 11,808	313,634	--	--
Total	1,422,801	1,328,057	991,316	7,672	3,749,846	132,754	3,882,600	--	--
2012 January	126,208	105,118	78,821	666	310,813	^E 11,702	322,515	--	--
February	107,951	99,682	77,898	646	286,177	^E 11,014	297,191	--	--
March	99,153	101,930	80,911	619	282,613	^E 10,750	293,363	--	--
April	88,300	100,839	80,604	604	270,348	^E 10,366	280,713	--	--
May	100,478	110,062	84,273	606	295,420	^E 11,258	306,678	--	--
June	122,992	117,651	83,202	610	324,455	^E 11,252	335,708	--	--
July	154,649	128,157	86,762	642	370,210	^E 12,216	382,426	--	--
August	147,991	127,713	87,629	650	363,984	^E 11,869	375,853	--	--
September	119,201	116,483	81,560	628	317,873	^E 11,073	328,945	--	--
October	96,707	110,111	82,600	619	290,037	^E 11,108	301,144	--	--
November	97,174	102,546	78,877	580	279,178	^E 11,389	290,567	--	--
December	113,791	103,551	77,698	632	295,673	^E 12,103	307,775	--	--
Total	1,374,594	1,323,844	980,837	7,504	3,686,780	136,099	3,822,878	--	--
2013 January	131,252	107,415	78,152	664	317,482	^E 12,016	329,498	--	--
February	112,869	100,765	74,402	646	288,683	^E 10,957	299,639	--	--
March	111,822	103,963	78,079	631	294,496	^E 11,677	306,173	--	--
April	95,334	101,380	77,691	625	275,029	^E 10,413	285,442	--	--
May	94,537	108,685	82,068	621	285,911	^E 11,273	297,184	--	--
June	117,736	117,674	81,376	631	317,416	^E 11,447	328,863	--	--
6-Month Total	663,550	639,881	471,769	3,817	1,779,017	67,782	1,846,799	--	--
2012 6-Month Total	645,081	635,283	485,710	3,751	1,769,826	66,341	1,836,168	--	--
2011 6-Month Total	687,468	638,593	484,997	3,901	1,814,959	63,927	1,878,886	--	--

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

^b Commercial sector, including public street and highway lighting, interdepartmental sales, and other sales to public authorities.

^c Industrial sector. Through 2002, excludes agriculture and irrigation; beginning in 2003, includes agriculture and irrigation.

^d Transportation sector, including sales to railroads and railways.

^e The sum of "Residential," "Commercial," "Industrial," and "Transportation."

^f Use of electricity that is 1) self-generated, 2) produced by either the same entity that consumes the power or an affiliate, and 3) used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of station use.

^g The sum of "Total Retail Sales" and "Direct Use."

^h "Commercial (Old)" is a discontinued series—data are for the commercial

sector, excluding public street and highway lighting, interdepartmental sales, and other sales to public authorities.

ⁱ "Other (Old)" is a discontinued series—data are for public street and highway lighting, interdepartmental sales, other sales to public authorities, agriculture and irrigation, and transportation including railroads and railways.

E=Estimate. NA=Not available. --=Not applicable.

Notes: • See Note 1, "Coverage of Electricity Statistics," at end of section.

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

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

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#electricity> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Electricity

Note 1. Coverage of Electricity Statistics. Through 1984, data for electric utilities also include institutions (such as universities) and military facilities that generated electricity primarily for their own use; beginning in 1985, data for electric utilities exclude institutions and military facilities. Data for independent power producers, commercial plants, and industrial plants include plants with a generator nameplate capacity of one megawatt or greater; they exclude plants with a generator nameplate capacity less than one megawatt. Also excluded from the electricity statistics in Section 7 are data for residential and commercial self-generation from solar energy, except for the small amount sold to the grid and included in data for the electric power sector.

Note 2. Classification of Power Plants Into Energy-Use Sectors. The U.S. Energy Information Administration (EIA) classifies power plants (both electricity-only and combined-heat-and-power plants) into energy-use sectors based on the North American Industry Classification System (NAICS), which replaced the Standard Industrial Classification (SIC) system in 1997. Plants with a NAICS code of 22 are assigned to the Electric Power Sector. Those with NAICS codes beginning with 11 (agriculture, forestry, fishing, and hunting); 21 (mining, including oil and gas extraction); 23 (construction); 31–33 (manufacturing); 2212 (natural gas distribution); and 22131 (water supply and irrigation systems) are assigned to the Industrial Sector. Those with all other codes are assigned to the Commercial Sector. Form EIA-860, “Annual Electric Generator Report,” asks respondents to indicate the primary purpose of the facility by assigning a NAICS code from the list at http://www.eia.gov/survey/form/eia_860/instructions.doc.

Table 7.1 Sources

Net Generation, Electric Power Sector

1949 forward: Table 7.2b.

Net Generation, Commercial and Industrial Sectors

1949 forward: Table 7.2c.

Trade

1949–September 1977: Unpublished Federal Power Commission data.

October 1977–1980: Unpublished Economic Regulatory Administration (ERA) data.

1981: U.S. Department of Energy (DOE), Office of Energy Emergency Operations, “Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981,” April 1982 (revised June 1982).

1982 and 1983: DOE, ERA, *Electricity Exchanges Across International Borders*.

1984–1986: DOE, ERA, *Electricity Transactions Across International Borders*.

1987 and 1988: DOE, ERA, Form ERA-781R, “Annual Report of International Electrical Export/Import Data.”

1989: DOE, Fossil Energy, Form FE-781R, “Annual Report of International Electrical Export/Import Data.”

1990–2000: National Energy Board of Canada; and DOE, Office of Electricity Delivery and Energy Reliability, Form FE-781R, “Annual Report of International Electrical Export/Import Data.”

2001–May 2011: National Energy Board of Canada; DOE, Office of Electricity Delivery and Energy Reliability, Form OE-781R, “Monthly Electricity Imports and Exports Report,” and predecessor form; and California Independent System Operator.

June 2011 forward: National Energy Board of Canada; California Independent System Operator; and EIA estimates for Texas transfers.

T&D Losses and Unaccounted for

1949 forward: Calculated as the sum of total net generation and imports minus end use and exports.

End Use

1949 forward: Table 7.6.

Table 7.2b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, “Monthly Power Plant Report.”

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, “Monthly Power Plant Report.”

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, “Monthly Power Plant Report.”

1989–1997: EIA, Form EIA-759, “Monthly Power Plant Report,” and Form EIA-867, “Annual Nonutility Power Producer Report.”

1998–2000: EIA, Form EIA-759, “Monthly Power Plant Report,” and Form EIA-860B, “Annual Electric Generator Report—Nonutility.”

2001–2003: EIA, Form EIA-906, “Power Plant Report.”

2004–2007: EIA, Form EIA-906, “Power Plant Report,” and Form EIA-920, “Combined Heat and Power Plant Report.”

2008 forward: EIA, Form EIA-923, “Power Plant Operations Report.”

Table 7.2c Sources

Industrial Sector, Hydroelectric Power, 1949–1988

1949–September 1977: Federal Power Commission (FPC), Form FPC-4, “Monthly Power Plant Report,” for plants with generating capacity exceeding 10 megawatts, and FPC, Form FPC-12C, “Industrial Electric Generating Capacity,” for all other plants.

October 1977–1978: Federal Energy Regulatory Commission (FERC), Form FPC-4, “Monthly Power Plant

Report,” for plants with generating capacity exceeding 10 megawatts, and FERC, Form FPC-12C, “Industrial Electric Generating Capacity,” for all other plants.

1979: FERC, Form FPC-4, “Monthly Power Plant Report,” for plants with generating capacity exceeding 10 megawatts, and U.S. Energy Information Administration (EIA) estimates for all other plants.

1980–1988: Estimated by EIA as the average generation over the 6-year period of 1974–1979.

All Data, 1989 Forward

1989–1997: EIA, Form EIA-867, “Annual Nonutility Power Producer Report.”

1998–2000: EIA, Form EIA-860B, “Annual Electric Generator Report—Nonutility.”

2001–2003: EIA, Form EIA-906, “Power Plant Report.”

2004–2007: EIA, Form EIA-906, “Power Plant Report,” and Form EIA-920, “Combined Heat and Power Plant Report.”

2008 forward: EIA, Form EIA-923, “Power Plant Operations Report.”

Table 7.3b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, “Monthly Power Plant Report.”

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, “Monthly Power Plant Report.”

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, “Monthly Power Plant Report.”

1989–1997: EIA, Form EIA-759, “Monthly Power Plant Report,” and Form EIA-867, “Annual Nonutility Power Producer Report.”

1998–2000: EIA, Form EIA-759, “Monthly Power Plant Report,” and Form EIA-860B, “Annual Electric Generator Report—Nonutility.”

2001–2003: EIA, Form EIA-906, “Power Plant Report.”

2004–2007: EIA, Form EIA-906, “Power Plant Report,” and Form EIA-920, “Combined Heat and Power Plant Report.”

2008 forward: EIA, Form EIA-923, “Power Plant Operations Report.”

Table 7.4b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, “Monthly Power Plant Report.”

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, “Monthly Power Plant Report.”

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, “Monthly Power Plant Report.”

1989–1997: EIA, Form EIA-759, “Monthly Power Plant Report,” and Form EIA-867, “Annual Nonutility Power Producer Report.”

1998–2000: EIA, Form EIA-759, “Monthly Power Plant Report,” and Form EIA-860B, “Annual Electric Generator Report—Nonutility.”

2001–2003: EIA, Form EIA-906, “Power Plant Report.”

2004–2007: EIA, Form EIA-906, “Power Plant Report,” and Form EIA-920, “Combined Heat and Power Plant Report.”

2008 forward: EIA, Form EIA-923, “Power Plant Operations Report.”

Table 7.6 Sources

Retail Sales, Residential and Industrial

1949–September 1977: Federal Power Commission, Form FPC-5, “Monthly Statement of Electric Operating Revenue and Income.”

October 1977–February 1980: Federal Energy Regulatory Commission (FERC), Form FPC-5, “Monthly Statement of Electric Operating Revenue and Income.”

March 1980–1982: FERC, Form FPC-5, “Electric Utility Company Monthly Statement.”

1983: U.S. Energy Information Administration (EIA), Form EIA-826, “Electric Utility Company Monthly Statement.”

1984–2002: EIA, Form EIA-861, “Annual Electric Utility Report.”

2003 forward: EIA, *Electric Power Monthly (EPM)*, August 2013, Table 5.1.

Retail Sales, Commercial

1949–2002: Estimated by EIA as the sum of “Commercial (Old)” and the non-transportation portion of “Other (Old).”

See estimation methodology at

http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf.

2003 forward: EIA, EPM, August 2013, Table 5.1.

Retail Sales, Transportation

1949–2002: Estimated by EIA as the transportation portion of “Other (Old).” See estimation methodology at

http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf.

2003 forward: EIA, EPM, August 2013, Table 5.1.

Direct Use, Annual

1989–1997: EIA, Form EIA-867, “Annual Nonutility Power Producer Report.”

1998–2000: EIA, Form EIA-860B, “Annual Electric Generator Report—Nonutility.”

2001–2011: EIA, *Electric Power Annual 2011*, January 2013, Table 2.2.

2012: Sum of monthly estimates.

Direct Use, Monthly

1989 forward: Annual shares are calculated as annual direct use divided by annual commercial and industrial net generation (on Table 7.1). Then monthly direct use estimates are calculated as the annual share multiplied by the monthly commercial and industrial net generation values. For 2012 and 2013, the 2011 annual share is used.

Discontinued Retail Sales Series Commercial (Old) and Other (Old)

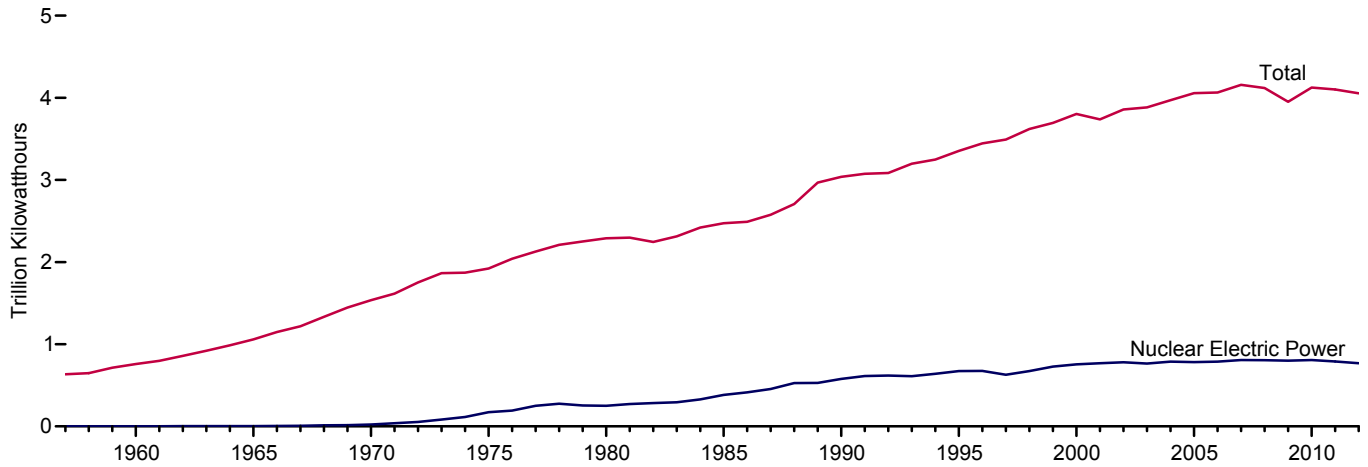
1949–2002: See sources for “Residential” and “Industrial.”

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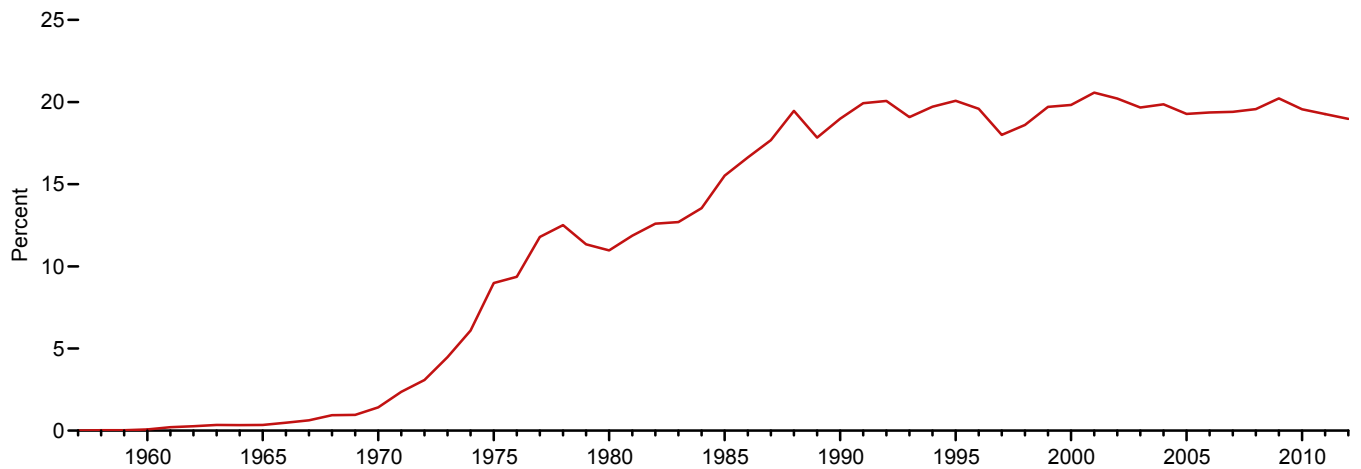
8. Nuclear Energy

Figure 8.1 Nuclear Energy Overview

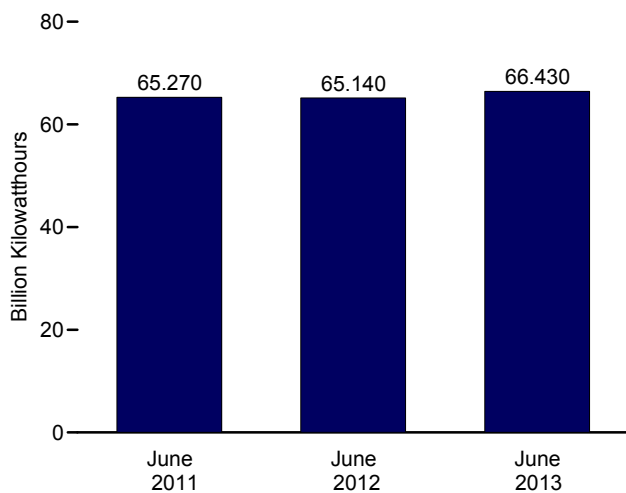
Electricity Net Generation, 1957–2012



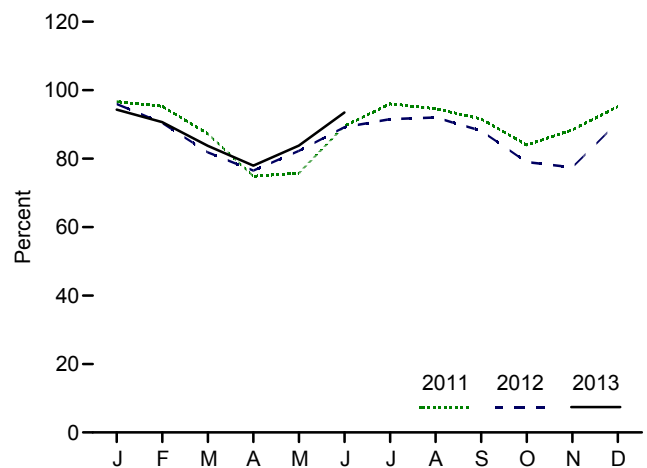
Nuclear Share of Electricity Net Generation, 1957–2012



Nuclear Electricity Net Generation



Capacity Factor, Monthly



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#nuclear>.
Sources: Tables 7.2a and 8.1.

Table 8.1 Nuclear Energy Overview

	Total Operable Units ^{a,b}	Net Summer Capacity of Operable Units ^{b,c}	Nuclear Electricity Net Generation	Nuclear Share of Electricity Net Generation	Capacity Factor ^d
	Number	Million Kilowatts	Million Kilowatthours	Percent	
1957 Total	1	0.055	10	(s)	NA
1960 Total	3	.411	518	.1	NA
1965 Total	13	.793	3,657	.3	NA
1970 Total	20	7.004	21,804	1.4	NA
1975 Total	57	37.267	172,505	9.0	55.9
1980 Total	71	51.810	251,116	11.0	56.3
1985 Total	96	79.397	383,691	15.5	58.0
1990 Total	112	99.624	576,862	19.0	66.0
1995 Total	109	99.515	673,402	20.1	77.4
2000 Total	104	97.860	753,893	19.8	88.1
2001 Total	104	98.159	768,826	20.6	89.4
2002 Total	104	98.657	780,064	20.2	90.3
2003 Total	104	99.209	763,733	19.7	87.9
2004 Total	104	99.628	788,528	19.9	90.1
2005 Total	104	99.988	781,986	19.3	89.3
2006 Total	104	100.334	787,219	19.4	89.6
2007 Total	104	100.266	806,425	19.4	91.8
2008 Total	104	100.755	806,208	19.6	91.1
2009 Total	104	101.004	798,855	20.2	90.3
2010 Total	104	^c 101.167	806,968	19.6	91.1
2011 January	104	^E 101.167	72,743	20.0	^E 96.6
February	104	^E 101.167	64,789	20.7	^E 95.3
March	104	^E 101.167	65,662	20.6	^E 87.2
April	104	^E 101.167	54,547	18.0	^E 74.9
May	104	^E 101.167	57,013	17.6	^E 75.7
June	104	^E 101.281	65,270	17.7	^E 89.5
July	104	^E 101.281	72,345	17.3	^E 96.0
August	104	^E 101.351	71,339	17.5	^E 94.6
September	104	^E 101.351	66,849	19.8	^E 91.6
October	104	^E 101.351	63,337	20.5	^E 84.0
November	104	^E 101.351	64,474	21.2	^E 88.4
December	104	101.419	71,837	21.4	95.2
Total	104	101.419	790,204	19.3	89.1
2012 January	104	^E 101.419	72,381	21.2	^E 95.9
February	104	^E 101.419	63,847	20.6	^E 90.5
March	104	^E 101.419	61,729	20.0	^E 81.8
April	104	^E 101.419	55,871	18.9	^E 76.5
May	104	^E 101.442	62,081	18.4	^E 82.3
June	104	^E 101.442	65,140	18.0	^E 89.2
July	104	^E 101.564	69,129	16.6	^E 91.5
August	104	^E 101.673	69,602	17.6	^E 92.0
September	104	^E 101.673	64,511	19.3	^E 88.1
October	104	^E 101.673	59,743	19.1	^E 79.0
November	104	^E 101.702	56,713	18.6	^E 77.4
December	104	^E 101.702	68,584	20.5	^E 90.6
Total	104	^E 101.702	769,331	19.0	^E 86.2
2013 January	104	^{RE} 101.760	71,406	20.5	^{RE} 94.3
February	103	^{RE} 100.900	61,483	19.9	^E 90.7
March	103	^{RE} 101.009	62,947	19.3	^E 83.8
April	103	^{RE} 101.157	56,767	19.0	^{RE} 77.9
May	102	^{RE} 100.836	62,848	19.5	^E 83.8
June	100	^E 98.686	66,430	18.6	^E 93.5
6-Month Total	100	^E 98.686	381,881	19.5	^E 87.3
2012 6-Month Total	104	^E 101.442	381,049	19.5	^E 86.0
2011 6-Month Total	104	^E 101.281	380,024	19.1	^E 86.5

^a Total of nuclear generating units holding full-power licenses, or equivalent permission to operate, at end of period. See Note 1, "Operable Nuclear Reactors," at end of section.

^b At end of period.

^c For the definition of "Net Summer Capacity," see Note 2, "Nuclear Capacity," at end of section. Beginning in 2010, monthly capacity values are estimated in two steps: 1) updates reported on Form EIA-860M are added to specific months; and 2) the difference between the resulting year-end capacity (from data reported on Form EIA-860M) and final capacity (reported on Form EIA-860) is distributed evenly across the 12 months.

^d For an explanation of the method of calculating the capacity factor, see Note

2, "Nuclear Capacity," at end of section.

R=Revised. E=Estimate. NA=Not available. (s)=Less than 0.05.

Notes: • For a discussion of nuclear reactor unit coverage, see Note 1, "Operable Nuclear Reactors," at end of section. • Nuclear electricity net generation totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#nuclear> for all available annual data from 1957–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#nuclear> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1957 through 1972 have been added to this table. For all years of data from 1957 through 2013, see the "Web Pages" cited above.

Nuclear Energy

Note 1. Operable Nuclear Reactors. A reactor is generally defined as operable while it possessed a full-power license from the Nuclear Regulatory Commission or its predecessor the Atomic Energy Commission, or equivalent permission to operate, at the end of the year or month shown. The definition is liberal in that it does not exclude units retaining full-power licenses during long, non-routine shutdowns that for a time rendered them unable to generate electricity. Examples are:

(a) In 1985 the five then-active Tennessee Valley Authority (TVA) units (Browns Ferry 1, 2, and 3, and Sequoyah 1 and 2) were shut down under a regulatory forced outage. All five units were idle for several years, restarting in 2007, 1991, 1995, 1988, and 1988, respectively and were counted as operable during the shutdowns.

(b) Shippingport was shut down from 1974 through 1976 for conversion to a light-water breeder reactor, but is counted as operable from 1957 until its retirement in 1982.

(c) Calvert Cliffs 2 was shut down in 1989 and 1990 for replacement of pressurizer heater sleeves but is counted as operable during those years.

Exceptions to the definition are Shoreham and Three Mile Island 2. Shoreham was granted a full-power license in April 1989, but was shut down two months later and never restarted. In 1991, the license was changed to Possession Only. Although not operable at the end of the year, Shoreham is counted as operable during 1989. A major accident closed Three Mile Island 2 in 1979, and although the unit retained its full-power license for several years, it is considered permanently shut down since that year.

The following nuclear generating units have recently been retired: Crystal River 3 in February 2013; Kewaunee in May 2013; and San Onofre 2 and 3 in June 2013.

Note 2. Nuclear Capacity. Nuclear generating units may have more than one type of net capacity rating, including the following:

(a) Net Summer Capacity—The steady hourly output that generating equipment is expected to supply to system load,

exclusive of auxiliary power, as demonstrated by test at the time of summer peak demand. Auxiliary power of a typical nuclear power plant is about 5 percent of gross generation.

(b) Net Design Capacity or Net Design Electrical Rating (DER)—The nominal net electrical output of a unit, specified by the utility and used for plant design.

The monthly capacity factors are calculated as the monthly nuclear electricity net generation divided by the maximum possible nuclear electricity net generation for that month. The maximum possible nuclear electricity net generation is the number of hours in the month (assuming 24-hour days, with no adjustment for changes to or from Daylight Savings Time) multiplied by the net summer capacity of operable nuclear generating units at the end of the month. That fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are calculated as the annual nuclear electricity net generation divided by the annual maximum possible nuclear electricity net generation (the sum of the monthly values for maximum possible nuclear electricity net generation).

Table 8.1 Sources

Total Operable Units and Net Summer Capacity of Operable Units

1957–1982: Compiled from various sources, primarily U.S. Department of Energy, Office of Nuclear Reactor Programs, “U.S. Central Station Nuclear Electric Generating Units: Significant Milestones.”

1983 forward: U.S. Energy Information Administration (EIA), Form EIA-860, “Annual Electric Generator Report,” and predecessor forms; Form EIA-860M, “Monthly Update to the Annual Electric Generator Report”; and monthly updates as appropriate. For a list of operable units as of November 2011, see http://www.eia.gov/nuclear/reactors/stats_table1.html.

Nuclear Electricity Net Generation and Nuclear Share of Electricity Net Generation

1957 forward: Table 7.2a.

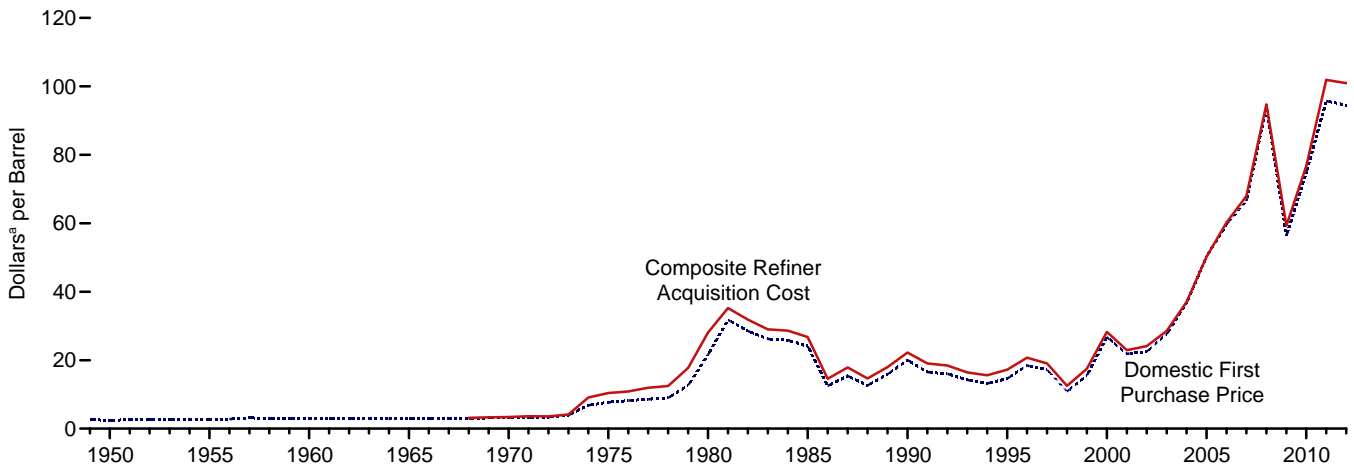
Capacity Factor

1973 forward: Calculated by EIA using the method described above in Note 2.

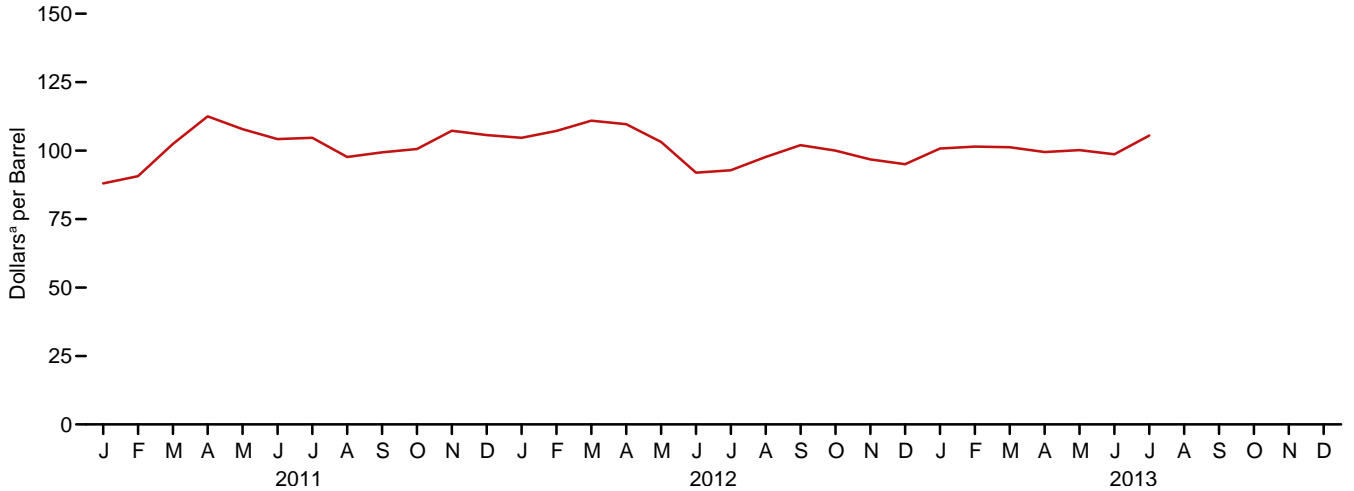
9. Energy Prices

Figure 9.1 Petroleum Prices

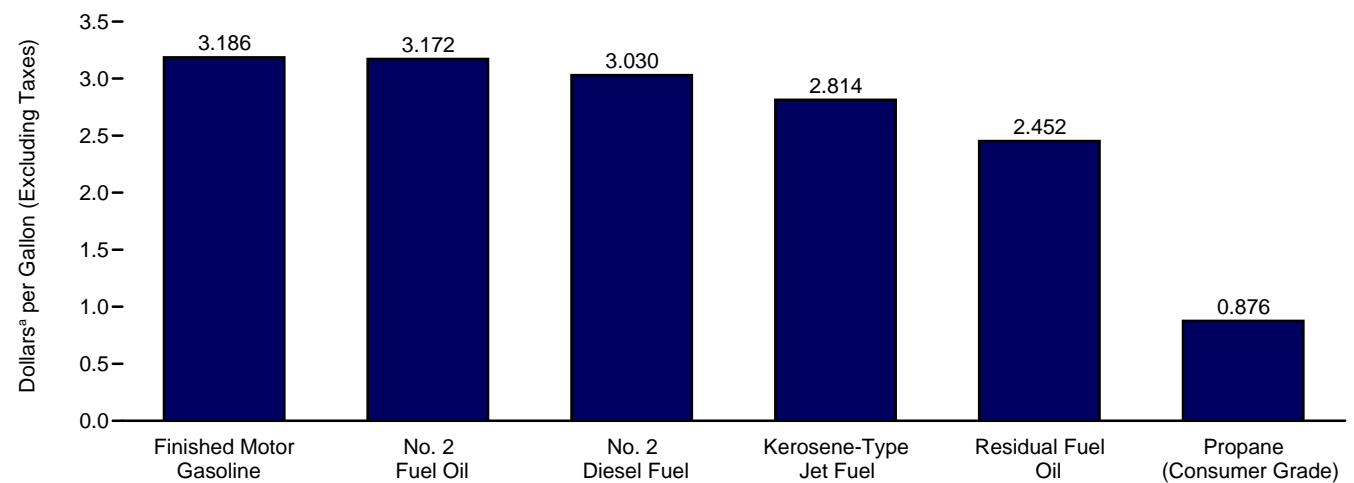
Crude Oil Prices, 1949–2012



Composite Refiner Acquisition Cost, Monthly



Refiner Prices to End Users: Selected Products, June 2013



^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#prices>.
 Sources: Tables 9.1, 9.5, and 9.7.

Table 9.1 Crude Oil Price Summary
(Dollars^a per Barrel)

	Domestic First Purchase Price ^c	F.O.B. Cost of Imports ^d	Landed Cost of Imports ^e	Refiner Acquisition Cost ^b		
				Domestic	Imported	Composite
1950 Average	2.51	NA	NA	NA	NA	NA
1955 Average	2.77	NA	NA	NA	NA	NA
1960 Average	2.88	NA	NA	NA	NA	NA
1965 Average	2.86	NA	NA	NA	NA	NA
1970 Average	3.18	NA	NA	^E 3.46	^E 2.96	^E 3.40
1975 Average	7.67	11.18	12.70	8.39	13.93	10.38
1980 Average	21.59	32.37	33.67	24.23	33.89	28.07
1985 Average	24.09	25.84	26.67	26.66	26.99	26.75
1990 Average	20.03	20.37	21.13	22.59	21.76	22.22
1995 Average	14.62	15.69	16.78	17.33	17.14	17.23
2000 Average	26.72	26.27	27.53	29.11	27.70	28.26
2001 Average	21.84	20.46	21.82	24.33	22.00	22.95
2002 Average	22.51	22.63	23.91	24.65	23.71	24.10
2003 Average	27.56	25.86	27.69	29.82	27.71	28.53
2004 Average	36.77	33.75	36.07	38.97	35.90	36.98
2005 Average	50.28	47.60	49.29	52.94	48.86	50.24
2006 Average	59.69	57.03	59.11	62.62	59.02	60.24
2007 Average	66.52	66.36	67.97	69.65	67.04	67.94
2008 Average	94.04	90.32	93.33	98.47	92.77	94.74
2009 Average	56.35	57.78	60.23	59.49	59.17	59.29
2010 Average	74.71	74.19	76.50	78.01	75.86	76.69
2011 January	85.66	86.81	89.47	88.70	87.61	88.04
February	86.69	92.20	94.28	89.50	91.42	90.66
March	99.19	104.17	104.73	102.41	102.43	102.43
April	108.80	111.52	112.43	111.70	113.02	112.51
May	102.46	105.81	108.18	107.63	107.98	107.84
June	97.30	104.33	105.18	102.51	105.38	104.23
July	97.82	105.59	106.22	102.67	105.94	104.68
August	89.00	97.72	99.30	95.90	99.00	97.70
September	90.22	100.82	101.03	96.89	101.05	99.39
October	92.28	101.91	102.55	98.34	101.99	100.57
November	100.18	105.79	106.00	106.69	107.67	107.28
December	98.71	103.09	105.62	104.51	106.52	105.69
Average	95.73	101.66	102.92	100.71	102.63	101.87
2012 January	98.99	103.96	105.27	103.97	105.25	104.71
February	102.04	108.56	109.23	105.93	108.08	107.18
March	105.42	110.65	110.62	110.80	111.00	110.92
April	103.62	107.17	107.55	111.22	108.54	109.68
May	95.57	100.79	101.56	103.04	103.26	103.17
June	83.59	87.89	91.90	91.66	92.18	91.96
July	86.10	92.50	93.68	92.64	92.99	92.84
August	92.53	99.63	98.70	98.58	97.04	97.70
September	95.98	101.03	101.34	102.17	101.82	101.97
October	92.24	97.75	99.22	99.07	100.92	100.02
November	89.64	91.86	96.20	95.28	98.07	96.78
December	89.81	92.69	95.01	96.56	93.70	95.06
Average	94.52	99.78	101.00	100.72	101.09	100.93
2013 January	94.89	95.23	95.19	103.78	97.91	100.78
February	95.04	100.94	99.09	103.75	99.23	101.45
March	95.85	100.21	98.51	103.45	99.11	101.23
April	94.72	^R 95.56	^R 95.72	102.53	96.45	99.50
May	^R 95.00	^R 96.14	^R 97.11	101.98	98.50	100.17
June	^R 94.05	^R 95.50	^R 95.02	^R 100.26	^R 97.17	^R 98.67
July	NA	NA	NA	^E 107.31	^E 104.09	^E 105.53

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

^b See Note 1, "Crude Oil Refinery Acquisition Costs," at end of section.

^c See Note 2, "Crude Oil Domestic First Purchase Prices," at end of section.

^d See Note 3, "Crude Oil F.O.B. Costs," at end of section.

^e See Note 4, "Crude Oil Landed Costs," at end of section.

^R=Revised. ^{NA}=Not available. ^E=Estimate.

Notes: • Domestic first purchase prices and refinery acquisition costs for the current two months are preliminary. F.O.B. and landed costs for the current three months are preliminary. • Through 1980, F.O.B. and landed costs reflect the

period of reporting; beginning in 1981, they reflect the period of loading. • Annual averages are the averages of the monthly prices, weighted by volume.

• Geographic coverage is the 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, and all U.S. Territories and Possessions.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949-1972. • See

<http://www.eia.gov/totalenergy/data/monthly/#prices> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 9.2 F.O.B. Costs of Crude Oil Imports From Selected Countries
(Dollars^a per Barrel)

	Selected Countries							Persian Gulf Nations ^b	Total OPEC ^c	Total Non-OPEC ^c
	Angola	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average^d	W	W	–	7.81	3.25	–	5.39	3.68	5.43	4.80
1975 Average	10.97	–	11.44	11.82	10.87	–	11.04	10.88	11.34	10.62
1980 Average	33.45	W	31.06	35.93	28.17	34.36	24.81	28.92	32.21	32.85
1985 Average	26.30	–	25.33	28.04	22.04	27.64	23.64	23.31	25.67	25.96
1990 Average	20.23	20.75	19.26	22.46	20.36	23.43	19.55	18.54	20.40	20.32
1995 Average	16.58	16.73	15.64	17.40	W	16.94	13.86	W	15.36	16.02
2000 Average	27.90	29.04	25.39	28.70	24.62	27.21	24.45	24.72	25.56	26.77
2001 Average	23.25	24.25	18.89	24.85	18.98	23.30	18.01	18.89	19.73	21.04
2002 Average	24.09	24.64	21.60	25.38	23.92	24.50	20.13	23.38	22.18	22.93
2003 Average	28.22	28.89	24.83	29.40	25.03	28.76	23.81	25.17	25.36	26.21
2004 Average	37.26	37.73	31.55	38.71	34.08	37.30	31.78	33.08	33.95	33.58
2005 Average	52.48	51.89	43.00	55.95	47.96	54.48	46.39	47.21	49.60	45.79
2006 Average	62.23	59.77	52.91	65.69	56.09	66.03	55.80	56.02	59.18	55.35
2007 Average	67.80	67.93	61.35	76.64	W	69.96	64.10	69.93	69.58	62.69
2008 Average	95.66	91.17	84.61	102.06	93.03	96.33	88.06	91.44	93.15	87.15
2009 Average	57.07	57.90	56.47	64.61	57.87	65.63	55.58	59.53	58.53	57.16
2010 Average	78.18	72.56	72.46	80.83	76.44	W	70.30	75.65	75.23	73.24
2011 January	95.97	83.36	84.45	99.86	W	–	81.25	W	89.74	83.96
February	W	88.55	88.77	109.07	W	–	85.11	97.25	96.01	88.99
March	113.63	101.29	102.55	117.98	W	–	97.56	107.36	106.19	102.41
April	122.52	114.17	109.90	126.05	W	–	106.56	114.82	115.15	107.71
May	113.33	106.15	105.13	117.66	W	–	101.60	110.02	108.43	103.64
June	115.13	102.78	103.43	119.13	W	–	100.59	106.39	108.22	100.37
July	114.80	100.30	104.84	119.68	W	–	100.62	109.06	110.09	100.88
August	W	95.01	98.21	115.61	W	–	97.17	106.98	104.19	93.57
September	112.49	97.45	100.28	115.43	109.99	–	95.72	108.41	105.82	97.06
October	109.74	102.37	101.48	114.46	W	–	96.93	105.62	105.20	98.64
November	112.49	106.97	107.94	115.35	W	–	105.44	106.51	108.16	104.17
December	111.26	103.10	105.96	W	W	–	105.75	104.48	106.42	100.80
Average	111.82	100.21	100.90	115.35	107.08	–	97.23	106.47	105.34	98.49
2012 January	111.10	106.69	107.79	114.12	W	–	105.08	107.51	107.51	101.40
February	121.45	114.47	110.14	124.31	W	–	110.37	111.12	113.85	103.42
March	W	118.46	114.81	128.10	W	–	112.76	118.06	117.06	104.65
April	118.84	114.06	110.54	W	W	–	109.33	115.02	113.85	101.42
May	110.79	101.27	103.12	110.79	W	–	101.45	105.16	105.28	96.74
June	95.65	91.81	90.60	98.96	91.90	–	87.64	90.55	90.63	85.28
July	W	96.83	95.03	103.86	W	–	93.81	95.47	96.30	88.46
August	W	106.16	101.12	114.62	W	–	99.94	104.87	104.18	95.13
September	112.75	108.59	102.49	111.74	107.14	–	101.00	105.58	105.05	97.52
October	W	105.77	98.98	W	W	–	98.10	102.70	101.29	95.05
November	W	103.75	93.45	–	W	–	93.15	101.91	95.94	89.37
December	–	101.24	94.19	W	W	–	92.99	102.93	98.04	87.64
Average	111.23	106.43	101.84	114.51	106.65	–	100.15	105.45	104.39	95.71
2013 January	W	106.99	100.16	W	W	–	97.15	105.30	102.42	91.51
February	W	106.45	108.25	W	W	–	104.06	105.22	106.93	97.34
March	W	101.31	105.16	111.03	W	–	101.60	108.10	105.77	94.86
April	W	99.58	99.95	W	W	–	^R 95.01	^R 100.50	^R 98.68	^R 93.04
May	103.27	^R 98.35	^R 99.21	^R 106.45	W	–	^R 95.48	98.51	^R 98.62	^R 94.06
June	103.67	98.56	97.22	W	W	–	96.11	97.42	98.12	93.42

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
^b Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).
^c See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On this table, "Total OPEC" for all years includes Algeria, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela; for 1973–2008, also includes Indonesia; for 1973–1992 and again beginning in 2008, also includes Ecuador (although Ecuador rejoined OPEC in November 2007, on this table Ecuador is included in "Total Non-OPEC" for 2007); for 1974–1995, also includes Gabon (although Gabon was a member of OPEC for only 1975–1994); and beginning in 2007, also includes Angola. Data for all countries not included in "Total OPEC" are included in "Total Non-OPEC."
^d Based on October, November, and December data only.
^R=Revised. – =No data reported. W=Value withheld to avoid disclosure of individual company data.

Notes: • The Free on Board (F.O.B.) cost at the country of origin excludes all costs related to insurance and transportation. See "F.O.B. (Free on Board)" in Glossary, and Note 3, "Crude Oil F.O.B. Costs," at end of section. • Values for the current two months are preliminary. • Through 1980, prices reflect the period of reporting; beginning in 1981, prices reflect the period of loading. • Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 states and the District of Columbia.
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available data beginning in 1973.
Sources: See end of section.

Table 9.3 Landed Costs of Crude Oil Imports From Selected Countries
(Dollars^a per Barrel)

	Selected Countries								Persian Gulf Nations ^b	Total OPEC ^c	Total Non-OPEC ^c
	Angola	Canada	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average^d	W	5.33	W	–	9.08	5.37	–	5.99	5.91	6.85	5.64
1975 Average	11.81	12.84	–	12.61	12.70	12.50	–	12.36	12.64	12.70	12.70
1980 Average	34.76	30.11	W	31.77	37.15	29.80	35.68	25.92	30.59	33.56	33.99
1985 Average	27.39	25.71	–	25.63	28.96	24.72	28.36	24.43	25.50	26.86	26.53
1990 Average	21.51	20.48	22.34	19.64	23.33	21.82	22.65	20.31	20.55	21.23	20.98
1995 Average	17.66	16.65	17.45	16.19	18.25	16.84	17.91	14.81	16.78	16.61	16.95
2000 Average	29.57	26.69	29.68	26.03	30.04	26.58	29.26	26.05	26.77	27.29	27.80
2001 Average	25.13	20.72	25.88	19.37	26.55	20.98	25.32	19.81	20.73	21.52	22.17
2002 Average	25.43	22.98	25.28	22.09	26.45	24.77	26.35	21.93	24.13	23.83	23.97
2003 Average	30.14	26.76	30.55	25.48	31.07	27.50	30.62	25.70	27.54	27.70	27.68
2004 Average	39.62	34.51	39.03	32.25	40.95	37.11	39.28	33.79	36.53	36.84	35.29
2005 Average	54.31	44.73	53.42	43.47	57.55	50.31	55.28	47.87	49.68	51.36	47.31
2006 Average	64.85	53.90	62.13	53.76	68.26	59.19	67.44	57.37	58.92	61.21	57.14
2007 Average	71.27	60.38	70.91	62.31	78.01	70.78	72.47	66.13	69.83	71.14	63.96
2008 Average	98.18	90.00	93.43	85.97	104.83	94.75	96.95	90.76	93.59	95.49	90.59
2009 Average	61.32	57.60	58.50	57.35	68.01	62.14	63.87	57.78	62.15	61.90	58.58
2010 Average	80.61	72.80	74.25	72.86	83.14	79.29	80.29	72.43	78.60	78.28	74.68
2011 January	99.58	81.96	85.88	85.07	101.24	96.59	W	84.70	96.41	94.00	85.07
February	110.07	80.54	90.93	89.08	109.61	103.20	W	89.88	101.81	100.19	89.00
March	114.40	89.39	105.84	103.03	117.17	110.22	118.42	101.22	109.64	109.26	101.11
April	123.35	99.13	112.47	110.55	126.47	116.13	124.38	107.95	115.07	116.57	108.80
May	116.76	98.12	109.70	105.62	119.95	112.19	W	104.04	111.10	111.75	104.97
June	116.73	92.33	104.31	103.71	120.81	110.00	W	102.32	108.97	109.87	100.82
July	117.77	91.75	101.35	105.38	121.80	111.06	W	103.04	110.19	111.61	100.37
August	113.36	84.05	95.08	98.78	115.83	109.45	W	99.54	108.32	106.27	93.83
September	112.63	85.21	99.17	99.90	117.19	109.91	W	99.10	108.82	107.67	95.59
October	114.82	88.20	104.14	101.97	116.09	108.90	W	99.89	108.00	107.95	97.93
November	115.14	93.80	108.52	108.46	117.05	108.61	W	106.90	108.39	110.10	102.91
December	115.65	95.74	106.64	106.31	117.10	108.27	W	108.02	107.53	109.63	102.52
Average	114.05	89.92	102.57	101.21	116.43	108.83	118.45	100.14	108.01	107.84	98.64
2012 January	115.13	93.43	110.54	108.38	115.41	110.49	W	106.23	110.61	110.32	101.31
February	121.30	92.09	115.19	111.24	126.42	114.75	W	111.72	114.24	115.76	102.99
March	128.35	88.71	119.93	115.20	130.46	117.55	–	114.29	116.71	117.99	103.94
April	120.60	85.55	113.78	111.55	124.06	115.33	W	110.58	115.77	116.10	99.94
May	114.94	82.78	105.04	103.79	113.89	108.39	W	103.02	108.52	108.26	95.21
June	103.10	78.11	93.85	90.89	103.24	99.38	–	89.41	99.24	97.29	87.15
July	106.95	75.65	97.70	95.24	106.95	99.00	W	94.91	99.05	99.49	88.11
August	113.27	80.68	105.94	101.98	114.51	104.66	–	101.38	104.35	105.27	92.29
September	116.51	85.42	109.19	103.16	114.95	107.06	–	102.97	106.29	107.02	95.79
October	114.90	86.35	106.48	99.09	117.03	106.12	W	99.31	105.76	105.81	93.77
November	111.01	82.89	104.74	94.32	112.41	106.05	–	94.67	104.94	102.26	91.17
December	116.37	76.68	102.86	94.98	114.52	106.87	W	94.30	105.78	103.38	86.76
Average	114.95	84.24	107.07	102.45	116.88	108.15	W	101.58	107.74	107.56	95.05
2013 January	115.79	75.45	106.36	101.04	120.99	108.57	–	99.04	107.02	106.85	86.43
February	115.77	76.67	109.28	108.95	117.89	108.75	W	105.54	107.96	108.83	90.85
March	110.56	79.59	105.37	106.36	114.08	107.71	W	103.35	108.02	107.57	90.36
April	^R 105.56	^R 83.02	101.42	100.63	^R 106.03	^R 102.30	W	^R 96.19	^R 102.31	^R 101.76	^R 90.79
May	^R 106.32	^R 86.63	^R 100.46	^R 100.07	^R 108.12	^R 100.76	W	^R 97.44	^R 100.85	^R 101.38	^R 93.37
June	106.76	86.21	99.04	97.71	W	99.81	–	97.78	99.63	100.35	91.90

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

^b Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

^c See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On this table, "Total OPEC" for all years includes Algeria, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela; for 1973–2008, also includes Indonesia; for 1973–1992 and again beginning in 2008, also includes Ecuador (although Ecuador rejoined OPEC in November 2007, on this table Ecuador is included in "Total Non-OPEC" for 2007); for 1974–1995, also includes Gabon (although Gabon was a member of OPEC for only 1975–1994); and beginning in 2007, also includes Angola. Data for all countries not included in "Total OPEC" are included in "Total Non-OPEC."

^d Based on October, November, and December data only.

R=Revised. – =No data reported. W=Value withheld to avoid disclosure of individual company data.

Notes: • See "Landed Costs" in Glossary, and Note 4, "Crude Oil Landed Costs," at end of section. • Values for the current two months are preliminary.

• Through 1980, prices reflect the period of reporting; beginning in 1981, prices reflect the period of loading. • Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available data beginning in 1973.

Sources: • **October 1973–September 1977:** Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report." • **October 1977–December 1977:** U.S. Energy Information Administration (EIA), Form FEA-F701-M-0, "Transfer Pricing Report." • **1978–2007:** EIA, *Petroleum Marketing Annual 2007*, Table 22. • **2008 forward:** EIA, *Petroleum Marketing Monthly*, September 2013, Table 22.

Table 9.4 Retail Motor Gasoline and On-Highway Diesel Fuel Prices
(Dollars^a per Gallon, Including Taxes)

	Platt's / Bureau of Labor Statistics Data				U.S. Energy Information Administration Data			
	Motor Gasoline by Grade				Regular Motor Gasoline by Area Type			On-Highway Diesel Fuel
	Leaded Regular	Unleaded Regular	Unleaded Premium ^b	All Grades ^c	Conventional Gasoline Areas ^d	Reformulated Gasoline Areas ^e	All Areas	
1950 Average	0.268	NA	NA	NA	--	--	--	--
1955 Average	.291	NA	NA	NA	--	--	--	--
1960 Average	.311	NA	NA	NA	--	--	--	--
1965 Average	.312	NA	NA	NA	--	--	--	--
1970 Average	.357	NA	NA	NA	--	--	--	--
1975 Average	.567	NA	NA	NA	--	--	--	--
1980 Average	1.191	1.245	NA	1.221	--	--	--	--
1985 Average	1.115	1.202	1.340	1.196	--	--	--	--
1990 Average	1.149	1.164	1.349	1.217	NA	NA	NA	NA
1995 Average	--	1.147	1.336	1.205	1.103	1.163	1.111	1.109
2000 Average	--	1.510	1.693	1.563	1.462	1.543	1.484	1.491
2001 Average	--	1.461	1.657	1.531	1.384	1.498	1.420	1.401
2002 Average	--	1.358	1.556	1.441	1.313	1.408	1.345	1.319
2003 Average	--	1.591	1.777	1.638	1.516	1.655	1.561	1.509
2004 Average	--	1.880	2.068	1.923	1.812	1.937	1.852	1.810
2005 Average	--	2.295	2.491	2.338	2.240	2.335	2.270	2.402
2006 Average	--	2.589	2.805	2.635	2.533	2.654	2.572	2.705
2007 Average	--	2.801	3.033	2.849	2.767	2.857	2.796	2.885
2008 Average	--	3.266	3.519	3.317	3.213	3.314	3.246	3.803
2009 Average	--	2.350	2.607	2.401	2.315	2.433	2.353	2.467
2010 Average	--	2.788	3.047	2.836	2.742	2.864	2.782	2.992
2011 January	--	3.091	3.345	3.139	3.058	3.173	3.095	3.388
February	--	3.167	3.424	3.215	3.168	3.301	3.211	3.584
March	--	3.546	3.807	3.594	3.509	3.671	3.561	3.905
April	--	3.816	4.074	3.863	3.746	3.914	3.800	4.064
May	--	3.933	4.192	3.982	3.849	4.025	3.906	4.047
June	--	3.702	3.972	3.753	3.628	3.789	3.680	3.933
July	--	3.654	3.915	3.703	3.614	3.726	3.650	3.905
August	--	3.630	3.893	3.680	3.612	3.698	3.639	3.860
September	--	3.612	3.887	3.664	3.573	3.693	3.611	3.837
October	--	3.468	3.745	3.521	3.400	3.549	3.448	3.798
November	--	3.423	3.700	3.475	3.330	3.497	3.384	3.962
December	--	3.278	3.553	3.329	3.220	3.361	3.266	3.861
Average	--	3.527	3.792	3.577	3.476	3.616	3.521	3.840
2012 January	--	3.399	3.663	3.447	3.330	3.486	3.380	3.833
February	--	3.572	3.840	3.622	3.517	3.711	3.579	3.953
March	--	3.868	4.138	3.918	3.774	4.017	3.852	4.127
April	--	3.927	4.194	3.976	3.837	4.032	3.900	4.115
May	--	3.792	4.062	3.839	3.643	3.919	3.732	3.979
June	--	3.552	3.825	3.602	3.465	3.695	3.539	3.759
July	--	3.451	3.726	3.502	3.379	3.565	3.439	3.721
August	--	3.707	3.991	3.759	3.668	3.834	3.722	3.983
September	--	3.856	4.140	3.908	3.801	3.949	3.849	4.120
October	--	3.786	4.079	3.839	3.653	3.939	3.746	4.094
November	--	3.488	3.782	3.542	3.380	3.603	3.452	4.000
December	--	3.331	3.626	3.386	3.256	3.424	3.310	3.961
Average	--	3.644	3.922	3.695	3.552	3.757	3.618	3.968
2013 January	--	3.351	3.646	3.407	3.255	3.452	3.319	3.909
February	--	3.693	3.990	3.748	3.605	3.807	3.670	4.111
March	--	3.735	4.038	3.792	3.648	3.845	3.711	4.068
April	--	3.590	3.901	3.647	3.501	3.714	3.570	3.930
May	--	3.623	3.936	3.682	3.565	3.720	3.615	3.870
June	--	3.633	3.957	3.693	3.576	3.731	3.626	3.849
July	--	3.628	3.951	3.687	3.515	3.751	3.591	3.866
August	--	3.600	3.919	3.658	3.515	3.697	3.574	3.905

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
^b The 1981 average (available in Web file) is based on September through December data only.
^c Also includes grades of motor gasoline not shown separately.
^d Any area that does not require the sale of reformulated gasoline.
^e "Reformulated Gasoline Areas" are ozone nonattainment areas designated by the U.S. Environmental Protection Agency that require the use of reformulated gasoline (RFG). Areas are reclassified each time a shift in or out of an RFG program occurs due to federal or state regulations.
 NA=Not available. -- =Not applicable.
 Notes: • See Note 5, "Motor Gasoline Prices," at end of section. • See "Motor Gasoline Grades," "Motor Gasoline, Conventional," "Motor Gasoline, Oxygenated," and "Motor Gasoline, Reformulated" in Glossary. • Geographic coverage: for columns 1-4, current coverage is 85 urban areas; for columns 5-7, coverage is the 50 states and the District of Columbia; for column 8, coverage is the 48 contiguous

states and the District of Columbia.
 Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#petroleum> for all available annual data from 1949-1972. • See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available monthly and annual data beginning in 1973.
 Sources: • **Motor Gasoline by Grade, Monthly Data: October 1973 forward**—U.S. Department of Labor, Bureau of Labor Statistics (BLS), *U.S. City Average Gasoline Prices*. • **Motor Gasoline by Grade, Annual Data: 1949-1973**—*Platt's Oil Price Handbook and Oilmanac, 1974*, 51st Edition. **1974 forward**—calculated by the U.S. Energy Information Administration (EIA) as simple averages of the BLS monthly data. • **Regular Motor Gasoline by Area Type:** EIA, calculated as simple averages of weighted weekly estimates from "Weekly U.S. Retail Gasoline Prices, Regular Grade." • **On-Highway Diesel Fuel:** EIA, calculated as simple averages of weighted weekly estimates from "Weekly Retail On-Highway Diesel Prices."

Selected years of data from 1949 through 1972 have been added to this table.
 For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 9.5 Refiner Prices of Residual Fuel Oil
(Dollars^a per Gallon, Excluding Taxes)

	Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent		Residual Fuel Oil Sulfur Content Greater Than 1 Percent		Average	
	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
1978 Average	0.293	0.314	0.245	0.275	0.263	0.298
1980 Average .....	.608	.675	.479	.523	.528	.607
1985 Average .....	.610	.644	.560	.582	.577	.610
1990 Average .....	.472	.505	.372	.400	.413	.444
1995 Average .....	.383	.436	.338	.377	.363	.392
2000 Average .....	.627	.708	.512	.566	.566	.602
2001 Average .....	.523	.642	.428	.492	.476	.531
2002 Average .....	.546	.640	.508	.544	.530	.569
2003 Average .....	.728	.804	.588	.651	.661	.698
2004 Average .....	.764	.835	.601	.692	.681	.739
2005 Average	1.115	1.168	.842	.974	.971	1.048
2006 Average	1.202	1.342	1.085	1.173	1.136	1.218
2007 Average	1.406	1.436	1.314	1.350	1.350	1.374
2008 Average	1.918	2.144	1.843	1.889	1.866	1.964
2009 Average	1.337	1.413	1.344	1.306	1.342	1.341
2010 Average	1.756	1.920	1.679	1.619	1.697	1.713
2011 January	NA	2.302	1.896	1.870	1.918	2.013
February	2.100	2.451	2.079	2.019	2.086	2.150
March	2.344	2.654	2.307	2.245	2.321	2.403
April	2.555	2.741	2.427	2.370	2.448	2.475
May	2.463	2.786	2.374	2.325	2.392	2.440
June	2.467	2.905	2.377	2.312	2.402	2.473
July	2.547	2.877	2.430	2.362	2.474	2.508
August	2.394	2.896	2.392	2.342	2.392	2.512
September	2.368	2.882	2.370	2.318	2.369	2.473
October	2.512	2.891	2.375	2.276	2.406	2.454
November	2.566	2.853	2.424	2.368	2.459	2.521
December	2.473	2.891	2.335	2.348	2.371	2.509
Average	2.389	2.736	2.316	2.257	2.336	2.401
2012 January	2.591	2.965	2.480	2.452	2.512	2.620
February	2.739	3.070	2.632	2.556	2.654	2.705
March	2.921	3.159	2.717	2.601	2.772	2.784
April	2.805	3.201	2.624	2.596	2.670	2.731
May	2.589	3.170	2.501	2.652	2.527	2.784
June	2.275	3.083	2.186	2.179	2.211	2.476
July	2.271	2.926	2.224	2.221	2.234	2.406
August	2.586	3.041	2.457	2.442	2.483	2.579
September	2.558	2.970	2.491	2.473	2.501	2.582
October	2.464	2.969	2.393	2.382	2.409	2.496
November	2.385	2.895	2.283	2.346	2.300	2.492
December	2.341	2.814	2.248	2.275	2.268	2.431
Average	2.548	3.025	2.429	2.433	2.457	2.592
2013 January	2.530	2.874	2.328	2.333	2.388	2.475
February	2.571	3.017	2.388	2.402	2.415	2.578
March	2.479	2.949	2.294	2.320	2.346	2.517
April	2.354	2.875	2.214	2.238	2.246	2.354
May	^R 2.316	2.839	2.213	2.421	^R 2.240	2.507
June	2.285	2.785	2.209	2.383	2.228	2.452

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
R=Revised. NA=Not available.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and commercial consumers. • Values for the current month are preliminary.
• Through 1982, prices are U.S. Energy Information Administration (EIA)

estimates. See Note 6, "Historical Petroleum Prices," at end of section.
• Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available data beginning in 1978.

Sources: • **1978–2007:** EIA, *Petroleum Marketing Annual 2007*, Table 17.
• **2008 forward:** EIA, *Petroleum Marketing Monthly*, September 2013, Table 16.

Table 9.6 Refiner Prices of Petroleum Products for Resale
(Dollars^a per Gallon, Excluding Taxes)

	Finished Motor Gasoline ^b	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	0.434	0.537	0.386	0.404	0.369	0.365	0.237
1980 Average .....	.941	1.128	.868	.864	.803	.801	.415
1985 Average .....	.835	1.130	.794	.874	.776	.772	.398
1990 Average .....	.786	1.063	.773	.839	.697	.694	.386
1995 Average .....	.626	.975	.539	.580	.511	.538	.344
2000 Average .....	.963	1.330	.880	.969	.886	.898	.595
2001 Average .....	.886	1.256	.763	.821	.756	.784	.540
2002 Average .....	.828	1.146	.716	.752	.694	.724	.431
2003 Average	1.002	1.288	.871	.955	.881	.883	.607
2004 Average	1.288	1.627	1.208	1.271	1.125	1.187	.751
2005 Average	1.670	2.076	1.723	1.757	1.623	1.737	.933
2006 Average	1.969	2.490	1.961	2.007	1.834	2.012	1.031
2007 Average	2.182	2.758	2.171	2.249	2.072	2.203	1.194
2008 Average	2.586	3.342	3.020	2.851	2.745	2.994	1.437
2009 Average	1.767	2.480	1.719	1.844	1.657	1.713	.921
2010 Average	2.165	2.874	2.185	2.299	2.147	2.214	1.212
2011 January	2.472	3.161	2.585	2.804	2.585	2.621	1.380
February	2.584	3.248	2.783	2.974	2.737	2.820	1.401
March	2.934	3.607	3.095	3.196	2.996	3.134	1.403
April	3.218	4.035	3.259	3.296	3.167	3.296	1.433
May	3.174	4.096	3.188	W	3.039	3.116	1.515
June	2.970	3.847	3.101	3.054	2.956	3.079	1.503
July	3.058	4.011	3.090	3.158	3.024	3.135	1.513
August	2.949	3.899	3.040	3.089	2.927	3.032	1.522
September	2.896	3.878	3.025	3.073	2.927	3.035	1.557
October	2.805	3.616	2.962	3.096	2.915	3.035	1.511
November	2.701	3.494	3.089	3.258	3.050	3.157	1.498
December	2.614	3.424	2.951	3.006	2.928	2.927	1.444
Average	2.867	3.739	3.014	3.065	2.907	3.034	1.467
2012 January	2.747	3.576	3.059	3.197	3.027	3.018	1.341
February	2.936	3.788	3.186	3.293	3.166	3.163	1.282
March	3.203	4.052	3.296	3.306	3.211	3.308	1.293
April	3.189	4.157	3.255	3.243	3.153	3.252	1.163
May	3.016	4.004	3.076	3.008	2.976	3.039	.950
June	2.757	3.883	2.747	2.697	2.635	2.741	.762
July	2.806	3.877	2.850	2.936	2.774	2.907	.809
August	3.087	4.124	3.129	3.195	2.988	3.206	.875
September	3.163	4.269	3.245	3.236	3.128	3.278	.910
October	2.941	4.002	3.182	3.250	3.155	3.265	.979
November	2.713	3.508	3.015	3.221	3.049	3.117	.955
December	2.590	3.518	2.982	3.145	3.003	3.022	.894
Average	2.929	3.919	3.080	3.163	3.031	3.109	1.033
2013 January	2.676	3.685	3.093	3.334	3.069	3.046	.928
February	3.020	4.058	3.250	3.474	3.168	3.259	.953
March	2.987	4.085	3.036	3.137	2.977	3.082	.952
April	2.853	3.962	2.884	2.889	2.793	2.969	.949
May	^R 2.951	4.068	2.763	2.793	^R 2.708	^R 2.958	.932
June	2.882	3.983	2.785	2.806	2.741	2.922	.861

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

^b See Note 5, "Motor Gasoline Prices," at end of section.

R=Revised. W=Value withheld to avoid disclosure of individual company data.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are shown in Table 9.7; they are sales made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and residential and commercial consumers. • Values for the current month are preliminary. • Through 1982, prices are U.S. Energy

Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available data beginning in 1978.

Sources: • **1978–2007:** EIA, *Petroleum Marketing Annual 2007*, Table 4. • **2008 forward:** EIA, *Petroleum Marketing Monthly*, September 2013, Table 4.

Table 9.7 Refiner Prices of Petroleum Products to End Users
(Dollars^a per Gallon, Excluding Taxes)

	Finished Motor Gasoline ^b	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	0.484	0.516	0.387	0.421	0.400	0.377	0.335
1980 Average	1.035	1.084	.868	.902	.788	.818	.482
1985 Average .....	.912	1.201	.796	1.030	.849	.789	.717
1990 Average .....	.883	1.120	.766	.923	.734	.725	.745
1995 Average .....	.765	1.005	.540	.589	.562	.560	.492
2000 Average	1.106	1.306	.899	1.123	.927	.935	.603
2001 Average	1.032	1.323	.775	1.045	.829	.842	.506
2002 Average .....	.947	1.288	.721	.990	.737	.762	.419
2003 Average	1.156	1.493	.872	1.224	.933	.944	.577
2004 Average	1.435	1.819	1.207	1.160	1.173	1.243	.839
2005 Average	1.829	2.231	1.735	1.957	1.705	1.786	1.089
2006 Average	2.128	2.682	1.998	2.244	1.982	2.096	1.358
2007 Average	2.345	2.849	2.165	2.263	2.241	2.267	1.489
2008 Average	2.775	3.273	3.052	3.283	2.986	3.150	1.892
2009 Average	1.888	2.442	1.704	2.675	1.962	1.834	1.220
2010 Average	2.301	3.028	2.201	3.063	2.462	2.314	1.481
2011							
January	2.615	3.323	2.623	3.358	2.889	2.681	NA
February	2.712	3.374	2.818	3.506	3.020	2.867	1.823
March	3.072	3.767	3.161	3.697	3.255	3.189	1.763
April	3.340	4.132	3.306	3.796	3.430	3.370	NA
May	3.419	4.091	3.220	3.894	3.337	3.231	1.648
June	3.184	3.913	3.138	3.802	3.193	3.183	1.681
July	3.172	4.027	3.118	3.812	3.294	3.214	1.620
August	3.134	3.920	3.057	3.851	3.251	3.143	1.650
September	3.090	3.915	3.059	3.873	3.288	3.127	1.702
October	2.980	3.697	2.987	3.823	3.346	3.108	1.706
November	2.922	3.620	3.124	3.892	3.403	3.225	1.773
December	2.808	W	2.963	3.824	3.255	3.024	1.691
Average	3.050	3.803	3.054	3.616	3.193	3.117	1.709
2012							
January	2.914	3.732	3.087	3.848	3.345	3.093	1.655
February	3.087	W	3.206	3.874	3.495	3.224	1.518
March	3.389	4.133	3.337	3.919	3.522	3.378	1.470
April	3.405	4.313	3.283	3.916	3.509	3.342	1.352
May	3.289	W	3.100	3.741	3.258	3.163	1.080
June	3.061	W	2.768	3.753	2.982	2.912	.902
July	2.981	W	2.856	3.612	3.041	2.989	.972
August	3.248	4.091	3.123	3.575	3.256	3.265	.916
September	3.357	4.262	3.283	3.771	3.361	3.367	.932
October	3.261	4.064	3.211	3.864	3.486	3.364	.980
November	2.994	3.561	3.045	3.854	3.403	3.206	.926
December	2.828	3.599	3.008	3.789	3.321	3.115	.840
Average	3.154	3.971	3.104	3.843	3.358	3.202	1.139
2013							
January	2.850	W	3.117	3.790	3.341	3.129	.891
February	3.221	4.060	3.294	3.887	3.498	3.339	.925
March	3.233	4.022	3.070	3.869	3.314	3.204	.943
April	3.102	3.860	2.922	3.836	3.217	3.090	.971
May	^R 3.188	^R 3.900	^R 2.787	3.786	^R 3.222	3.058	.953
June	3.186	W	2.814	3.634	3.172	3.030	.876

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

^b See Note 5, "Motor Gasoline Prices," at end of section.

R=Revised. NA=Not available. W=Value withheld to avoid disclosure of individual company data.

Notes: • Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and residential and commercial consumers. Sales for resale are shown in Table 9.6; they are sales made to purchasers other than ultimate consumers. • Values for

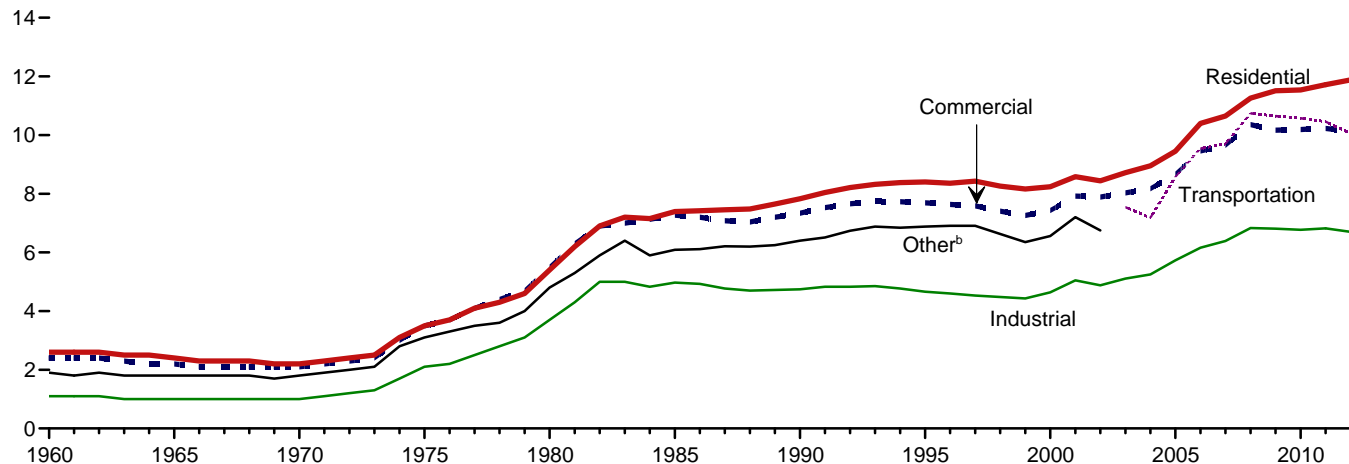
the current month are preliminary. • Through 1982, prices are U.S. Energy Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available data beginning in 1978.

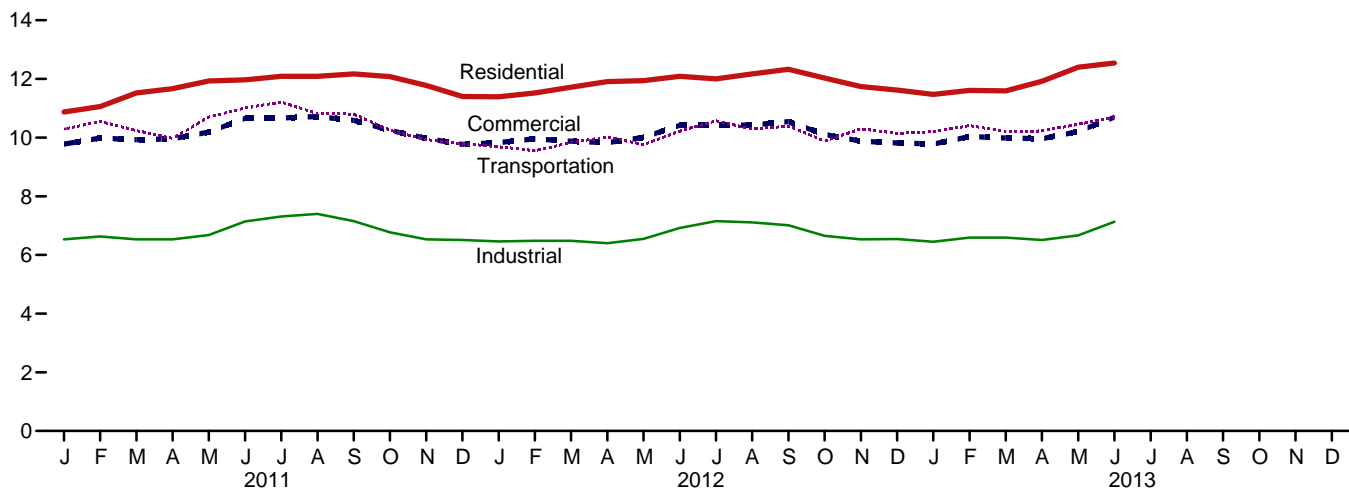
Sources: • **1978–2007:** EIA, *Petroleum Marketing Annual 2007*, Table 2. • **2008 forward:** EIA, *Petroleum Marketing Monthly*, September 2013, Table 2.

Figure 9.2 Average Retail Prices of Electricity
(Cents^a per Kilowatthour)

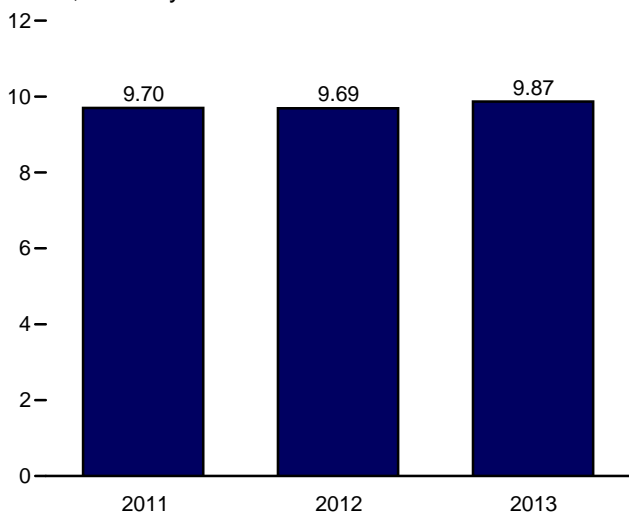
By Sector, 1960–2012



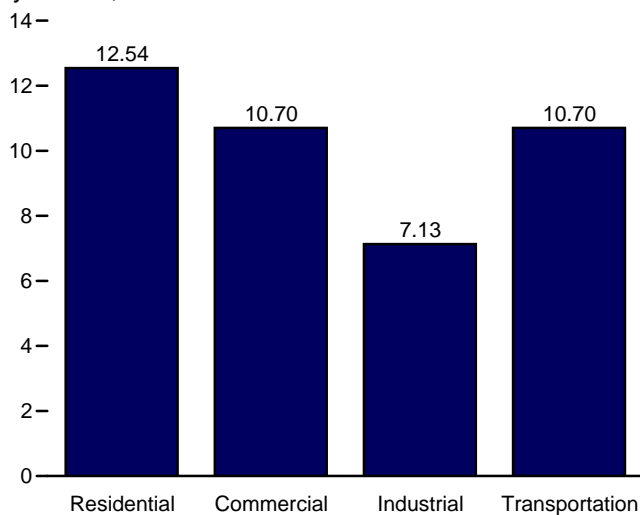
By Sector, Monthly



Total, January–June



By Sector, June 2013



^a Prices are not adjusted for inflation. See “Nominal Price” in Glossary.

^b Public street and highway lighting, interdepartmental sales, other sales to public authorities, agricultural and irrigation, and transportation including railroads and railways.

Note: Includes taxes.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#prices>.

Source: Table 9.8.

Table 9.8 Average Retail Prices of Electricity
(Cents^a per Kilowatt-hour, Including Taxes)

	Residential	Commercial ^b	Industrial ^c	Transportation ^d	Other ^e	Total
1960 Average	2.60	2.40	1.10	NA	1.90	1.80
1965 Average	2.40	2.20	1.00	NA	1.80	1.70
1970 Average	2.20	2.10	1.00	NA	1.80	1.70
1975 Average	3.50	3.50	2.10	NA	3.10	2.90
1980 Average	5.40	5.50	3.70	NA	4.80	4.70
1985 Average	7.39	7.27	4.97	NA	6.09	6.44
1990 Average	7.83	7.34	4.74	NA	6.40	6.57
1995 Average	8.40	7.69	4.66	NA	6.88	6.89
2000 Average	8.24	7.43	4.64	NA	6.56	6.81
2001 Average	8.58	7.92	5.05	NA	7.20	7.29
2002 Average	8.44	7.89	4.88	NA	6.75	7.20
2003 Average	8.72	8.03	5.11	7.54	--	7.44
2004 Average	8.95	8.17	5.25	7.18	--	7.61
2005 Average	9.45	8.67	5.73	8.57	--	8.14
2006 Average	10.40	9.46	6.16	9.54	--	8.90
2007 Average	10.65	9.65	6.39	9.70	--	9.13
2008 Average	11.26	10.36	6.83	10.74	--	9.74
2009 Average	11.51	10.17	6.81	10.65	--	9.82
2010 Average	11.54	10.19	6.77	10.57	--	9.83
2011						
January	10.87	9.78	6.53	10.29	--	9.48
February	11.06	9.99	6.63	10.55	--	9.56
March	11.52	9.93	6.53	10.24	--	9.55
April	11.67	9.96	6.53	9.97	--	9.54
May	11.93	10.19	6.68	10.70	--	9.78
June	11.97	10.66	7.14	11.01	--	10.26
July	12.09	10.67	7.31	11.21	--	10.47
August	12.09	10.72	7.40	10.82	--	10.49
September	12.17	10.59	7.15	10.80	--	10.29
October	12.08	10.25	6.77	10.25	--	9.83
November	11.78	9.98	6.53	9.93	--	9.58
December	11.40	9.77	6.51	9.79	--	9.53
Average	11.72	10.23	6.82	10.46	--	9.90
2012						
January	11.39	9.83	6.46	9.69	--	9.61
February	11.52	9.96	6.48	9.55	--	9.60
March	11.72	9.88	6.48	9.83	--	9.56
April	11.91	9.83	6.40	10.02	--	9.49
May	11.94	10.01	6.55	9.76	--	9.68
June	12.09	10.42	6.92	10.22	--	10.15
July	12.00	10.42	7.15	10.57	--	10.31
August	12.17	10.43	7.11	10.29	--	10.34
September	12.33	10.55	7.01	10.39	--	10.31
October	12.03	10.11	6.65	9.88	--	9.76
November	11.74	9.88	6.53	10.30	--	9.58
December	11.62	9.82	6.54	10.14	--	9.65
Average	11.88	10.12	6.70	10.05	--	9.87
2013						
January	11.47	9.78	6.45	10.20	--	9.66
February	11.61	10.04	6.59	10.41	--	9.77
March	11.59	9.99	6.59	10.20	--	9.69
April	11.92	9.96	6.51	10.23	--	9.67
May	12.40	10.21	6.67	10.45	--	9.92
June	12.54	10.70	7.13	10.70	--	10.47
6-Month Average	11.90	10.13	6.66	10.36	--	9.87
2012 6-Month Average	11.75	10.00	6.55	9.84	--	9.69
2011 6-Month Average	11.47	10.10	6.67	10.46	--	9.70

^a Prices are not adjusted for inflation. See "Nominal Price" in Glossary.

^b Commercial sector. For 1960–2002, prices exclude public street and highway lighting, interdepartmental sales, and other sales to public authorities.

^c Industrial sector. For 1960–2002, prices exclude agriculture and irrigation.

^d Transportation sector, including railroads and railways.

^e Public street and highway lighting, interdepartmental sales, other sales to public authorities, agriculture and irrigation, and transportation including railroads and railways.

NA=Not available. -- =Not applicable.

Notes: • Beginning in 2003, the category "Other" has been replaced by "Transportation," and the categories "Commercial" and "Industrial" have been redefined. • Prices are calculated by dividing revenue by sales. Revenue may not correspond to sales for a particular month because of energy service provider billing and accounting procedures. That lack of correspondence could result in uncharacteristic increases or decreases in the monthly prices. • Prices include state and local taxes, energy or demand charges, customer service charges, environmental surcharges, franchise fees, fuel adjustments, and other miscellaneous charges applied to end-use customers during normal billing operations. Prices do not include deferred charges, credits, or other adjustments, such as fuel or revenue from purchased power, from previous reporting periods. • Through 1979, data are for Classes A and B privately owned electric utilities only. (Class A utilities are those with operating revenues of \$2.5 million or more; Class B

utilities are those with operating revenues between \$1 million and \$2.5 million.) For 1980–1982, data are for selected Class A utilities whose electric operating revenues were \$100 million or more during the previous year. For 1983, data are for a selected sample of electric utilities. Beginning in 1984, data are for a census of electric utilities. Beginning in 1996, data also include energy service providers selling to retail customers. • See Note 7, "Electricity Retail Prices," at end of section for plant coverage, and for information on preliminary and final values. • Geographic coverage is the 50 states and the District of Columbia.

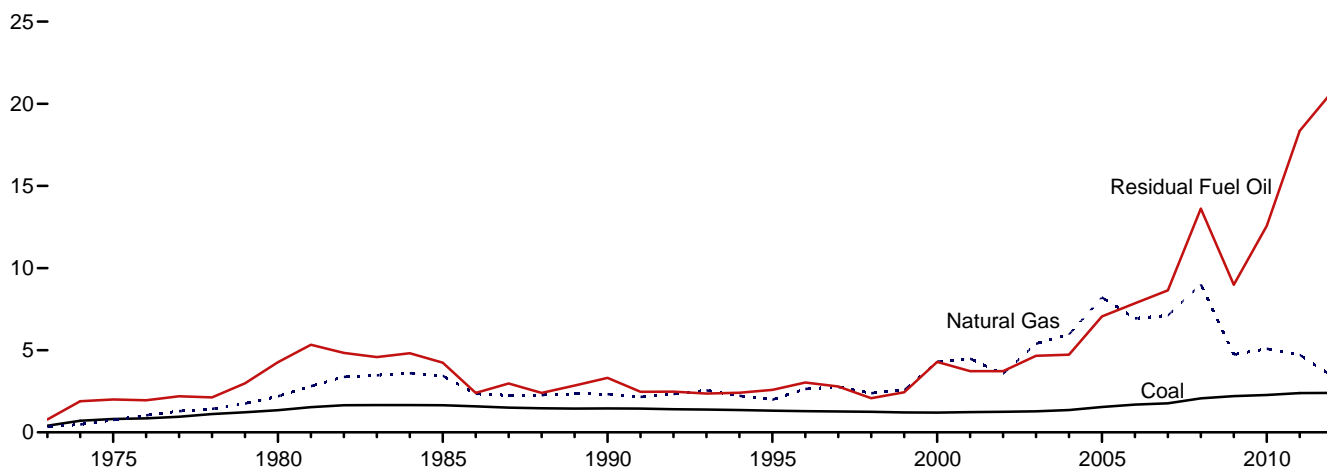
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#electricity> for all available annual data from 1960–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available monthly and annual data beginning in 1973.

Sources: • **1960–September 1977:** Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • **October 1977–February 1980:** Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • **March 1980–1982:** FERC, Form FERC-5, "Electric Utility Company Monthly Statement." • **1983:** U.S. Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement." • **1984–2009:** EIA, Form EIA-861, "Annual Electric Power Industry Report." • **2010 forward:** EIA, *Electric Power Monthly*, August 2013, Table 5.3.

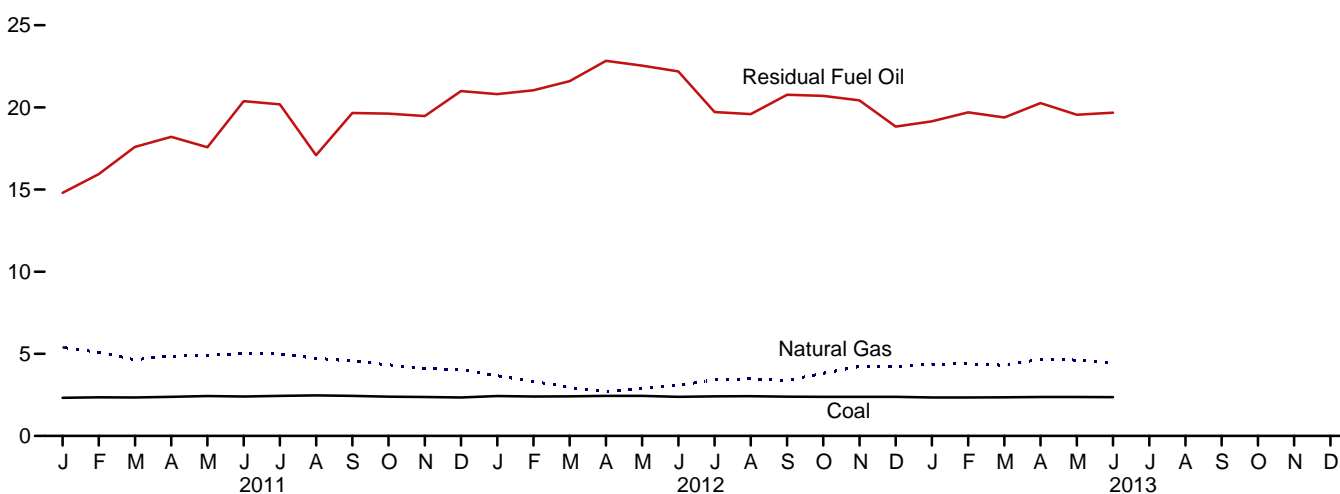
Selected years of data from 1960 through 1972 have been added to this table.
For all years of data from 1960 through 2013, see the "Web Pages" cited above.

Figure 9.3 Cost of Fossil-Fuel Receipts at Electric Generating Plants
(Dollars^a per Million Btu, Including Taxes)

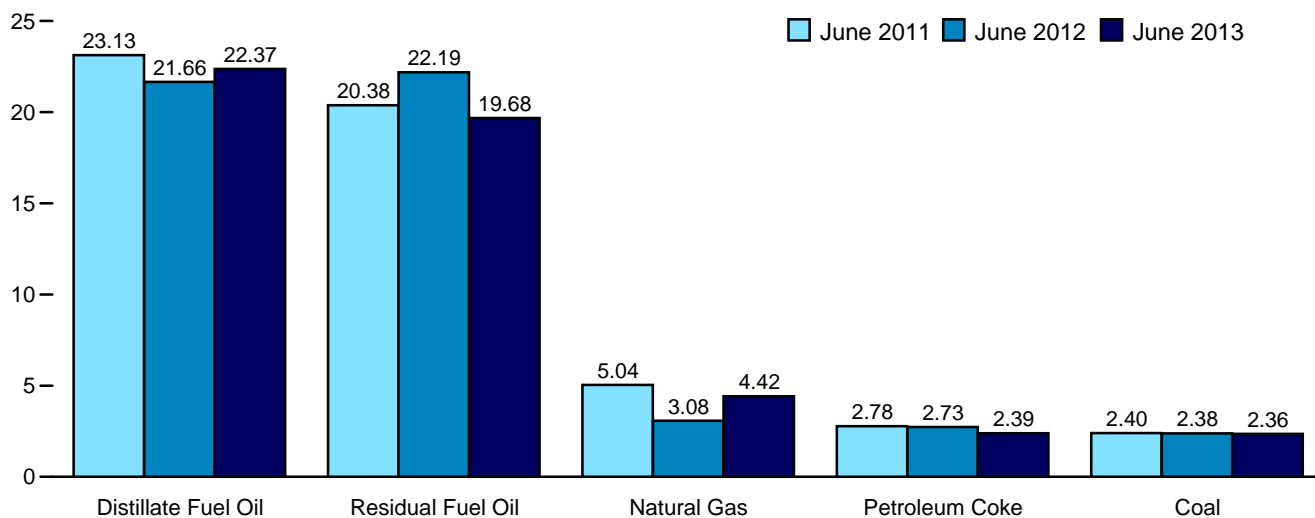
Costs, 1973–2012



Costs, Monthly



By Fuel Type



^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#prices>.
Source: Table 9.9.

Table 9.9 Cost of Fossil-Fuel Receipts at Electric Generating Plants
(Dollars^a per Million Btu, Including Taxes)

	Coal	Petroleum				Natural Gas ^e	All Fossil Fuels ^f
		Residual Fuel Oil ^b	Distillate Fuel Oil ^c	Petroleum Coke	Total ^d		
1973 Average	0.41	0.79	NA	NA	0.80	0.34	0.48
1975 Average .....	.81	2.01	NA	NA	2.02	.75	1.04
1980 Average	1.35	4.27	NA	NA	4.35	2.20	1.93
1985 Average	1.65	4.24	NA	NA	4.32	3.44	2.09
1990 Average	1.45	3.32	5.38	.80	3.35	2.32	1.69
1995 Average	1.32	2.59	3.99	.65	2.57	1.98	1.45
2000 Average	1.20	4.29	6.65	.58	4.18	4.30	1.74
2001 Average	1.23	3.73	6.30	.78	3.69	4.49	1.73
2002 Average^g	1.25	3.73	5.34	.78	3.34	3.56	1.86
2003 Average	1.28	4.66	6.82	.72	4.33	5.39	2.28
2004 Average	1.36	4.73	8.02	.83	4.29	5.96	2.48
2005 Average	1.54	7.06	11.72	1.11	6.44	8.21	3.25
2006 Average	1.69	7.85	13.28	1.33	6.23	6.94	3.02
2007 Average	1.77	8.64	14.85	1.51	7.17	7.11	3.23
2008 Average	2.07	13.62	21.46	2.11	10.87	9.01	4.12
2009 Average	2.21	8.98	13.22	1.61	7.02	4.74	3.04
2010 Average	2.27	12.57	16.61	2.28	9.54	5.09	3.26
2011 January	2.32	14.80	19.59	3.13	11.83	5.39	3.37
February	2.35	15.94	20.93	2.84	11.60	5.09	3.27
March	2.34	17.59	22.59	3.09	12.98	4.64	3.12
April	2.38	18.21	24.06	3.20	13.04	4.86	3.28
May	2.43	17.57	23.04	3.31	13.21	4.89	3.38
June	2.40	20.38	23.13	2.78	14.29	5.04	3.51
July	2.44	20.18	22.95	3.30	12.13	4.98	3.61
August	2.47	17.09	22.51	3.08	10.52	4.73	3.43
September	2.44	19.66	22.73	2.93	11.51	4.56	3.25
October	2.39	19.62	23.20	3.32	13.20	4.33	3.13
November	2.37	19.47	23.38	2.58	13.03	4.10	3.03
December	2.34	20.99	22.45	2.74	12.11	4.04	3.02
Average	2.39	18.35	22.46	3.03	12.48	4.72	3.29
2012 January	2.43	20.81	22.87	2.71	12.76	3.67	2.98
February	2.40	21.04	23.73	2.57	12.61	3.32	2.83
March	2.41	21.60	24.80	2.43	12.31	2.96	2.73
April	2.44	22.83	24.30	2.64	13.17	2.68	2.65
May	2.44	22.54	23.23	2.68	13.88	2.90	2.75
June	2.38	22.19	21.66	2.73	13.41	3.08	2.81
July	2.41	19.72	21.80	2.93	13.95	3.41	2.98
August	2.42	19.59	23.15	2.51	13.24	3.48	2.97
September	2.39	20.77	24.30	2.43	10.33	3.38	2.87
October	2.38	20.70	24.85	2.07	12.24	3.81	3.00
November	2.38	20.43	24.37	2.46	12.27	4.23	3.10
December	2.38	18.83	23.50	2.46	11.44	4.20	3.13
Average	2.40	20.78	23.45	2.54	12.60	3.40	2.90
2013 January	2.34	19.15	23.00	2.46	12.03	4.38	3.10
February	2.34	19.70	23.89	2.50	12.22	4.39	3.10
March	2.35	19.39	23.85	2.59	13.78	4.30	3.10
April	2.37	20.26	22.92	2.61	9.36	4.67	3.16
May	2.37	19.55	22.62	2.32	10.78	4.62	3.16
June	2.36	19.68	22.37	2.39	10.11	4.42	3.15
6-Month Average	2.36	19.55	23.07	2.48	11.52	4.46	3.13
2012 6-Month Average	2.42	21.77	23.31	2.63	13.01	3.09	2.79
2011 6-Month Average	2.37	17.48	22.05	3.06	12.86	4.99	3.32

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

^b For 1973–2001, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).

^c For 1973–2001, electric utility data are for light oil (fuel oil nos. 1 and 2).

^d For all years, includes residual fuel oil and distillate fuel oil. For 1990 forward, also includes petroleum coke. For 1973–2012, also includes jet fuel, kerosene, and waste oil. For 1983–2012, also includes other petroleum, such as propane and refined motor oil.

^e Natural gas, plus a small amount of supplemental gaseous fuels. For 1973–2000, data also include a small amount of blast furnace gas and other gases derived from fossil fuels.

^f Weighted average of costs shown under "Coal," "Petroleum," and "Natural Gas."

^g Through 2001, data are for electric utilities only. Beginning in 2002, data also include independent power producers, and electric generating plants in the

commercial and industrial sectors.

NA=Not available.

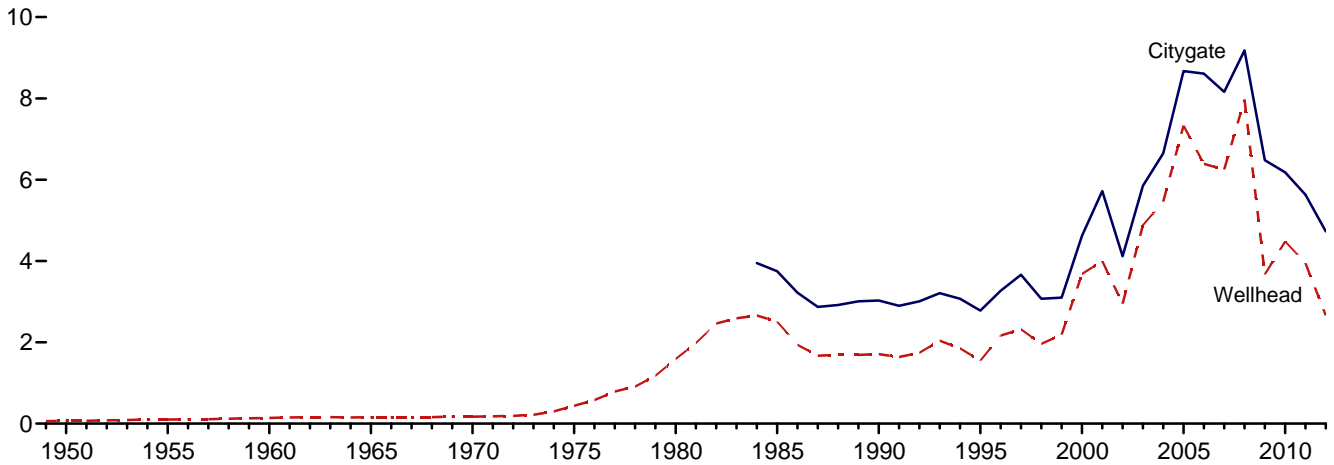
Notes: • Receipts are purchases of fuel. • Yearly costs are averages of monthly values, weighted by quantities in Btu. • For this table, there are several breaks in the data series related to what plants and fuels are covered. Beginning in 2013, data cover all regulated generating plants; plus unregulated plants whose total fossil-fueled nameplate generating capacity is 50 megawatts or more for coal, and 200 megawatts or more for natural gas, residual fuel oil, distillate fuel oil, and petroleum coke. For data coverage before 2013, see EIA, *Electric Power Monthly*, Appendix C, Form EIA-923 notes, "Receipts and cost and quality of fossil fuels" section. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available data beginning in 1973.

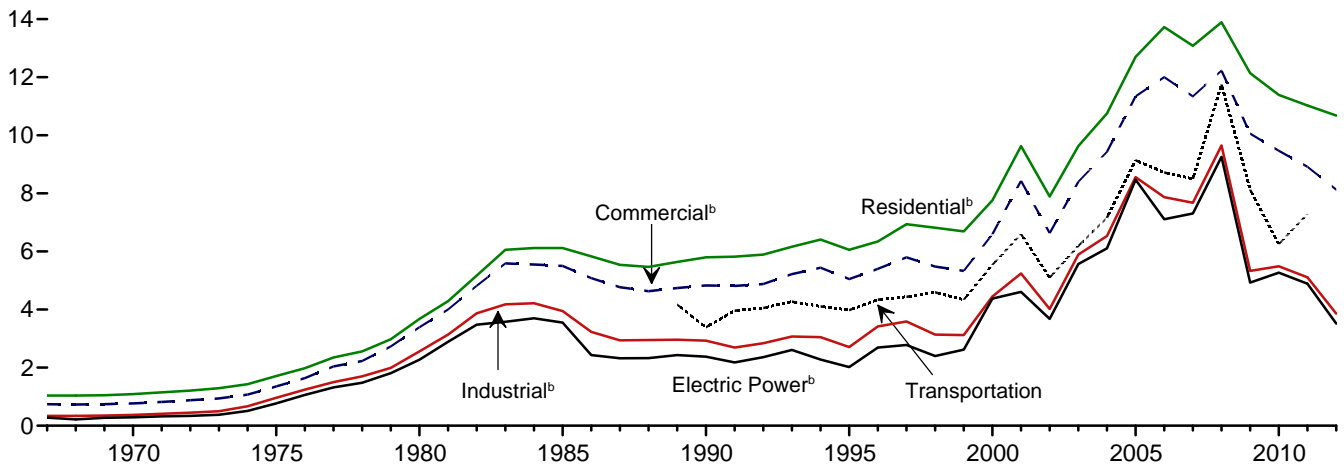
Sources: See end of section.

Figure 9.4 Natural Gas Prices
(Dollars^a per Thousand Cubic Feet)

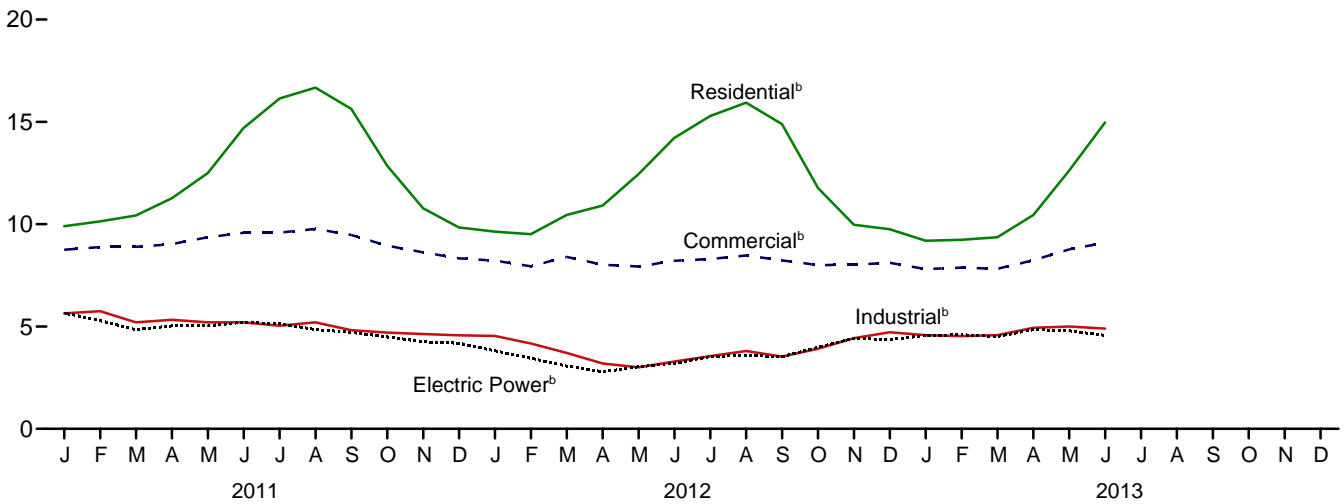
Wellhead and Citygate, 1949–2012



Consuming Sectors, 1967–2012



Consuming Sectors, Monthly



^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
^b Includes taxes.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#prices>.
Source: Table 9.10.

Table 9.10 Natural Gas Prices
(Dollars^a per Thousand Cubic Feet)

	Wellhead Price ^f	City-gate Price ^g	Consuming Sectors ^b									
			Residential		Commercial ^c		Industrial ^d		Transportation	Electric Power ^e		
			Price ^h	Percentage of Sector ⁱ	Price ^h	Percentage of Sector ⁱ	Price ^h	Percentage of Sector ⁱ	Vehicle Fuel ^j Price ^h	Price ^h	Percentage of Sector ^k	
1950 Average	0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1955 Average	.10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1960 Average	.14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1965 Average	.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1970 Average	.17	NA	1.09	NA	.77	NA	.37	NA	NA	.29	NA	NA
1975 Average	.44	NA	1.71	NA	1.35	NA	.96	NA	NA	.77	96.1	NA
1980 Average	1.59	NA	3.68	NA	3.39	NA	2.56	NA	NA	2.27	96.9	NA
1985 Average	2.51	3.75	6.12	NA	5.50	NA	3.95	68.8	NA	3.55	94.0	NA
1990 Average	1.71	3.03	5.80	99.2	4.83	86.6	2.93	35.2	3.39	2.38	76.8	NA
1995 Average	1.55	2.78	6.06	99.0	5.05	76.7	2.71	24.5	3.98	2.02	71.4	NA
2000 Average	3.68	4.62	7.76	92.6	6.59	63.9	4.45	19.8	5.54	4.38	50.5	NA
2001 Average	4.00	5.72	9.63	92.4	8.43	66.0	5.24	20.8	6.60	4.61	40.2	NA
2002 Average	2.95	4.12	7.89	97.9	6.63	77.4	4.02	22.7	5.10	^e 3.68	83.9	NA
2003 Average	4.88	5.85	9.63	97.5	8.40	78.2	5.89	22.1	6.19	5.57	91.2	NA
2004 Average	5.46	6.65	10.75	97.7	9.43	78.0	6.53	23.6	7.16	6.11	89.8	NA
2005 Average	7.33	8.67	12.70	98.1	11.34	82.1	8.56	24.0	9.14	8.47	91.3	NA
2006 Average	6.39	8.61	13.73	98.1	12.00	80.8	7.87	23.4	8.72	7.11	93.4	NA
2007 Average	6.25	8.16	13.08	98.0	11.34	80.4	7.68	22.2	8.50	7.31	92.2	NA
2008 Average	7.97	9.18	13.89	97.5	12.23	79.7	9.65	20.4	11.75	9.26	101.1	NA
2009 Average	3.67	6.48	12.14	97.4	10.06	77.8	5.33	18.8	8.13	4.93	101.1	NA
2010 Average	4.48	6.18	11.39	97.4	9.47	77.5	5.49	18.0	6.25	5.27	100.8	NA
2011 January	4.37	5.69	9.90	96.5	8.75	72.8	5.64	17.1	NA	5.66	101.7	NA
February	4.34	5.75	10.14	96.5	8.88	72.0	5.75	16.9	NA	5.29	101.8	NA
March	3.95	5.73	10.43	96.2	8.89	69.6	5.20	16.8	NA	4.84	101.0	NA
April	4.05	5.62	11.27	96.0	9.03	66.4	5.33	16.3	NA	5.03	101.6	NA
May	4.12	5.80	12.50	96.2	9.36	63.9	5.20	16.7	NA	5.04	101.3	NA
June	4.20	6.12	14.70	96.3	9.58	61.7	5.20	16.2	NA	5.20	101.1	NA
July	4.27	6.16	16.14	96.3	9.59	60.1	5.04	17.0	NA	5.13	100.5	NA
August	4.20	6.19	16.67	95.7	9.77	58.1	5.20	16.4	NA	4.85	101.0	NA
September	3.82	5.94	15.63	95.5	9.47	57.8	4.82	16.2	NA	4.71	101.4	NA
October	3.62	5.45	12.85	95.7	8.95	61.4	4.70	16.2	NA	4.49	101.5	NA
November	3.35	5.29	10.78	95.2	8.63	66.1	4.63	16.5	NA	4.26	101.1	NA
December	3.14	5.03	9.84	96.4	8.33	69.1	4.57	17.0	NA	4.18	101.4	NA
Average	3.95	5.63	11.03	96.2	8.92	67.3	5.11	16.6	7.29	4.89	101.2	NA
2012 January	^E 2.89	4.85	9.64	96.2	8.22	70.5	4.54	16.3	NA	3.81	100.8	NA
February	^E 2.46	4.73	9.51	96.1	7.94	69.2	4.17	16.5	NA	3.45	100.4	NA
March	^E 2.25	4.84	10.45	96.2	8.40	67.3	3.71	16.3	NA	3.07	100.3	NA
April	^E 1.89	4.19	10.91	95.5	8.02	63.7	3.19	15.8	NA	2.79	101.1	NA
May	^E 1.94	4.30	12.44	95.6	7.93	60.8	3.01	15.9	NA	3.03	100.8	NA
June	^E 2.54	4.63	14.22	95.6	8.21	60.7	3.29	15.9	NA	3.20	100.7	NA
July	^E 2.59	4.88	15.29	95.6	8.30	59.1	3.55	16.3	NA	3.53	100.7	NA
August	^E 2.86	5.13	15.94	95.1	8.47	57.2	3.80	16.9	NA	3.59	100.5	NA
September	^E 2.71	4.74	14.89	95.1	8.23	57.6	3.53	16.8	NA	3.52	101.3	NA
October	^E 3.03	4.65	11.77	95.2	8.00	60.7	3.91	16.7	NA	3.98	101.4	NA
November	^E 3.35	4.79	9.97	95.5	8.02	65.8	4.43	17.2	NA	4.42	100.4	NA
December	^E 3.35	4.79	9.75	95.8	8.11	68.6	4.72	17.3	NA	4.36	101.6	NA
Average	^E 2.66	4.73	10.68	95.8	8.13	65.4	3.86	16.5	NA	3.52	100.8	NA
2013 January	NA	4.52	9.19	95.9	7.81	70.8	4.58	17.4	NA	4.56	95.1	NA
February	NA	4.56	9.24	95.6	7.88	70.4	4.53	17.3	NA	4.59	94.3	NA
March	NA	4.75	9.36	95.5	7.82	69.5	4.58	17.1	NA	4.51	94.6	NA
April	NA	5.14	10.45	95.3	8.24	67.1	4.94	17.1	NA	4.85	95.0	NA
May	NA	5.56	12.62	95.2	8.77	63.5	5.00	16.6	NA	4.79	95.2	NA
June	NA	5.74	14.97	94.9	9.10	59.4	4.90	16.4	NA	4.56	94.9	NA
6-Month Average	NA	4.81	9.91	95.6	8.06	68.3	4.74	17.0	NA	4.64	94.9	NA
2012 6-Month Average	^E 2.33	4.68	10.33	96.0	8.13	66.9	3.69	16.1	NA	3.21	100.7	NA
2011 6-Month Average	4.17	5.74	10.65	96.3	8.95	69.5	5.40	16.7	NA	5.18	101.4	NA

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
^b See Note 8, "Natural Gas Prices," at end of section.
^c Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.
^d Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.
^e 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. Through 2001, data are for electric utilities only; beginning in 2002, data also include independent power producers.
^f See "Natural Gas Wellhead Price" in Glossary.
^g See "Citygate" in Glossary.
^h Includes taxes.
ⁱ The percentage of the sector's consumption in Table 4.3 for which price data are available. For details on how the percentages are derived, see Table 9.10 sources at end of section.
^j Much of the natural gas delivered for vehicle fuel represents deliveries to

fueling stations that are used primarily or exclusively by fleet vehicles. Thus, the prices are often those associated with the cost of gas in the operation of fleet vehicles.

^k Percentages exceed 100 percent when reported natural gas receipts are greater than reported natural gas consumption—this can occur when combined-heat-and-power plants report fuel receipts related to non-electric generating activities.

NA=Not available. E=Estimate.

Notes: • Prices are for natural gas, plus a small amount of supplemental gaseous fuels. • Prices are intended to include all taxes. See Note 8, "Natural Gas Prices," at end of section. • Wellhead annual and year-to-date prices are simple averages of the monthly prices; all other annual and year-to-date prices are volume-weighted averages of the monthly prices. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#naturalgas> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#prices> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Energy Prices

Note 1. Crude Oil Refinery Acquisition Costs. Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on U.S. Energy Information Administration (EIA) Form EIA-14, “Refiners’ Monthly Cost Report.” Those costs were previously published from data collected on Economic Regulatory Administration (ERA) Form ERA-49, “Domestic Crude Oil Entitlements Program Refiners Monthly Report.” Form ERA-49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for Form EIA-14 in accordance with conventions used for Form ERA-49. The respondents for the two forms are also essentially the same. However, due to possible different interpretations of the filing requirements and a different method for handling prior period adjustments, care must be taken when comparing the data collected on the two forms.

The refiner acquisition cost of crude oil is the average price paid by refiners for crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners concerned. Domestic crude oil is that oil produced in the United States or from the outer continental shelf as defined in 43 USC Section 1331. Imported crude oil is either that oil reported on Form ERA-51, “Transfer Pricing Report,” or any crude oil that is not domestic oil. The composite cost is the weighted average of domestic and imported crude oil costs.

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on Federal Energy Administration (FEA) Form FEA-P110-M-1, “Refiners’ Monthly Cost Allocation Report,” included unfinished oils but excluded SPR. Imported averages derived from Form ERA-49 exclude oil purchased for SPR, whereas the composite averages derived from Form ERA-49 include SPR. None of the prices derived from Form EIA-14 include either unfinished oils or SPR.

Note 2. Crude Oil Domestic First Purchase Prices. The average domestic first purchase price represents the average price at which all domestic crude oil is purchased. Crude oil domestic first purchase prices were derived as follows: for 1949–1973, weighted average domestic first purchase values as reported by state agencies and calculated by the Bureau of Mines; for 1974 and 1975, weighted averages of a sample survey of major first purchasers’ purchases; for 1976 forward, weighted averages of all first purchasers’ purchases. The data series was previously called “Actual Domestic Wellhead Price.”

Note 3. Crude Oil F.O.B. Costs. F.O.B. literally means “Free on Board.” It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.

Note 4. Crude Oil Landed Costs. The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to April 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude oil from countries that export only small amounts to the United States were also excluded. Beginning in April 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

Note 5. Motor Gasoline Prices. Several different series of motor gasoline prices are published in this section. U.S. city average retail prices of motor gasoline by grade are calculated monthly by the Bureau of Labor Statistics during the development of the Consumer Price Index (CPI). These prices include all federal, state, and local taxes paid at the time of sale. Prior to 1977, prices were collected in 56 urban areas. From 1978 forward, prices are collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).

Regular motor gasoline prices by area type are determined by EIA in a weekly survey of retail motor gasoline outlets (Form EIA-878, “Motor Gasoline Price Survey”). Prices include all federal, state, and local taxes paid at the time of sale. A representative sample of outlets by geographic area and size is randomly selected from a sampling frame of approximately 115,000 retail motor gasoline outlets. Monthly and annual prices are simple averages of weighted weekly estimates from “Weekly U.S. Retail Gasoline Prices, Regular Grade.” For more information on the survey methodology, see EIA, *Weekly Petroleum Status Report*, Appendix B, “Weekly Petroleum Price Surveys” section.

Refiner prices of finished motor gasoline for resale and to end users are determined by EIA in a monthly survey of refiners and gas plant operators (Form EIA-782A). The prices do not include any federal, state, or local taxes paid at the time of sale. Estimates of prices prior to January 1983 are based on Form FEA-P302-M-1/EIA-460, “Petroleum Industry Monthly Report for Product Prices,” and also exclude all federal, state, or local taxes paid at the time of sale. Sales for resale are those made to purchasers who are other-than-ultimate consumers. Sales to end users are sales made directly to the consumer of the product, including bulk consumers (such as agriculture, industry, and utilities) and residential and commercial consumers.

Note 6. Historical Petroleum Prices. Starting in January 1983, Form EIA-782, “Monthly Petroleum Product Sales Report,” replaced 10 previous surveys. Every attempt was made to continue the most important price series. However, prices published through December 1982 and those

published since January 1983 do not necessarily form continuous data series due to changes in survey forms, definitions, instructions, populations, samples, processing systems, and statistical procedures. To provide historical data, continuous series were generated for annual data 1978–1982 and for monthly data 1981 and 1982 by estimating the prices that would have been published had Form EIA-782 survey and system been in operation at that time. This form of estimation was performed after detailed adjustment was made for product and sales type matching and for discontinuity due to other factors. An important difference between the previous and present prices is the distinction between wholesale and resale and between retail and end user. The resale category continues to include sales among resellers. However, sales to bulk consumers, such as utility, industrial, and commercial accounts previously included in the wholesale category, are now counted as made to end users. The end-user category continues to include retail sales through company-owned and operated outlets but also includes sales to the bulk consumers such as agriculture, industry, and electric utilities. Additional information may be found in “Estimated Historic Time Series for the EIA-782,” a feature article by Paula Weir, printed in the December 1983 [3] *Petroleum Marketing Monthly*, published by EIA.

Note 7. Electricity Retail Prices. Average annual retail prices of electricity have the following plant coverage: Through 1979, annual data are for Classes A and B privately owned electric utilities only. For 1980–1982, annual data are for selected Class A utilities whose electric operating revenues were \$100 million or more during the previous year. For 1983, annual data are for a selected sample of electric utilities. Beginning in 1984, data are for a census of electric utilities. Beginning in 1996, annual data also include energy service providers selling to retail customers.

Average monthly retail prices of electricity have the following plant coverage: Through 1985, monthly data are derived from selected privately owned electric utilities and, therefore, are not national averages. Beginning in 1986, monthly data are based on a sample of publicly and privately owned electric utilities. Beginning in 1996, monthly data also include energy service providers selling to retail customers.

Preliminary monthly data are from Form EIA-826, “Monthly Electric Sales and Revenue Report With State Distributions Report,” which is a monthly collection of data from approximately 450 of the largest publicly and privately owned electric utilities as well as a census of energy service providers with retail sales in deregulated states; a model is then applied to the collected data to estimate for the entire universe of U.S. electric utilities. Preliminary annual data are the sum of the monthly revenues divided by the sum of the monthly sales. When final annual data become available each year from Form EIA-861, “Annual Electric Power Industry Report,” their ratios

to the preliminary Form EIA-826 values are used to derive adjusted final monthly values.

Note 8. Natural Gas Prices. Natural gas prices are intended to include all taxes. Instructions on the data collection forms specifically direct that all federal, state, and local taxes, surcharges, and/or adjustments billed to consumers are to be included. However, sales and other taxes itemized on more than 3,000 consumers’ bills are sometimes excluded by the reporting utilities. Delivered-to-consumers prices for 1987 forward represent natural gas delivered and sold to residential, commercial, industrial, vehicle fuel, and electric power consumers. They do not include the price of natural gas delivered on behalf of third parties to residential, commercial, industrial, and vehicle fuel customers except for certain states in the residential and commercial sectors for 2002 forward. Volumes of natural gas delivered on behalf of third parties are included in the consumption data shown in Table 4.3. Additional information is available in EIA, *Natural Gas Monthly*, Appendix C.

Table 9.1 Sources

Domestic First Purchase Price

1949–1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*, “Crude Petroleum and Petroleum Products” chapter.

1977: Federal Energy Administration, based on Form FEA-P124, “Domestic Crude Oil Purchaser’s Monthly Report.”

1978–2009: U.S. Energy Information Administration (EIA), *Petroleum Marketing Annual 2009*, Table 1.

2010 forward: EIA, *Petroleum Marketing Monthly*, September 2013, Table 1.

F.O.B. and Landed Cost of Imports

October 1973–September 1977: Federal Energy Administration, Form FEA-F701-M-0, “Transfer Pricing Report.”

October–December 1977: EIA, Form FEA-F701-M-0, “Transfer Pricing Report.”

1978–2009: EIA, *Petroleum Marketing Annual 2009*, Table 1.

2010 forward: EIA, *Petroleum Marketing Monthly*, September 2013, Table 1.

Refiner Acquisition Cost

1968–1973: EIA estimates. The cost of domestic crude oil was derived by adding estimated transportation costs to the reported average domestic first purchase price. The cost of imported crude oil was derived by adding an estimated ocean transport cost based on the published “Average Freight Rate Assessment” to the average “Free Alongside Ship” value published by the U.S. Bureau of the Census.

1974–1976: DOI, BOM, *Minerals Yearbook*, “Crude Petroleum and Petroleum Products” chapter.

1977: January–September, FEA, based on Form FEA-P110-M-1, “Refiners’ Monthly Cost Allocation Report.”

October–December, EIA, based on Form FEA-P110-M-1, “Refiners’ Monthly Cost Allocation Report.”

1978–2007: EIA, *Petroleum Marketing Annual 2007*, Table 1.

2008 forward: EIA, *Petroleum Marketing Monthly*, September 2013, Table 1.

Table 9.2 Sources

October 1973–September 1977: Federal Energy Administration, Form FEA-F701-M-0, “Transfer Pricing Report.”
October 1977–December 1977: U.S. Energy Information Administration (EIA), Form FEA-F701-M-0, “Transfer Pricing Report.”

1978–2007: EIA, *Petroleum Marketing Annual 2007*, Table 21.

2008 forward: EIA, *Petroleum Marketing Monthly*, September 2013, Table 21.

Table 9.9 Sources

1973–September 1977: Federal Power Commission, Form FPC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants.”

October 1977–December 1977: Federal Energy Regulatory Commission, Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants.”

1978 and 1979: U.S. Energy Information Administration (EIA), Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants.”

1980–1989: EIA, *Electric Power Monthly*, May issues.

1990–2000: EIA, *Electric Power Monthly*, March 2003, Table 26.

2001–2007: EIA, *Electric Power Monthly*, October 2008, Table 4.1; Federal Energy Regulatory Commission, Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants”; and EIA, Form EIA-423, “Monthly Cost and Quality of Fuels for Electric Plants Report.”

2008 forward: EIA, *Electric Power Monthly*, August 2013, Table 4.1; and Form EIA-923, “Power Plant Operations Report.”

Table 9.10 Sources

All Prices Except Vehicle Fuel and Electric Power

1949–2006: U.S. Energy Information Administration (EIA), *Natural Gas Annual (NGA)*, annual reports and unpublished revisions.

2007 forward: EIA, *Natural Gas Monthly (NGM)*, August 2013, Table 3.

Vehicle Fuel Price

1989 forward: EIA, NGA, annual reports.

Electric Power Sector Price

1967–1972: EIA, NGA, annual reports.

1973–1998: EIA, NGA 2000, Table 96.

1999–2002: EIA, NGM, October 2004, Table 4.

2003–2007: Federal Energy Regulatory Commission, Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants,” and EIA, Form EIA-423 “Monthly Cost and Quality of Fuels for Electric Plants Report.”

2008 forward: Form EIA-923, “Power Plant Operations Report.”

Percentage of Residential Sector

1989–2011: EIA, Form EIA-176, “Annual Report of Natural and Supplemental Gas Supply and Disposition.”

2012 and 2013: EIA, Form EIA-857, “Monthly Report of Natural Gas Purchases and Deliveries to Consumers.”

Percentage of Commercial Sector

1987–2006: EIA, NGA, annual reports. Calculated as the total amount of natural gas delivered to commercial consumers minus the amount delivered for the account of others, and then divided by the total amount delivered to commercial consumers.

2007 forward: EIA, NGM, August 2013, Table 3.

Percentage of Industrial Sector

1982–2006: EIA, NGA, annual reports. Calculated as the total amount of natural gas delivered to industrial consumers minus the amount delivered for the account of others, and then divided by the total amount delivered to industrial consumers.

2007 forward: EIA, NGM, August 2013, Table 3.

Percentage of Electric Power Sector

1973–2001: Calculated by EIA as the quantity of natural gas receipts by electric utilities reported on Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants” (and predecessor forms) divided by the quantity of natural gas consumed by the electric power sector (for 1973–1988, see *Monthly Energy Review (MER)*, Table 7.3b; for 1989–2001, see MER, Table 7.4b).

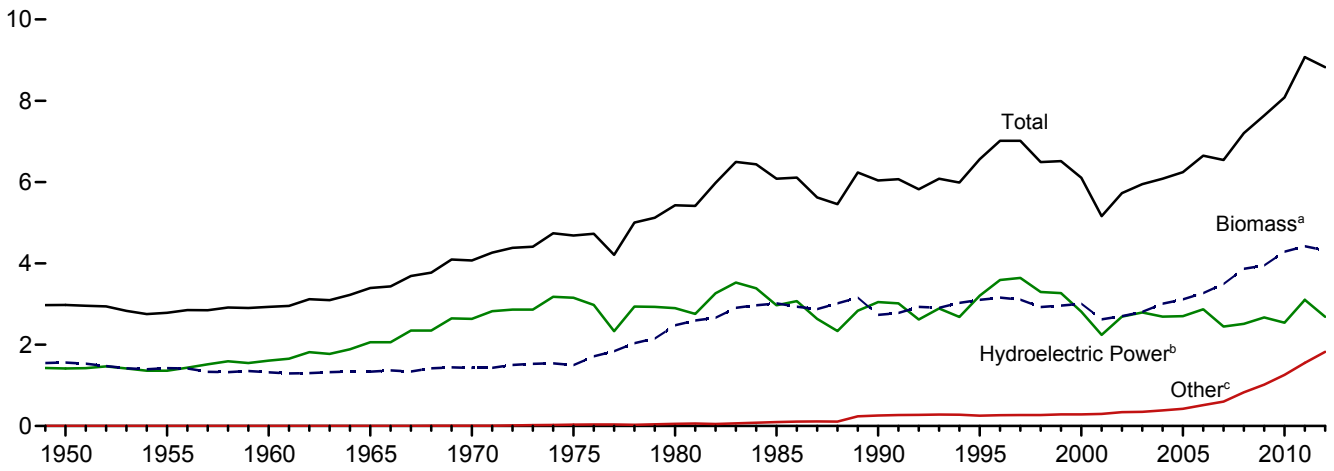
2002–2007: Calculated by EIA as the quantity of natural gas receipts by electric utilities and independent power producers reported on Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants,” and EIA-423, “Monthly Cost and Quality of Fuels for Electric Plants Report,” divided by the quantity of natural gas consumed by the electric power sector (see MER, Table 7.4b).

2008 forward: Calculated by EIA as the quantity of natural gas receipts by electric utilities and independent power producers reported on Form EIA-923, “Power Plant Operations Report,” divided by the quantity of natural gas consumed by the electric power sector (see MER, Table 7.4b).

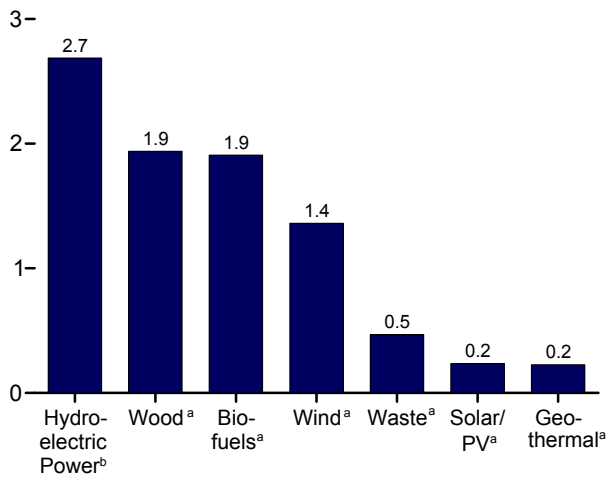
10. Renewable Energy

Figure 10.1 Renewable Energy Consumption
(Quadrillion Btu)

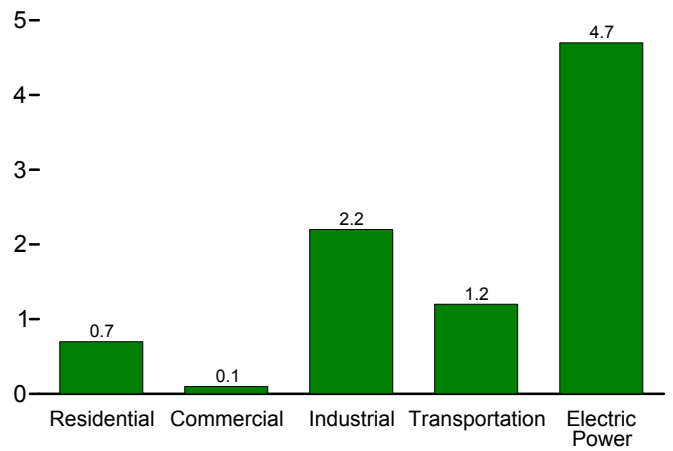
Total and Major Sources, 1949–2012



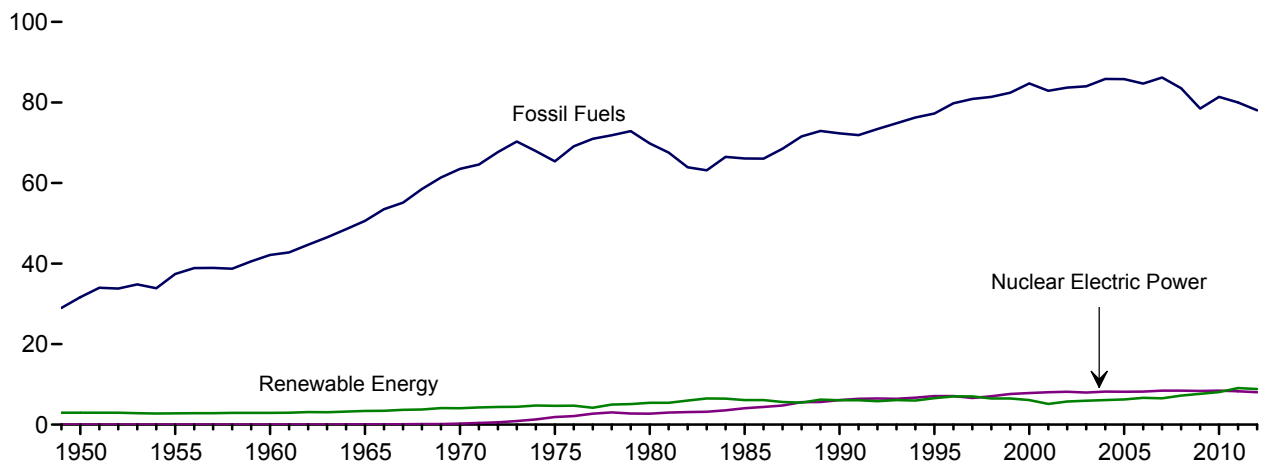
By Source, 2012



By Sector, 2012



Compared With Other Resources, 1949–2012



^a See Table 10.1 for definition.
^b Conventional hydroelectric power.
^c Geothermal, solar/PV, and wind.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#renewable>.
Sources: Tables 1.3 and 10.1–10.2c.

Table 10.1 Renewable Energy Production and Consumption by Source
(Trillion Btu)

	Production ^a			Consumption								
	Biomass		Total Renewable Energy ^d	Hydroelectric Power ^e	Geothermal ^f	Solar/PV ^g	Wind ^h	Biomass				Total Renewable Energy
	Bio-fuels ^b	Total ^c						Wood ⁱ	Waste ^j	Bio-fuels ^k	Total	
1950 Total	NA	1,562	2,978	1,415	NA	NA	NA	1,562	NA	NA	1,562	2,978
1955 Total	NA	1,424	2,784	1,360	NA	NA	NA	1,424	NA	NA	1,424	2,784
1960 Total	NA	1,320	2,928	1,608	(s)	NA	NA	1,320	NA	NA	1,320	2,928
1965 Total	NA	1,335	3,396	2,059	2	NA	NA	1,335	NA	NA	1,335	3,396
1970 Total	NA	1,431	4,070	2,634	6	NA	NA	1,429	2	NA	1,431	4,070
1975 Total	NA	1,499	4,687	3,155	34	NA	NA	1,497	2	NA	1,499	4,687
1980 Total	NA	2,475	5,428	2,900	53	NA	NA	2,474	2	NA	2,475	5,428
1985 Total	93	3,016	6,084	2,970	97	(s)	(s)	2,687	236	93	3,016	6,084
1990 Total	111	2,735	6,041	3,046	171	59	29	2,216	408	111	2,735	6,041
1995 Total	198	3,099	6,558	3,205	152	69	33	2,370	531	200	3,101	6,560
2000 Total	233	3,006	6,104	2,811	164	66	57	2,262	511	236	3,008	6,106
2001 Total	254	2,624	5,164	2,242	164	64	70	2,006	364	253	2,622	5,163
2002 Total	308	2,705	5,734	2,689	171	63	105	1,995	402	303	2,701	5,729
2003 Total	402	2,805	5,947	2,793	173	62	113	2,002	401	404	2,807	5,948
2004 Total	487	2,998	6,069	2,688	178	63	142	2,121	389	499	3,010	6,081
2005 Total	564	3,104	6,229	2,703	181	63	178	2,137	403	577	3,117	6,242
2006 Total	720	3,216	6,599	2,869	181	68	264	2,099	397	771	3,267	6,649
2007 Total	978	3,480	6,528	2,446	186	76	341	2,089	413	991	3,493	6,541
2008 Total	1,387	3,881	7,219	2,511	192	89	546	2,059	435	1,372	3,866	7,204
2009 Total	1,584	3,967	7,655	2,669	200	98	721	1,931	452	1,568	3,951	7,639
2010 Total	1,884	4,332	8,128	2,539	208	126	923	1,981	468	1,837	4,286	8,082
2011 January	169	384	747	248	18	13	83	176	39	153	368	731
February	151	345	710	234	17	13	102	158	36	145	338	703
March	171	379	816	303	18	14	102	169	39	160	368	806
April	163	358	813	303	17	14	121	159	36	154	349	804
May	170	368	832	317	18	15	114	161	37	164	362	826
June	168	374	825	312	17	15	107	167	38	168	373	824
July	171	383	792	304	18	15	73	172	39	162	373	782
August	174	386	742	250	18	15	73	172	39	174	385	741
September	166	371	677	208	17	14	67	167	38	160	364	670
October	176	381	708	192	18	15	102	166	40	167	372	699
November	178	385	738	201	18	14	121	167	40	167	374	727
December	186	404	770	231	18	14	104	176	41	176	394	761
Total	2,044	4,516	9,170	3,103	212	171	1,168	2,010	462	1,948	4,421	9,074
2012 January	177	386	783	227	19	17	134	170	39	154	363	760
February	164	358	699	198	18	17	108	158	36	152	347	688
March	172	369	792	250	19	19	135	158	39	163	361	784
April	164	352	768	254	18	19	124	151	38	160	349	765
May	173	374	814	277	19	21	122	162	39	172	374	814
June	165	364	778	259	19	21	116	160	38	164	362	777
July	157	364	749	260	19	21	85	167	40	158	365	750
August	163	366	711	225	19	21	81	165	39	168	371	716
September	152	349	643	171	19	20	84	160	37	150	348	642
October	156	355	674	157	19	21	122	160	40	161	360	679
November	152	352	685	183	19	19	112	160	40	152	352	685
December	157	367	769	226	20	19	138	168	42	153	363	765
Total	1,951	4,357	8,867	2,687	227	235	1,361	1,938	468	1,909	4,316	8,825
2013 January	152	361	789	244	19	23	141	169	40	151	360	787
February	139	327	700	199	18	22	135	152	36	140	327	701
March	161	367	763	200	19	26	152	166	40	161	367	764
April	162	352	805	241	19	26	168	153	38	163	353	806
May	171	371	854	277	19	27	159	161	40	171	372	854
June	169	370	816	266	19	28	134	162	40	170	371	817
6-Month Total	954	2,148	4,728	1,427	113	151	889	961	233	956	2,151	4,730
2012 6-Month Total	1,014	2,203	4,635	1,465	112	114	740	959	230	966	2,155	4,587
2011 6-Month Total	993	2,207	4,743	1,717	106	84	629	990	224	944	2,158	4,694

^a Production equals consumption for all renewable energy sources except biofuels.

^b Total biomass inputs to the production of fuel ethanol and biodiesel.

^c Wood and wood-derived fuels, biomass waste, and total biomass inputs to the production of fuel ethanol and biodiesel.

^d Hydroelectric power, geothermal, solar thermal/photovoltaic, wind, and biomass.

^e Conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^f Geothermal electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6), and geothermal heat pump and direct use energy.

^g Solar thermal and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6), and solar thermal direct use energy.

^h Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

ⁱ Wood and wood-derived fuels.

^j Municipal solid waste from biogenic sources, landfill gas, sludge waste,

agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^k Fuel ethanol (minus denaturant) and biodiesel consumption, plus losses and co-products from the production of fuel ethanol and biodiesel.

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

Notes: • Most data for the residential, commercial, industrial, and transportation sectors are estimates. See notes and sources for Tables 10.2a and 10.2b. • See Note, "Renewable Energy Production and Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#renewable> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#renewable> for all available monthly and annual data beginning in 1973.

Sources: Tables 10.2a–10.4.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the “Web Pages” cited above.

Table 10.2a Renewable Energy Consumption: Residential and Commercial Sectors
(Trillion Btu)

	Residential Sector				Commercial Sector ^a								
	Geo-thermal ^b	Solar/ PV ^c	Biomass		Hydro- electric Power ^e	Geo- thermal ^b	Solar/ PV ^f	Wind ^g	Biomass				Total
			Wood ^d	Total					Wood ^d	Waste ^h	Fuel Ethanol ⁱ	Total	
1950 Total	NA	NA	1,006	1,006	NA	NA	NA	NA	19	NA	NA	19	19
1955 Total	NA	NA	775	775	NA	NA	NA	NA	15	NA	NA	15	15
1960 Total	NA	NA	627	627	NA	NA	NA	NA	12	NA	NA	12	12
1965 Total	NA	NA	468	468	NA	NA	NA	NA	9	NA	NA	9	9
1970 Total	NA	NA	401	401	NA	NA	NA	NA	8	NA	NA	8	8
1975 Total	NA	NA	425	425	NA	NA	NA	NA	8	NA	NA	8	8
1980 Total	NA	NA	850	850	NA	NA	NA	NA	21	NA	NA	21	21
1985 Total	NA	NA	1,010	1,010	NA	NA	NA	NA	24	NA	(s)	24	24
1990 Total	6	56	580	641	1	3	—	—	66	28	(s)	94	98
1995 Total	7	64	520	591	1	5	—	—	72	40	(s)	113	118
2000 Total	9	61	420	489	1	8	—	—	71	47	(s)	119	128
2001 Total	9	59	370	438	1	8	—	—	67	25	(s)	92	101
2002 Total	10	57	380	448	(s)	9	—	—	69	26	(s)	95	104
2003 Total	13	57	400	470	1	11	—	—	71	29	1	101	113
2004 Total	14	57	410	481	1	12	—	—	70	34	1	105	118
2005 Total	16	58	430	504	1	14	—	—	70	34	1	105	120
2006 Total	18	63	380	462	1	14	—	—	65	36	1	103	118
2007 Total	22	70	420	512	1	14	—	—	70	31	2	103	118
2008 Total	26	80	470	577	1	15	(s)	—	73	34	2	109	125
2009 Total	33	89	500	622	1	17	(s)	(s)	73	36	3	112	129
2010 Total	37	114	440	591	1	19	(s)	(s)	72	36	3	111	130
2011 January	3	13	38	55	(s)	2	(s)	(s)	6	3	(s)	9	11
February	3	12	35	49	(s)	2	(s)	(s)	5	3	(s)	9	10
March	3	13	38	55	(s)	2	(s)	(s)	6	3	(s)	10	11
April	3	13	37	53	(s)	2	(s)	(s)	6	3	(s)	9	11
May	3	13	38	55	(s)	2	(s)	(s)	6	4	(s)	10	12
June	3	13	37	53	(s)	2	(s)	(s)	6	4	(s)	10	11
July	3	13	38	55	(s)	2	(s)	(s)	6	4	(s)	10	12
August	3	13	38	55	(s)	2	(s)	(s)	6	4	(s)	10	12
September	3	13	37	53	(s)	2	(s)	(s)	6	4	(s)	9	11
October	3	13	38	55	(s)	2	(s)	(s)	6	4	(s)	10	11
November	3	13	37	53	(s)	2	(s)	(s)	6	4	(s)	10	11
December	3	13	38	55	(s)	2	(s)	(s)	6	4	(s)	10	12
Total	40	153	450	643	(s)	20	1	(s)	69	43	3	115	136
2012 January	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
February	3	15	33	52	(s)	2	(s)	(s)	5	4	(s)	9	11
March	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
April	3	16	34	53	(s)	2	(s)	(s)	5	3	(s)	9	11
May	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
June	3	16	34	53	(s)	2	(s)	(s)	5	3	(s)	9	11
July	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
August	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
September	3	16	34	53	(s)	2	(s)	(s)	5	3	(s)	9	11
October	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
November	3	16	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11
December	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	10	12
Total	40	193	420	652	(s)	20	1	1	62	44	3	109	131
2013 January	3	20	36	59	(s)	2	(s)	(s)	5	4	(s)	10	12
February	3	18	32	53	(s)	2	(s)	(s)	5	4	(s)	9	10
March	3	20	36	59	(s)	2	(s)	(s)	5	4	(s)	10	12
April	3	19	35	57	(s)	2	(s)	(s)	5	4	(s)	9	11
May	3	20	36	59	(s)	2	(s)	(s)	5	4	(s)	9	11
June	3	19	35	57	(s)	2	(s)	(s)	5	4	(s)	9	11
6-Month Total	20	115	208	343	(s)	10	1	(s)	31	23	1	56	67
2012 6-Month Total	20	96	209	324	(s)	10	1	(s)	31	22	1	54	65
2011 6-Month Total	20	76	223	319	(s)	10	(s)	(s)	34	21	1	56	67

^a Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

^b Geothermal heat pump and direct use energy.

^c Solar thermal direct use energy, and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6). Includes distributed solar thermal and PV energy used in the commercial, industrial, and electric power sectors.

^d Wood and wood-derived fuels.

^e Conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^f Photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6) at commercial plants with capacity of 1 megawatt or greater.

^g Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^h Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

ⁱ The fuel ethanol (minus denaturant) portion of motor fuels, such as E10, consumed by the commercial sector.

NA=Not available. —=No data reported. (s)=Less than 0.5 trillion Btu.

Notes: • Data are estimates, except for commercial sector solar/PV, hydroelectric power, wind, and waste. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#renewable> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#renewable> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 10.2b Renewable Energy Consumption: Industrial and Transportation Sectors
(Trillion Btu)

	Industrial Sector ^a										Transportation Sector		
	Hydroelectric Power ^b	Geothermal ^c	Solar/PV ^d	Wind ^e	Biomass					Total	Biomass		
					Wood ^f	Waste ^g	Fuel Ethanol ^h	Losses and Co-products ⁱ	Total		Fuel Ethanol ^j	Bio-diesel	Total
1950 Total	69	NA	NA	NA	532	NA	NA	NA	532	602	NA	NA	NA
1955 Total	38	NA	NA	NA	631	NA	NA	NA	631	669	NA	NA	NA
1960 Total	39	NA	NA	NA	680	NA	NA	NA	680	719	NA	NA	NA
1965 Total	33	NA	NA	NA	855	NA	NA	NA	855	888	NA	NA	NA
1970 Total	34	NA	NA	NA	1,019	NA	NA	NA	1,019	1,053	NA	NA	NA
1975 Total	32	NA	NA	NA	1,063	NA	NA	NA	1,063	1,096	NA	NA	NA
1980 Total	33	NA	NA	NA	1,600	NA	NA	NA	1,600	1,633	NA	NA	NA
1985 Total	33	NA	NA	NA	1,645	230	1	42	1,918	1,951	50	NA	50
1990 Total	31	2	-	-	1,442	192	1	49	1,684	1,717	60	NA	60
1995 Total	55	3	-	-	1,652	195	2	86	1,934	1,992	112	NA	112
2000 Total	42	4	-	-	1,636	145	1	99	1,881	1,928	135	NA	135
2001 Total	33	5	-	-	1,443	129	3	108	1,681	1,719	141	1	142
2002 Total	39	5	-	-	1,396	146	3	130	1,676	1,720	168	2	170
2003 Total	43	3	-	-	1,363	142	4	169	1,679	1,725	228	2	230
2004 Total	33	4	-	-	1,476	132	6	203	1,817	1,853	286	3	290
2005 Total	32	4	-	-	1,452	148	7	230	1,837	1,873	327	12	339
2006 Total	29	4	-	-	1,472	130	10	285	1,897	1,930	442	33	475
2007 Total	16	5	-	-	1,413	145	10	377	1,944	1,965	557	46	602
2008 Total	17	5	-	-	1,339	143	12	532	2,026	2,047	786	40	826
2009 Total	18	4	-	-	1,178	154	13	617	1,963	1,985	894	42	935
2010 Total	16	4	(s)	-	1,273	168	17	742	2,201	2,221	1,041	34	1,075
2011 January	1	(s)	(s)	(s)	115	15	1	66	197	199	82	3	86
February	2	(s)	(s)	(s)	102	13	1	59	175	177	81	4	84
March	2	(s)	(s)	(s)	110	14	1	65	191	193	87	6	93
April	2	(s)	(s)	(s)	105	13	1	62	180	182	82	8	90
May	2	(s)	(s)	(s)	103	13	1	64	182	185	90	8	98
June	1	(s)	(s)	(s)	109	13	1	63	187	189	92	10	103
July	1	(s)	(s)	(s)	111	13	1	64	190	191	86	10	96
August	1	(s)	(s)	(s)	111	13	2	65	191	192	95	12	107
September	1	(s)	(s)	(s)	109	13	1	62	185	187	83	13	96
October	1	(s)	(s)	(s)	107	15	1	65	189	190	89	11	100
November	1	(s)	(s)	(s)	110	15	1	66	192	194	86	13	99
December	2	(s)	(s)	(s)	116	15	1	69	201	203	91	14	105
Total	17	4	(s)	(s)	1,309	165	17	771	2,261	2,283	1,045	113	1,158
2012 January	2	(s)	(s)	(s)	113	14	1	67	196	198	81	5	86
February	2	(s)	(s)	(s)	105	14	1	61	181	183	82	8	90
March	2	(s)	(s)	(s)	103	14	1	64	183	185	88	10	98
April	2	(s)	(s)	(s)	100	14	1	61	176	178	87	11	98
May	2	(s)	(s)	(s)	108	14	1	64	188	190	93	14	107
June	1	(s)	(s)	(s)	106	14	1	61	182	184	90	11	101
July	1	(s)	(s)	(s)	110	14	1	58	184	185	88	10	99
August	1	(s)	(s)	(s)	107	14	2	60	183	185	95	11	106
September	1	(s)	(s)	(s)	105	14	1	56	177	178	83	9	92
October	1	(s)	(s)	(s)	106	15	1	58	180	181	93	8	101
November	2	(s)	(s)	(s)	106	15	1	58	180	182	84	9	93
December	2	(s)	(s)	(s)	111	15	1	60	188	190	86	5	92
Total	18	4	(s)	(s)	1,281	171	17	728	2,197	2,219	1,050	111	1,161
2013 January	3	(s)	(s)	(s)	112	15	1	57	186	190	83	9	92
February	4	(s)	(s)	(s)	101	14	1	52	168	171	78	9	87
March	3	(s)	(s)	(s)	109	15	1	59	185	188	89	12	101
April	2	(s)	(s)	(s)	102	14	1	59	177	180	90	12	102
May	3	(s)	(s)	(s)	106	14	1	63	185	188	94	13	107
June	3	(s)	(s)	(s)	107	14	1	62	185	188	92	14	106
6-Month Total	18	2	(s)	(s)	638	86	8	352	1,084	1,105	525	69	595
2012 6-Month Total	10	2	(s)	(s)	636	84	8	378	1,106	1,118	520	59	579
2011 6-Month Total	10	2	(s)	(s)	644	81	8	380	1,113	1,125	515	40	554

^a Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

^b Conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^c Geothermal heat pump and direct use energy.

^d Photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6) at industrial plants with capacity of 1 megawatt or greater.

^e Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^f Wood and wood-derived fuels.

^g Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^h The fuel ethanol (minus denaturant) portion of motor fuels, such as E10,

consumed by the industrial sector.

ⁱ Losses and co-products from the production of fuel ethanol and biodiesel. Does not include natural gas, electricity, and other non-biomass energy used in the production of fuel ethanol and biodiesel—these are included in the industrial sector consumption statistics for the appropriate energy source.

^j The fuel ethanol (minus denaturant) portion of motor fuels, such as E10 and E85, consumed by the transportation sector.

NA=Not available. –=No data reported. (s)=Less than 0.5 trillion Btu.

Notes: • Data are estimates, except for industrial sector hydroelectric power in 1949–1978 and 1989 forward, solar/PV, and wind. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#renewable> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#renewable> for all available monthly and annual data beginning in 1973.

Sources: See end of section.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table 10.2c Renewable Energy Consumption: Electric Power Sector
(Trillion Btu)

	Hydro-electric Power ^a	Geo-thermal ^b	Solar/PV ^c	Wind ^d	Biomass			Total
					Wood ^e	Waste ^f	Total	
1950 Total	1,346	NA	NA	NA	5	NA	5	1,351
1955 Total	1,322	NA	NA	NA	3	NA	3	1,325
1960 Total	1,569	(s)	NA	NA	2	NA	2	1,571
1965 Total	2,026	2	NA	NA	3	NA	3	2,031
1970 Total	2,600	6	NA	NA	1	2	4	2,609
1975 Total	3,122	34	NA	NA	(s)	2	2	3,158
1980 Total	2,867	53	NA	NA	3	2	4	2,925
1985 Total	2,937	97	(s)	(s)	8	7	14	3,049
1990 Total ^g	3,014	161	4	29	129	188	317	3,524
1995 Total	3,149	138	5	33	125	296	422	3,747
2000 Total	2,768	144	5	57	134	318	453	3,427
2001 Total	2,209	142	6	70	126	211	337	2,763
2002 Total	2,650	147	6	105	150	230	380	3,288
2003 Total	2,749	146	5	113	167	230	397	3,411
2004 Total	2,655	148	6	142	165	223	388	3,339
2005 Total	2,670	147	6	178	185	221	406	3,406
2006 Total	2,839	145	5	264	182	231	412	3,665
2007 Total	2,430	145	6	341	186	237	423	3,345
2008 Total	2,494	146	9	546	177	258	435	3,630
2009 Total	2,650	146	9	721	180	261	441	3,967
2010 Total	2,521	148	12	923	196	264	459	4,064
2011 January	247	13	(s)	83	17	21	37	381
February	233	12	1	102	16	19	35	382
March	301	13	1	102	15	21	36	453
April	301	12	2	121	12	20	32	467
May	315	13	2	114	13	21	34	477
June	311	12	2	107	16	22	37	469
July	303	12	2	73	17	22	39	429
August	249	12	2	73	17	22	39	376
September	207	12	2	67	15	21	37	323
October	191	12	1	102	14	22	36	343
November	199	12	1	121	14	22	36	369
December	229	13	1	103	16	23	39	385
Total	3,085	149	17	1,167	182	255	437	4,855
2012 January	225	14	1	134	16	21	37	410
February	196	13	1	108	15	19	34	353
March	249	14	2	135	14	21	35	435
April	252	13	3	124	11	20	31	424
May	276	14	5	122	13	22	35	451
June	257	13	5	116	15	21	36	428
July	259	14	5	85	16	22	38	401
August	224	13	4	80	16	21	38	360
September	170	13	4	84	15	20	36	307
October	156	14	4	122	14	21	35	330
November	181	14	3	112	15	22	36	346
December	224	14	2	138	16	23	38	416
Total	2,668	163	41	1,360	176	253	429	4,661
2013 January	241	14	3	141	16	21	37	435
February	195	13	4	135	14	18	32	380
March	197	14	6	152	15	21	37	405
April	238	13	6	168	11	20	31	457
May	274	14	7	159	14	21	35	489
June	263	14	8	134	15	21	36	455
6-Month Total	1,408	81	34	888	84	124	208	2,620
2012 6-Month Total	1,455	81	18	740	84	124	208	2,502
2011 6-Month Total	1,707	75	8	629	89	122	211	2,629

^a Conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^b Geothermal electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^c Solar thermal and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^d Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

^e Wood and wood-derived fuels.

^f Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

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

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

Notes: • 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 Pages: • See <http://www.eia.gov/totalenergy/data/annual/#renewable> for all available annual data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#renewable> for all available monthly and annual data beginning in 1973.

Sources: Tables 7.2b, 7.4b, and A6.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the “Web Pages” cited above.

Table 10.3 Fuel Ethanol Overview

	Feed-stock ^a	Losses and Co-products ^b	Denaturant ^c	Production ^d			Trade ^d	Stocks ^{d,f}	Stock Change ^{d,g}	Consumption ^d			Consumption Minus Denaturant ^h
							Net Imports ^e						
							TBtu						
1981 Total	13	6	40	1,978	83	7	NA	NA	NA	1,978	83	7	7
1985 Total	93	42	294	14,693	617	52	NA	NA	NA	14,693	617	52	51
1990 Total	111	49	356	17,802	748	63	NA	NA	NA	17,802	748	63	62
1995 Total	198	86	647	32,325	1,358	115	387	2,186	-207	32,919	1,383	117	114
2000 Total	233	99	773	38,627	1,622	138	116	3,400	-624	39,367	1,653	140	137
2001 Total	253	108	841	42,028	1,765	150	315	4,298	898	41,445	1,741	148	144
2002 Total	307	130	1,019	50,956	2,140	182	306	6,200	1,902	49,360	2,073	176	171
2003 Total	400	169	1,335	66,772	2,804	238	292	5,978	-222	67,286	2,826	240	233
2004 Total	484	203	1,621	81,058	3,404	289	3,542	6,002	24	84,576	3,552	301	293
2005 Total	552	230	1,859	92,961	3,904	331	3,234	5,563	-439	96,634	4,059	344	335
2006 Total	688	285	2,326	116,294	4,884	414	17,408	8,760	3,197	130,505	5,481	465	453
2007 Total	914	376	3,105	155,263	6,521	553	10,457	10,535	1,775	163,945	6,886	584	569
2008 Total	1,300	531	4,433	221,637	9,309	790	12,610	14,226	3,691	230,556	9,683	821	800
2009 Total	1,517	616	5,688	260,424	10,938	928	4,720	16,594	2,368	262,776	11,037	936	910
2010 Total	1,839	742	6,506	316,617	13,298	1,127	-9,115	17,941	1,347	306,155	12,858	1,090	1,061
2011 January	165	66	581	28,467	1,196	101	-1,359	20,826	2,885	24,223	1,017	86	84
February	146	59	535	25,300	1,063	90	-1,425	21,016	190	23,685	995	84	82
March	163	65	548	28,178	1,183	100	-2,003	21,593	577	25,598	1,075	91	89
April	154	62	508	26,538	1,115	94	-2,865	21,065	-528	24,201	1,016	86	84
May	160	64	550	27,720	1,164	99	-1,743	20,609	-456	26,433	1,110	94	92
June	158	63	540	27,224	1,143	97	-1,533	19,217	-1,392	27,083	1,137	96	94
July	159	64	555	27,541	1,157	98	-2,731	18,788	-429	25,239	1,060	90	88
August	162	65	575	27,976	1,175	100	-665	18,123	-665	27,976	1,175	100	97
September	154	62	525	26,588	1,117	95	-1,745	18,465	342	24,501	1,029	87	85
October	162	65	557	28,013	1,177	100	-2,388	18,038	-427	26,052	1,094	93	90
November	164	66	573	28,383	1,192	101	-2,911	18,308	270	25,202	1,058	90	87
December	172	69	602	29,718	1,248	106	-2,997	18,238	-70	26,791	1,125	95	93
Total	1,919	769	6,649	331,646	13,929	1,181	-24,365	18,238	297	306,984	12,893	1,093	1,065
2012 January	167	67	583	29,063	1,221	103	-1,789	21,753	ⁱ 3,492	23,782	999	85	82
February	154	61	528	26,653	1,119	95	-1,785	22,572	819	24,049	1,010	86	83
March	160	64	522	27,706	1,164	99	-1,626	22,952	380	25,700	1,079	91	89
April	152	61	494	26,368	1,107	94	-1,549	22,370	-582	25,401	1,067	90	88
May	160	64	520	27,718	1,164	99	-1,013	21,851	-519	27,224	1,143	97	95
June	154	61	503	26,611	1,118	95	-613	21,456	-395	26,393	1,109	94	92
July	146	58	504	25,329	1,064	90	-502	20,373	-1,083	25,910	1,088	92	90
August	151	60	526	26,194	1,100	93	654	19,369	-1,004	27,852	1,170	99	97
September	141	56	497	24,511	1,029	87	694	20,044	675	24,530	1,030	87	85
October	146	58	528	25,352	1,065	90	609	18,762	-1,282	27,243	1,144	97	94
November	145	58	527	25,189	1,058	90	997	20,174	1,412	24,774	1,041	88	86
December	150	60	534	25,971	1,091	92	-79	20,677	503	25,389	1,066	90	88
Total	1,825	727	6,266	316,665	13,300	1,127	-6,002	20,677	ⁱ 2,416	308,247	12,946	1,097	1,069
2013 January	144	57	504	24,935	1,047	89	-546	20,558	-119	24,508	1,029	87	85
February	130	52	462	22,645	951	81	-727	19,580	-978	22,896	962	82	79
March	148	59	511	25,681	1,079	91	-264	18,941	-639	26,056	1,094	93	90
April	148	59	515	25,662	1,078	91	-559	17,645	-1,296	26,399	1,109	94	92
May	157	62	537	27,197	1,142	97	-535	16,810	-835	27,497	1,155	98	95
June	154	61	509	26,722	1,122	95	-170	16,395	-415	26,967	1,133	96	94
6-Month Total ...	881	351	3,038	152,842	6,419	544	-2,801	16,395	-4,282	154,323	6,482	549	535
2012 6-Month Total ...	946	377	3,150	164,119	6,893	584	-8,375	21,456	3,195	152,549	6,407	543	530
2011 6-Month Total ...	946	379	3,262	163,427	6,864	582	-10,927	19,217	1,276	151,224	6,351	538	525

^a Total corn and other biomass inputs to the production of undenatured ethanol used for fuel ethanol.

^b Losses and co-products from the production of fuel ethanol. Does not include natural gas, electricity, and other non-biomass energy used in the production of fuel ethanol—these are included in the industrial sector consumption statistics for the appropriate energy source.

^c The amount of denaturant in fuel ethanol produced.

^d Includes denaturant.

^e Through 2009, data are for fuel ethanol imports only; data for fuel ethanol exports are not available. Beginning in 2010, data are for fuel ethanol imports minus fuel ethanol (including industrial alcohol) exports.

^f Stocks are at end of period.

^g A negative value indicates a decrease in stocks and a positive value indicates an increase.

^h Consumption of fuel ethanol minus denaturant. Data for fuel ethanol minus denaturant are used to develop data for "Renewable Energy/Biomass" in Tables 10.1–10.2b, as well as in Sections 1 and 2.

ⁱ Derived from the preliminary 2011 stocks value (18,261 thousand barrels), not the final 2011 value (18,238 thousand barrels) that is shown under "Stocks." NA=Not available.

Notes: • Mbbl = thousand barrels. MMgal = million U.S. gallons. TBtu = trillion Btu. • Fuel ethanol data in thousand barrels are converted to million gallons by multiplying by 0.042, and are converted to Btu by multiplying by the approximate heat content of fuel ethanol—see Table A3. • Through 1980, data are not available. For 1981–1992, data are estimates. For 1993–2008, only data for feedstock, losses and co-products, and denaturant are estimates. Beginning in 2009, only data for feedstock, and losses and co-products, are estimates. • See "Denaturant," "Ethanol," "Fuel Ethanol," and "Fuel Ethanol Minus Denaturant" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#renewable> for all available data beginning in 1981.

Sources: See end of section.

Table 10.4 Biodiesel Overview

	Feed-stock ^a	Losses and Co-products ^b	Production			Trade			Stocks ^d	Stock Change ^e	Balancing Item ^f	Consumption		
						Imports	Exports	Net Imports ^c						
			TBtu	TBtu	Mbbl	MMgal	TBtu	Mbbl				Mbbl	Mbbl	Mbbl
2001 Total	1	(s)	204	9	1	78	39	39	NA	NA	NA	243	10	1
2002 Total	1	(s)	250	10	1	191	56	135	NA	NA	NA	385	16	2
2003 Total	2	(s)	338	14	2	94	110	-16	NA	NA	NA	322	14	2
2004 Total	4	(s)	666	28	4	97	124	-26	NA	NA	NA	640	27	3
2005 Total	12	(s)	2,162	91	12	207	206	1	NA	NA	NA	2,163	91	12
2006 Total	32	(s)	5,963	250	32	1,069	828	242	NA	NA	NA	6,204	261	33
2007 Total	63	1	11,662	490	62	3,342	6,477	-3,135	NA	NA	NA	8,528	358	46
2008 Total	88	1	16,145	678	87	7,502	16,128	-8,626	NA	NA	NA	7,519	316	40
2009 Total	67	1	12,281	516	66	1,844	6,332	-4,489	711	711	669	7,750	326	42
2010 Total	44	1	8,177	343	44	546	2,503	-1,958	672	-39	0	6,258	263	34
2011 January	5	(s)	842	35	5	49	217	-169	1,016	^g 39	0	634	27	3
February	5	(s)	961	40	5	37	88	-51	1,217	201	0	709	30	4
March	8	(s)	1,419	60	8	53	197	-144	1,381	164	0	1,111	47	6
April	9	(s)	1,692	71	9	52	222	-169	1,408	27	0	1,495	63	8
May	10	(s)	1,838	77	10	48	192	-144	1,576	168	0	1,526	64	8
June	11	(s)	1,938	81	10	48	117	-69	1,524	-53	0	1,922	81	10
July	12	(s)	2,183	92	12	62	142	-80	1,748	224	0	1,879	79	10
August	12	(s)	2,273	95	12	65	71	-7	1,834	86	0	2,181	92	12
September	12	(s)	2,284	96	12	65	193	-127	1,617	-216	0	2,373	100	13
October	14	(s)	2,508	105	13	82	132	-49	1,965	347	0	2,111	89	11
November	14	(s)	2,494	105	13	66	131	-65	1,877	-88	0	2,517	106	13
December	14	(s)	2,604	109	14	234	39	195	2,012	135	0	2,664	112	14
Total	125	2	23,035	967	123	861	1,740	-879	2,012	^g 1,035	0	21,122	887	113
2012 January	9	(s)	1,700	71	9	44	248	-204	2,527	^h 625	0	872	37	5
February	10	(s)	1,837	77	10	58	119	-62	2,869	342	0	1,433	60	8
March	12	(s)	2,193	92	12	55	149	-93	3,053	184	0	1,915	80	10
April	12	(s)	2,180	92	12	49	221	-171	2,932	-121	0	2,130	89	11
May	13	(s)	2,373	100	13	94	306	-212	2,514	-418	0	2,579	108	14
June	12	(s)	2,162	91	12	102	375	-273	2,363	-151	0	2,039	86	11
July	11	(s)	2,065	87	11	160	408	-248	2,253	-110	0	1,927	81	10
August	12	(s)	2,140	90	11	43	386	-342	2,003	-250	0	2,048	86	11
September	11	(s)	1,935	81	10	81	282	-202	2,060	57	0	1,676	70	9
October	10	(s)	1,781	75	10	33	200	-167	2,183	123	0	1,491	63	8
November	7	(s)	1,356	57	7	9	65	-56	1,875	-309	0	1,609	68	9
December	7	(s)	1,360	57	7	68	143	-75	2,169	292	0	993	42	5
Total	125	2	23,082	969	124	797	2,903	-2,105	2,169	^h 264	0	20,712	870	111
2013 January	9	(s)	1,578	66	8	30	16	14	2,110	-58	0	1,651	69	9
February	9	(s)	1,611	68	9	52	59	-7	2,109	-2	0	1,606	67	9
March	13	(s)	2,332	98	12	406	185	221	2,434	325	0	2,228	94	12
April	14	(s)	2,532	106	14	304	371	-67	2,625	191	0	2,274	95	12
May	14	(s)	2,635	111	14	385	554	-169	2,635	9	0	2,457	103	13
June	15	(s)	2,685	113	14	682	587	95	2,709	80	0	2,700	113	14
6-Month Total	73	1	13,373	562	72	1,859	1,772	87	2,709	545	0	12,915	542	69
2012 6-Month Total	68	1	12,445	523	67	403	1,418	-1,015	2,363	461	0	10,969	461	59
2011 6-Month Total	47	1	8,689	365	47	287	1,033	-745	1,524	547	0	7,397	311	40

^a Total vegetable oil and other biomass inputs to the production of biodiesel.
^b Losses and co-products from the production of biodiesel. Does not include natural gas, electricity, and other non-biomass energy used in the production of biodiesel—these are included in the industrial sector consumption statistics for the appropriate energy source.
^c Net imports equal imports minus exports.
^d Stocks are at end of period. Through 2010, includes stocks at bulk terminals only. Beginning in 2011, includes stocks at bulk terminals and biodiesel production plants.
^e A negative value indicates a decrease in stocks and a positive value indicates an increase.
^f Beginning in 2009, because of incomplete data coverage and different data sources, "Balancing Item" is used to balance biodiesel supply and disposition.
^g Derived from the final 2010 stocks value for bulk terminals and biodiesel production plants (977 thousand barrels), not the final 2010 value for bulk terminals

only (672 thousand barrels) that is shown under "Stocks."
^h Derived from the preliminary 2011 stocks value (1,902 thousand barrels), not the final 2011 value (2,012 thousand barrels) that is shown under "Stocks."
 NA=Not available. (s)=Less than 0.5 trillion Btu.
 Notes: • Mbbl = thousand barrels. MMgal = million U.S. gallons. TBtu = trillion Btu. • Biodiesel data in thousand barrels are converted to million gallons by multiplying by 0.042, and are converted to Btu by multiplying by 5.359 million Btu per barrel (the approximate heat content of biodiesel—see Table A3). • Through 2000, data are not available. Beginning in 2001, data not from U.S. Energy Information Administration (EIA) surveys are estimates. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
 Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#renewable> for all available data beginning in 2001.
 Sources: See end of section.

Renewable Energy

Note. Renewable Energy Production and Consumption. In Tables 1.1, 1.3, and 10.1, renewable energy consumption consists of: conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6); geothermal electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6), and geothermal heat pump and geothermal direct use energy; solar thermal and photovoltaic electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6), and solar thermal direct use energy; wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6); wood and wood-derived fuels consumption; biomass waste (municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass) consumption; fuel ethanol (minus denaturant) and biodiesel consumption; and losses and co-products from the production of fuel ethanol and biodiesel. In Tables 1.1, 1.2, and 10.1, renewable energy production is assumed to equal consumption for all renewable energy sources except biofuels (biofuels production comprises biomass inputs to the production of fuel ethanol and biodiesel).

Table 10.2a Sources

Residential Sector, Geothermal

1989 forward: Oregon Institute of Technology, Geo-Heat Center. Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimates for 2012 and 2013 are set equal to that of 2011.)

Residential Sector, Solar/PV

1989–2009: U.S. Energy Information Administration (EIA) estimates based on Form EIA-63A, “Annual Solar Thermal Collector Manufacturers Survey,” and Form EIA-63B, “Annual Photovoltaic Module/Cell Manufacturers Survey.” Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month.

2010 forward: EIA estimates based on Form EIA-63B, “Annual Photovoltaic Cell/Module Shipments Report”; Form EIA-63A, “Annual Solar Thermal Collector Manufacturers Survey” (pre-2010 data); and SEIA/GTM Research, *U.S. Solar Market Insight: 2010 Year in Review*. Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimate for 2013 is set equal to that of 2012 plus the 2011–2012 increase in Btu.)

Residential Sector, Wood

1949–1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980 forward: EIA, Form EIA-457, “Residential Energy Consumption Survey”; and EIA estimates based on Form EIA-457 and regional heating degree-day data. Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimate for 2013 is set equal to that of 2012.)

Commercial Sector, Hydroelectric Power

1989 forward: Commercial sector conventional hydroelectricity net generation data from EIA, Form EIA-923, “Power Plant Operations Report,” and predecessor forms, are converted to Btu by multiplying by the fossil-fuels heat rate—see Table A6.

Commercial Sector, Geothermal

1989 forward: Oregon Institute of Technology, Geo-Heat Center. Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimates for 2012 and 2013 are set equal to that of 2011.)

Commercial Sector, Solar/PV

2008 forward: Commercial sector solar thermal and photovoltaic (PV) electricity net generation data from EIA, Form EIA-923, “Power Plant Operations Report,” are converted to Btu by multiplying by the fossil-fuels heat rate—see Table A6.

Commercial Sector, Wind

2009 forward: Commercial sector wind electricity net generation data from EIA, Form EIA-923, “Power Plant Operations Report,” are converted to Btu by multiplying by the fossil-fuels heat rate—see Table A6.

Commercial Sector, Wood

1949–1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980–1983: EIA, *Estimates of U.S. Wood Energy Consumption 1980-1983*, Table ES1.

1984: EIA estimate based on the 1983 value.

1985–1988: Values interpolated.

1989 forward: EIA, *Monthly Energy Review (MER)*, Tables 7.4a–7.4c; and EIA estimates based on Form EIA-871, “Commercial Buildings Energy Consumption Survey.” Data for wood consumption at commercial combined-heat-and-power (CHP) plants are calculated as total wood consumption at electricity-only and CHP plants (MER, Table 7.4a) minus wood consumption in the electric power sector (MER, Table 7.4b) and at industrial CHP plants

(MER, Table 7.4c). Annual estimates for wood consumption at other commercial plants are based on Form EIA-871 (the annual estimate for 2013 is set equal to that of 2012); monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month.

Commercial Sector, Biomass Waste

1989 forward: EIA, MER, Table 7.4c.

Commercial Sector, Fuel Ethanol (Minus Denaturant)

1981 forward: EIA, MER, Tables 3.5, 3.7a, and 10.3. Calculated as commercial sector motor gasoline consumption (Table 3.7a) divided by total motor gasoline product supplied (Table 3.5), and then multiplied by fuel ethanol (minus denaturant) consumption (Table 10.3).

Table 10.2b Sources

Industrial Sector, Hydroelectric Power

1949 forward: Industrial sector conventional hydroelectricity net generation data from Table 7.2c are converted to Btu by multiplying by the fossil-fuels heat rate—see Table A6.

Industrial Sector, Geothermal

1989 forward: Oregon Institute of Technology, Geo-Heat Center. Monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month. (The annual estimates for 2012 and 2013 are set equal to that of 2011.)

Industrial Sector, Solar/PV

2010 forward: Industrial sector solar thermal and photovoltaic (PV) electricity net generation data from the U.S. Energy Information Administration (EIA), Form EIA-923, "Power Plant Operations Report," are converted to Btu by multiplying by the fossil-fuels heat rate—see Table A6.

Industrial Sector, Wind

2011 forward: Industrial sector wind electricity net generation data from EIA, Form EIA-923, "Power Plant Operations Report," are converted to Btu by multiplying by the fossil-fuels heat rate—see Table A6.

Industrial Sector, Wood

1949–1979: EIA, *Estimates of U.S. Wood Energy Consumption from 1949 to 1981*, Table A2.

1980–1983: EIA, *Estimates of U.S. Wood Energy Consumption 1980-1983*, Table ES1.

1984: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 1.

1985 and 1986: Values interpolated.

1987: EIA, *Estimates of Biofuels Consumption in the United States During 1987*, Table 2.

1988: Value interpolated.

1989 forward: EIA, *Monthly Energy Review (MER)*, Table 7.4c; and EIA estimates based on Form EIA-846, "Manufacturing Energy Consumption Survey." Data for wood consumption at industrial combined-heat-and-power (CHP) plants are from MER, Table 7.4c. Annual estimates for wood consumption at other industrial plants are based on Form EIA-846 (the annual estimate for 2013 is set equal to that of 2012); monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month.

Industrial Sector, Biomass Waste

1981: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8; and EIA, MER, Table 10.2c. Estimates are calculated as total waste consumption minus electric power sector waste consumption.

1982 and 1983: EIA estimates for total waste consumption based on *Estimates of U.S. Biofuels Consumption 1990*, Table 8; and EIA, MER, Table 10.2c. Estimates are calculated as total waste consumption minus electric power sector waste consumption.

1984: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8; and EIA, MER, Table 10.2c. Estimates are calculated as total waste consumption minus electric power sector waste consumption.

1985 and 1986: Values interpolated.

1987: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 8; and EIA, MER, Table 10.2c. Estimates are calculated as total waste consumption minus electric power sector waste consumption.

1988: Value interpolated.

1989 forward: EIA, MER, Table 7.4c; and EIA estimates based on information presented in Government Advisory Associates, *Resource Recovery Yearbook* and *Methane Recovery Yearbook*, and information provided by the U.S. Environmental Protection Agency, Landfill Methane Outreach Program. Data for waste consumption at industrial CHP plants are from MER, Table 7.4c. Annual estimates for waste consumption at other industrial plants are based on the non-EIA sources listed above (the annual estimate for 2013 is set equal to that of 2012); monthly estimates are created by dividing the annual estimates by the number of days in the year and then multiplying by the number of days in the month.

Industrial Sector, Fuel Ethanol (Minus Denaturant)

1981 forward: EIA, MER, Tables 3.5, 3.7b, and 10.3. Calculated as industrial sector motor gasoline consumption (Table 3.7b) divided by total motor gasoline product supplied (Table 3.5), and then multiplied by fuel ethanol (minus denaturant) consumption (Table 10.3).

Industrial Sector, Losses and Co-products

1981 forward: Calculated as fuel ethanol losses and co-products (Table 10.3) plus biodiesel losses and co-products (Table 10.4).

Transportation Sector, Fuel Ethanol (Minus Denaturant)

1981 forward: EIA, MER, Tables 3.5, 3.7c, and 10.3. Calculated as transportation sector motor gasoline consumption (Table 3.7c) divided by total motor gasoline product supplied (Table 3.5), and then multiplied by fuel ethanol (minus denaturant) consumption (Table 10.3).

Transportation Sector, Biodiesel

2001 forward: EIA, MER, Table 10.4. Transportation sector biodiesel consumption is assumed to equal total biodiesel consumption.

Table 10.3 Sources

Feedstock

1981 forward: Calculated as fuel ethanol production (in thousand barrels) minus denaturant, and then multiplied by the fuel ethanol feedstock factor—see Table A3.

Losses and Co-products

1981 forward: Calculated as fuel ethanol feedstock plus denaturant minus fuel ethanol production.

Denaturant

1981–2008: Data in thousand barrels for petroleum denaturant in fuel ethanol produced are estimated as 2 percent of fuel ethanol production; these data are converted to Btu by multiplying by 4.645 million Btu per barrel (the estimated quantity-weighted factor of pentanes plus and conventional motor gasoline used as denaturant).

2009–2011: U.S. Energy Information Administration (EIA), *Petroleum Supply Annual (PSA)*, annual reports, Table 1. Data in thousand barrels for net production of pentanes plus at renewable fuels and oxygenate plants are multiplied by -1; these data are converted to Btu by multiplying by 4.620 million Btu per barrel (the approximate heat content of pentanes plus). Data in thousand barrels for net production of conventional motor gasoline and motor gasoline blending components at renewable fuels and oxygenate plants are multiplied by -1; these data are converted to Btu by multiplying by 5.253 million Btu per barrel (the approximate heat content of conventional motor gasoline). Total denaturant is the sum of the values for pentanes plus, conventional motor gasoline, and motor gasoline blending components.

2012 and 2013: EIA, *Petroleum Supply Monthly (PSM)*, monthly reports, Table 1. Data in thousand barrels for net production of pentanes plus at renewable fuels and oxygenate plants are multiplied by -1; these data are converted to Btu by multiplying by 4.620 million Btu per barrel (the approximate heat content of pentanes plus). Data in thousand barrels for net production of conventional motor gasoline and motor gasoline blending components at renewable fuels and oxygenate plants are multiplied by -1; these data are converted to Btu by multiplying by 5.253 million Btu per barrel (the approximate heat content of conventional motor gasoline). Total denaturant is the sum of the values for pentanes plus, conventional motor gasoline, and motor gasoline blending components.

Production

1981–1992: Fuel ethanol production is assumed to equal fuel ethanol consumption—see sources for "Consumption."

1993–2004: Calculated as fuel ethanol consumption plus fuel ethanol stock change minus fuel ethanol net imports. These data differ slightly from the original production data from EIA, Form EIA-819, "Monthly Oxygenate Report," and predecessor form, which were not reconciled and updated to be consistent with the final balance.

2005–2008: EIA, Form EIA-819, "Monthly Oxygenate Report."

2009–2011: EIA, PSA, annual reports, Table 1, data for net production of fuel ethanol at renewable fuels and oxygenate plants.

2012 and 2013: EIA, PSM, monthly reports, Table 1, data for net production of fuel ethanol at renewable fuels and oxygenate plants.

Trade, Stocks, and Stock Change

1992–2011: EIA, PSA, annual reports, Table 1.

2012 and 2013: EIA, PSM, monthly reports, Table 1.

Consumption

1981–1989: EIA, *Estimates of U.S. Biofuels Consumption 1990*, Table 10; and interpolated values for 1982, 1983, 1985, 1986, and 1988.

1990–1992: EIA, *Estimates of U.S. Biomass Energy Consumption 1992*, Table D2; and interpolated value for 1991.

1993–2004: EIA, PSA, annual reports, Tables 2 and 16. Calculated as 10 percent of oxygenated finished motor gasoline field production (Table 2), plus fuel ethanol refinery input (Table 16).

2005–2008: EIA, PSA, annual reports, Tables 1 and 15. Calculated as motor gasoline blending components adjustments (Table 1), plus finished motor gasoline adjustments (Table 1), plus fuel ethanol refinery and blender net inputs (Table 15).

2009–2011: EIA, PSA, annual reports, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments.

2012 and 2013: EIA, PSM, monthly reports, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments.

Consumption Minus Denaturant

1981 forward: Calculated as fuel ethanol consumption minus the amount of denaturant in fuel ethanol consumed. Denaturant in fuel ethanol consumed is estimated by multiplying denaturant in fuel ethanol produced by the fuel ethanol consumption-to-production ratio.

Table 10.4 Sources

Feedstock

2001 forward: Calculated as biodiesel production in thousand barrels multiplied by 5.433 million Btu per barrel (the biodiesel feedstock factor—see Table A3).

Losses and Co-products

2001 forward: Calculated as biodiesel feedstock minus biodiesel production.

Production

2001–2005: U.S. Department of Agriculture, Commodity Credit Corporation, Bioenergy Program records. Annual data are derived from quarterly data. Monthly data are estimated by dividing the annual data by the number of days in the year and then multiplying by the number of days in the month.

2006: U.S. Department of Commerce, Bureau of the Census, “M311K—Fats and Oils: Production, Consumption, and Stocks,” data for soybean oil consumed in methyl esters (biodiesel). In addition, the U.S. Energy Information Administration (EIA) estimates that 14.4 million gallons of yellow grease were consumed in methyl esters (biodiesel).

2007: U.S. Department of Commerce, Bureau of the Census, “M311K—Fats and Oils: Production, Consumption, and Stocks,” data for all fats and oils consumed in methyl esters (biodiesel).

2008: EIA, *Monthly Biodiesel Production Report*, December 2009 (release date October 2010), Table 11. Monthly

data for 2008 are estimated based on U.S. Department of Commerce, Bureau of the Census, M311K data, multiplied by the EIA 2008 annual value’s share of the M311K 2008 annual value.

2009 forward: EIA, *Monthly Biodiesel Production Report*, monthly reports, Table 1.

Trade

2001–October 2012: For imports, U.S. Department of Agriculture, data for the following Harmonized Tariff Schedule codes: 3824.90.40.20, “Fatty Esters Animal/Vegetable Mixture” (data through June 2010); 3824.90.40.30, “Biodiesel/Mixes” (data for July 2010–2011); 3826.00.00.00, “Biodiesel B30-99” (data for 2012); and 3826.00.10.00, “Biodiesel B100” (data for 2012). For exports, U.S. Department of Agriculture, data for the following Schedule B codes: 3824.90.40.00, “Fatty Substances Animal/ Vegetable/Mixture” (data through 2010); 3824.90.40.30, “Biodiesel <70%” (data for 2011); and 3826.00.00.00, “Biodiesel B=>30” (data for 2012). Although these categories include products other than biodiesel (such as biodiesel coprocessed with petroleum feedstocks; and products destined for soaps, cosmetics, and other items), biodiesel is the largest component. In the absence of other reliable data for biodiesel trade, EIA sees these data as good substitutes.

November 2012 forward: EIA, *Petroleum Supply Monthly (PSM)*, monthly reports, Tables 37 and 49, data for biomass-based diesel fuel.

Stocks and Stock Change

2009–2011: EIA, *Petroleum Supply Annual (PSA)*, annual reports, Table 1, data for renewable fuels except fuel ethanol.

2012 and 2013: EIA, PSM, monthly reports, Table 1, data for renewable fuels except fuel ethanol.

Balancing Item

2009 forward: Calculated as biodiesel consumption and biodiesel stock change minus biodiesel production and biodiesel net imports.

Consumption

2001–2008: Calculated as biodiesel production plus biodiesel net imports.

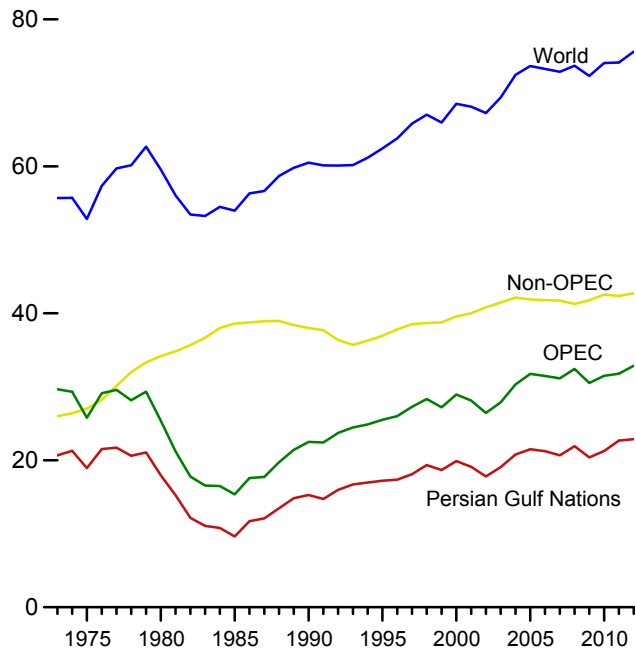
January and February 2009: EIA, PSA, Table 1, data for refinery and blender net inputs of renewable fuels except fuel ethanol.

March 2009 forward: Calculated as biodiesel production plus biodiesel net imports minus biodiesel stock change.

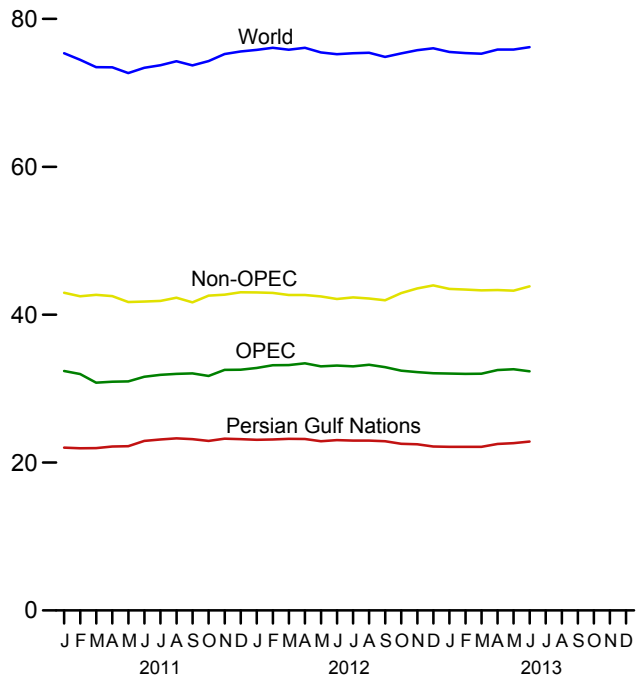
11. International Petroleum

Figure 11.1a World Crude Oil Production Overview
(Million Barrels per Day)

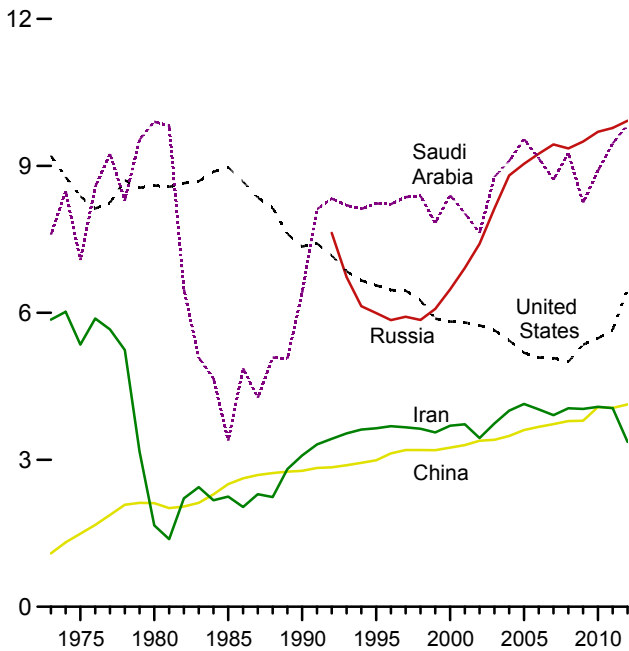
World Production, 1973–2012



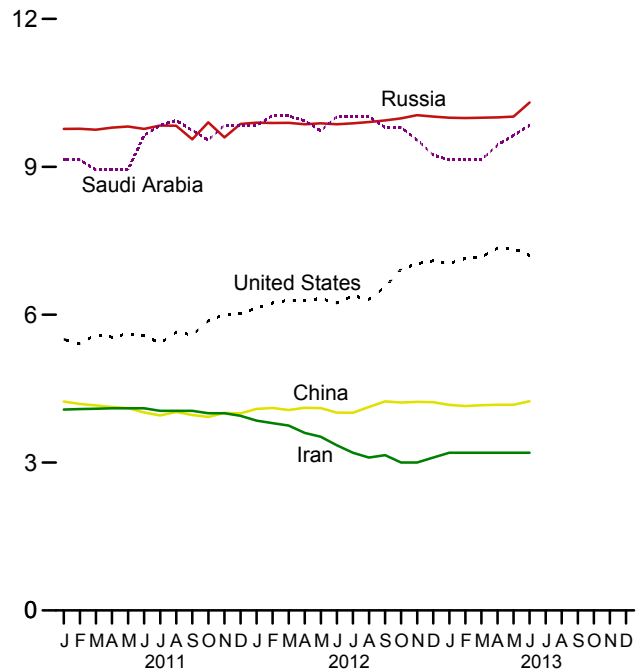
World Production, Monthly



Selected Producers, 1973–2012



Selected Producers, Monthly



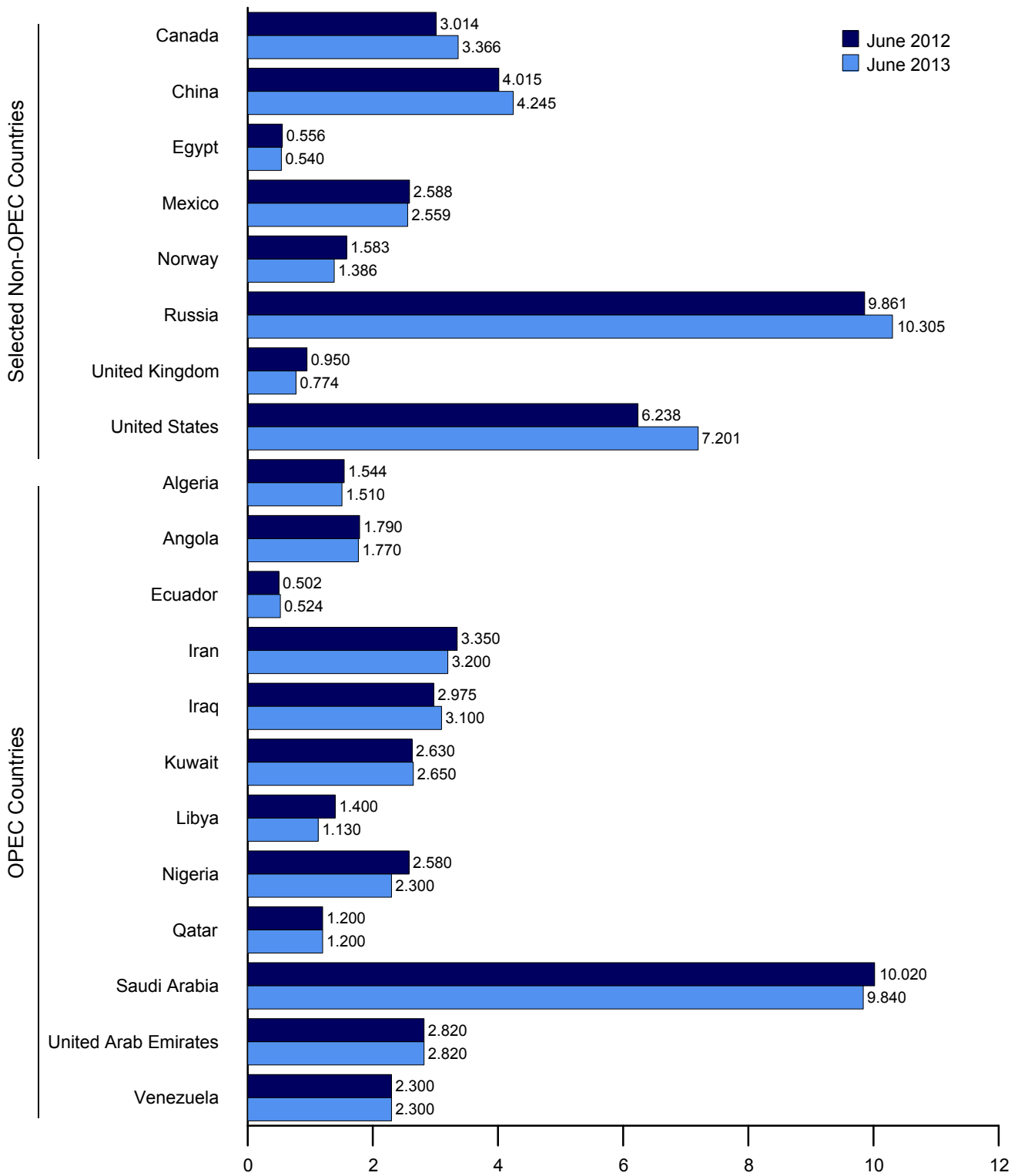
Notes: • OPEC is the Organization of the Petroleum Exporting Countries. • The Persian Gulf Nations are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in “Per-

sian Gulf Nations.”

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.

Sources: Tables 11.1a and 11.1b.

Figure 11.1b World Crude Oil Production by Selected Country
(Million Barrels per Day)



Note: OPEC is the Organization of the Petroleum Exporting Countries.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.
 Sources: Tables 11.1a and 11.1b.

Table 11.1a World Crude Oil Production: OPEC Members
(Thousand Barrels per Day)

	Algeria	Angola	Ecuador	Iran	Iraq	Kuwait ^a	Libya	Nigeria	Qatar	Saudi Arabia ^a	United Arab Emirates	Venezuela	Total OPEC ^b
1973 Average	1,097	162	209	5,861	2,018	3,020	2,175	2,054	570	7,596	1,533	3,366	29,661
1975 Average	983	165	161	5,350	2,262	2,084	1,480	1,783	438	7,075	1,664	2,346	25,790
1980 Average	1,106	150	204	1,662	2,514	1,656	1,787	2,055	472	9,900	1,709	2,168	25,383
1985 Average	1,036	231	281	2,250	1,433	1,023	1,059	1,495	301	3,388	1,193	1,677	15,367
1990 Average	1,180	475	285	3,088	2,040	1,175	1,375	1,810	406	6,410	2,117	2,137	22,498
1995 Average	1,162	646	392	3,643	560	2,057	1,390	1,993	442	8,231	2,233	2,750	25,500
1996 Average	1,227	709	396	3,686	579	2,062	1,401	2,001	510	8,218	2,278	2,938	26,003
1997 Average	1,259	714	388	3,664	1,155	2,007	1,446	2,132	550	8,362	2,316	3,280	27,274
1998 Average	1,226	735	375	3,634	2,150	2,085	1,390	2,153	696	8,389	2,345	3,167	28,346
1999 Average	1,177	745	373	3,557	2,508	1,898	1,319	2,130	665	7,833	2,169	2,826	27,199
2000 Average	1,214	746	395	3,696	2,571	2,079	1,410	2,165	737	8,404	2,368	3,155	28,940
2001 Average	1,265	742	412	3,724	2,390	1,998	1,367	2,256	714	8,031	2,205	3,010	28,114
2002 Average	1,349	896	393	3,444	2,023	1,894	1,319	2,118	679	7,634	2,082	2,604	26,435
2003 Average	1,516	903	411	3,743	1,308	2,136	1,421	2,275	715	8,775	2,348	2,335	27,885
2004 Average	1,582	1,052	528	4,001	2,011	2,376	1,515	2,329	783	9,101	2,478	2,557	30,313
2005 Average	1,692	1,250	532	4,139	1,878	2,529	1,633	2,627	835	9,550	2,535	2,565	31,766
2006 Average	1,699	1,413	536	4,028	1,996	2,535	1,681	2,440	850	9,152	2,636	2,511	31,476
2007 Average	1,708	1,744	511	3,912	2,086	2,464	1,702	2,350	851	8,722	2,603	2,490	31,143
2008 Average	1,705	1,981	505	4,050	2,375	2,586	1,736	2,165	924	9,261	2,681	2,464	32,433
2009 Average	1,585	1,907	486	4,037	2,391	2,350	1,650	2,208	927	8,250	2,413	2,319	30,522
2010 Average	1,540	1,939	486	4,080	2,399	2,300	1,650	2,455	1,127	8,900	2,415	2,216	31,507
2011													
January	1,540	1,790	500	4,076	2,625	2,350	1,650	2,616	1,280	9,140	2,520	2,300	32,387
February	1,540	1,790	509	4,084	2,525	2,350	1,340	2,604	1,280	9,140	2,520	2,300	31,982
March	1,540	1,790	501	4,092	2,525	2,450	300	2,460	1,290	8,940	2,620	2,300	30,808
April	1,540	1,740	504	4,100	2,525	2,550	200	2,520	1,300	8,940	2,720	2,300	30,939
May	1,540	1,840	497	4,100	2,575	2,550	200	2,604	1,300	8,940	2,720	2,300	30,966
June	1,540	1,690	495	4,100	2,575	2,550	100	2,604	1,300	9,640	2,720	2,300	31,614
July	1,540	1,740	492	4,050	2,625	2,550	100	2,604	1,300	9,840	2,720	2,300	31,861
August	1,540	1,790	495	4,050	2,625	2,600	0	2,640	1,300	9,940	2,720	2,300	32,000
September	1,540	1,840	496	4,050	2,725	2,600	100	2,640	1,300	9,740	2,720	2,300	32,051
October	1,540	1,790	502	4,000	2,725	2,600	300	2,400	1,300	9,540	2,720	2,300	31,717
November	1,540	1,940	504	4,000	2,725	2,600	550	2,520	1,300	9,840	2,720	2,300	32,539
December	1,540	1,890	501	3,950	2,725	2,600	800	2,400	1,300	9,840	2,720	2,300	32,566
Average	1,540	1,786	500	4,054	2,626	2,530	465	2,550	1,296	9,458	2,679	2,300	31,784
2012													
January	1,550	1,890	504	3,850	2,675	2,650	1,000	2,520	1,300	9,840	2,720	2,300	32,799
February	1,550	1,940	503	3,800	2,575	2,650	1,200	2,580	1,300	10,040	2,720	2,300	33,158
March	1,550	1,790	499	3,750	2,725	2,640	1,350	2,520	1,200	10,030	2,820	2,300	33,174
April	1,550	1,890	500	3,600	2,965	2,640	1,400	2,640	1,190	9,930	2,820	2,300	33,425
May	1,550	1,840	498	3,525	2,925	2,640	1,400	2,580	1,200	9,730	2,820	2,300	33,008
June	1,544	1,790	502	3,350	2,975	2,630	1,400	2,580	1,200	10,020	2,820	2,300	33,111
July	1,546	1,740	508	3,200	3,075	2,625	1,400	2,580	1,200	10,015	2,820	2,300	33,009
August	1,548	1,840	512	3,100	3,175	2,625	1,450	2,640	1,200	10,015	2,820	2,300	33,225
September	1,550	1,740	506	3,150	3,275	2,610	1,500	2,460	1,200	9,800	2,820	2,300	32,911
October	1,482	1,790	503	3,000	3,075	2,610	1,500	2,340	1,200	9,800	2,820	2,300	32,420
November	1,483	1,770	504	3,000	3,225	2,650	1,450	2,280	1,200	9,540	2,820	2,300	32,222
December	1,485	1,790	503	3,100	3,125	2,650	1,350	2,520	1,200	9,240	2,820	2,300	32,083
Average	1,532	1,817	504	3,367	2,983	2,635	1,367	2,520	1,216	9,832	2,804	2,300	32,877
2013													
January	1,490	1,840	505	3,200	3,075	2,650	1,350	2,460	1,200	9,140	2,820	2,300	32,030
February	1,490	1,790	506	3,200	3,075	2,650	1,400	2,420	1,200	9,140	2,820	2,300	31,991
March	1,490	1,840	504	3,200	3,075	2,650	1,350	2,445	1,200	9,140	2,820	2,300	32,014
April	1,510	1,855	516	3,200	3,175	2,650	1,450	2,400	1,200	9,440	2,820	2,300	32,516
May	1,510	1,890	522	3,200	3,075	2,650	1,420	2,400	1,200	9,640	2,820	2,300	32,627
June	1,510	1,770	524	3,200	3,100	2,650	1,130	2,300	1,200	9,840	2,820	2,300	32,344
6-Month Average	1,500	1,832	513	3,200	3,096	2,650	1,350	2,405	1,200	9,391	2,820	2,300	32,256
2012 6-Month Average	1,549	1,856	501	3,646	2,807	2,642	1,291	2,569	1,231	9,930	2,787	2,300	33,110
2011 6-Month Average	1,540	1,739	501	4,092	2,559	2,468	625	2,567	1,292	9,121	2,638	2,300	31,442

^a Except for the period from August 1990 through May 1991, includes about one-half of the production in the Kuwait-Saudi Arabia Neutral Zone. Kuwaiti Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In June 2013, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 520 thousand barrels per day. Data for Saudi Arabia include approximately 150 thousand barrels per day from the Abu Safah field produced on behalf of Bahrain.

^b See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On Tables 11.1a and 11.1b, countries are classified as "OPEC" or "Non-OPEC" in all years based on their status in the most current year. For

example, Ecuador rejoined OPEC in 2007, and is thus included in "Total OPEC" for all years; and Indonesia left OPEC at the end of 2008, and is thus included in "Total Non-OPEC" for all years.

Notes: • Data are for crude oil and lease condensate; they exclude natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> for all available data beginning in 1973.

Sources: See end of section.

Table 11.1b World Crude Oil Production: Persian Gulf Nations, Non-OPEC, and World
(Thousand Barrels per Day)

	Persian Gulf Nations ^b	Selected Non-OPEC ^a Producers									Total Non-OPEC ^a	World
		Canada	China	Egypt	Mexico	Norway	Former U.S.S.R.	Russia	United Kingdom	United States		
1973 Average	20,668	1,798	1,090	165	465	32	8,324	NA	2	9,208	26,018	55,679
1975 Average	18,934	1,430	1,490	235	705	189	9,523	NA	12	8,375	27,039	52,828
1980 Average	17,961	1,435	2,114	595	1,936	486	11,706	NA	1,622	8,597	34,175	59,558
1985 Average	9,630	1,471	2,505	887	2,745	773	11,585	NA	2,530	8,971	38,598	53,965
1990 Average	15,278	1,553	2,774	873	2,553	1,630	10,975	NA	1,820	7,355	37,999	60,497
1995 Average	17,208	1,805	2,990	920	2,711	2,766	---	5,995	2,489	6,560	36,934	62,434
1996 Average	17,367	1,837	3,131	922	2,944	3,091	---	5,850	2,568	6,465	37,815	63,818
1997 Average	18,095	1,922	3,200	856	3,104	3,142	---	5,920	2,518	6,452	38,532	65,806
1998 Average	19,337	1,981	3,198	834	3,160	3,011	---	5,854	2,616	6,252	38,685	67,032
1999 Average	18,667	1,907	3,195	852	2,998	3,019	---	6,079	2,684	5,881	38,768	65,967
2000 Average	19,892	1,977	3,249	768	3,104	3,222	---	6,479	2,275	5,822	39,583	68,522
2001 Average	19,098	2,029	3,300	720	3,218	3,226	---	6,917	2,282	5,801	40,003	68,116
2002 Average	17,794	2,171	3,390	715	3,263	3,131	---	7,408	2,292	5,744	40,825	67,260
2003 Average	19,063	2,306	3,409	713	3,459	3,042	---	8,132	2,093	5,644	41,478	69,363
2004 Average	20,787	2,398	3,485	673	3,476	2,954	---	8,805	1,845	5,435	42,149	72,462
2005 Average	21,501	2,369	3,609	623	3,423	2,698	---	9,043	1,649	5,186	41,878	73,644
2006 Average	21,232	2,525	3,673	535	3,345	2,491	---	9,247	1,490	5,089	41,792	73,269
2007 Average	20,672	2,628	3,729	530	3,143	2,270	---	9,437	1,498	5,077	41,730	72,873
2008 Average	21,913	2,579	3,790	566	2,839	2,182	---	9,357	1,391	5,000	41,265	73,698
2009 Average	20,402	2,579	3,796	587	2,646	2,067	---	9,495	1,328	5,353	41,784	72,306
2010 Average	21,257	2,741	4,078	575	2,621	1,869	---	9,694	1,233	5,479	42,559	74,067
2011 January	22,026	2,833	4,238	572	2,636	1,905	---	9,769	1,316	5,502	42,969	75,356
February	21,934	2,783	4,188	571	2,606	1,861	---	9,773	1,085	5,410	42,495	74,477
March	21,952	2,854	4,160	570	2,624	1,808	---	9,753	1,073	5,595	42,677	73,485
April	22,170	2,854	4,127	569	2,624	1,874	---	9,795	1,164	5,546	42,505	73,444
May	22,220	2,562	4,106	568	2,608	1,607	---	9,818	1,017	5,611	41,719	72,685
June	22,920	2,670	4,017	567	2,595	1,660	---	9,770	1,018	5,573	41,780	73,394
July	23,120	2,913	3,956	566	2,584	1,737	---	9,837	946	5,420	41,865	73,726
August	23,270	3,073	4,027	565	2,601	1,714	---	9,832	767	5,645	42,284	74,284
September	23,170	2,993	3,964	564	2,537	1,636	---	9,557	890	5,593	41,668	73,719
October	22,920	3,062	3,926	563	2,601	1,756	---	9,902	998	5,874	42,577	74,293
November	23,220	3,043	4,006	562	2,577	1,764	---	9,595	1,039	6,006	42,700	75,239
December	23,170	3,155	3,998	561	2,604	1,713	---	9,869	1,010	6,027	43,028	75,594
Average	22,678	2,901	4,059	566	2,600	1,752	---	9,774	1,026	5,652	42,357	74,141
2012 January	23,070	R 3,108	4,089	560	2,566	1,761	---	9,894	1,021	RE 6,133	43,015	75,814
February	23,120	R 3,249	4,109	560	2,591	1,745	---	9,889	1,034	RE 6,236	42,940	76,097
March	23,200	R 3,037	4,066	560	2,600	1,715	---	9,891	977	RE 6,291	42,657	75,831
April	23,180	R 3,155	4,111	560	2,590	1,720	---	9,861	975	RE 6,287	42,666	76,091
May	22,875	R 3,035	4,105	560	2,591	1,699	---	9,882	899	RE 6,328	42,458	75,466
June	23,030	R 3,014	4,015	556	2,588	1,583	---	9,861	950	RE 6,238	42,119	75,230
July	22,970	R 3,114	4,010	554	2,571	1,553	---	9,882	946	RE 6,383	42,342	75,351
August	22,970	R 3,064	4,128	554	2,600	1,570	---	9,907	792	RE 6,313	42,191	75,416
September	22,890	R 3,011	4,242	553	2,602	1,309	---	9,941	601	RE 6,562	41,946	74,857
October	22,540	R 3,173	4,217	551	2,584	1,549	---	9,984	682	RE 6,927	42,917	75,337
November	22,470	R 3,271	4,232	551	2,622	1,517	---	10,048	864	RE 7,034	43,541	75,763
December	22,170	R 3,427	4,224	551	2,606	1,558	---	10,018	923	RE 7,093	43,951	76,034
Average	22,872	R 3,138	4,129	556	2,593	1,607	---	9,922	888	RE 6,486	42,729	75,606
2013 January	22,120	R 3,329	4,168	548	R 2,602	1,545	---	9,995	932	RE 7,040	43,494	75,524
February	22,120	R 3,259	4,146	547	R 2,595	1,502	---	9,990	823	RE 7,139	43,391	75,382
March	22,120	R 3,419	4,164	545	R 2,555	1,498	---	9,995	803	RE 7,169	43,279	75,294
April	22,520	R 3,237	4,174	543	R 2,557	1,567	---	10,002	R 812	RE 7,351	43,330	75,846
May	22,620	R 3,027	4,174	541	R 2,548	1,563	---	R 10,018	R 844	RE 7,340	43,239	75,866
June	22,845	3,366	4,245	540	2,559	1,386	---	10,305	774	E 7,201	43,828	76,172
6-Month Average	22,392	3,273	4,179	544	2,569	1,511	---	10,051	832	E 7,207	43,426	75,682
2012 6-Month Average	23,078	3,098	4,082	559	2,588	1,704	---	9,880	975	E 6,252	42,642	75,752
2011 6-Month Average	22,204	2,759	4,139	569	2,616	1,785	---	9,780	1,113	5,541	42,358	73,800

^a See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On Tables 11.1a and 11.1b, countries are classified as "OPEC" or "Non-OPEC" in all years based on their status in the most current year. For example, Ecuador rejoined OPEC in 2007, and is thus included in "Total OPEC" for all years; and Indonesia left OPEC at the end of 2008, and is thus included in "Total Non-OPEC" for all years.

^b Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

R=Revised. NA=Not available. -- =Not applicable. E=Estimate.

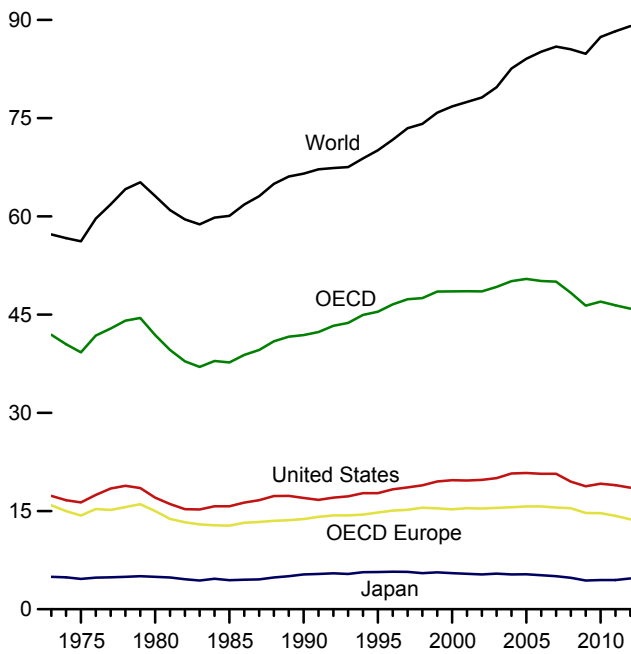
Notes: • Data are for crude oil and lease condensate; they exclude natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available. • Data for countries may not sum to World totals due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> for all available data beginning in 1973.

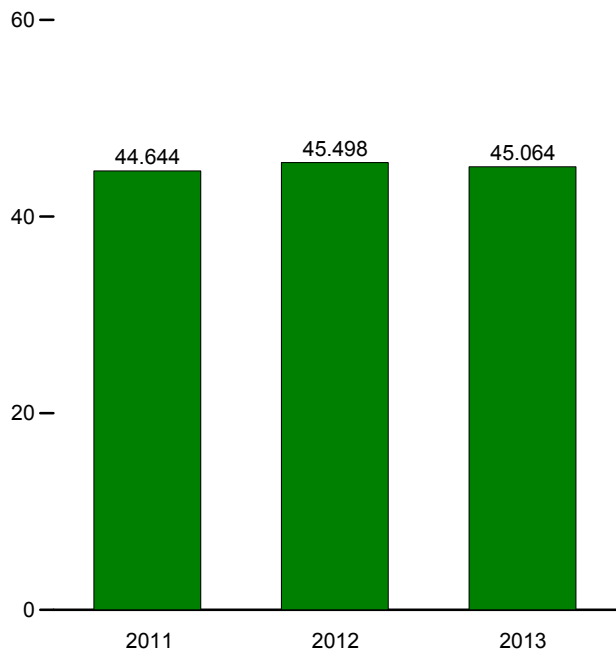
Sources: See end of section.

Figure 11.2 Petroleum Consumption in OECD Countries
(Million Barrels per Day)

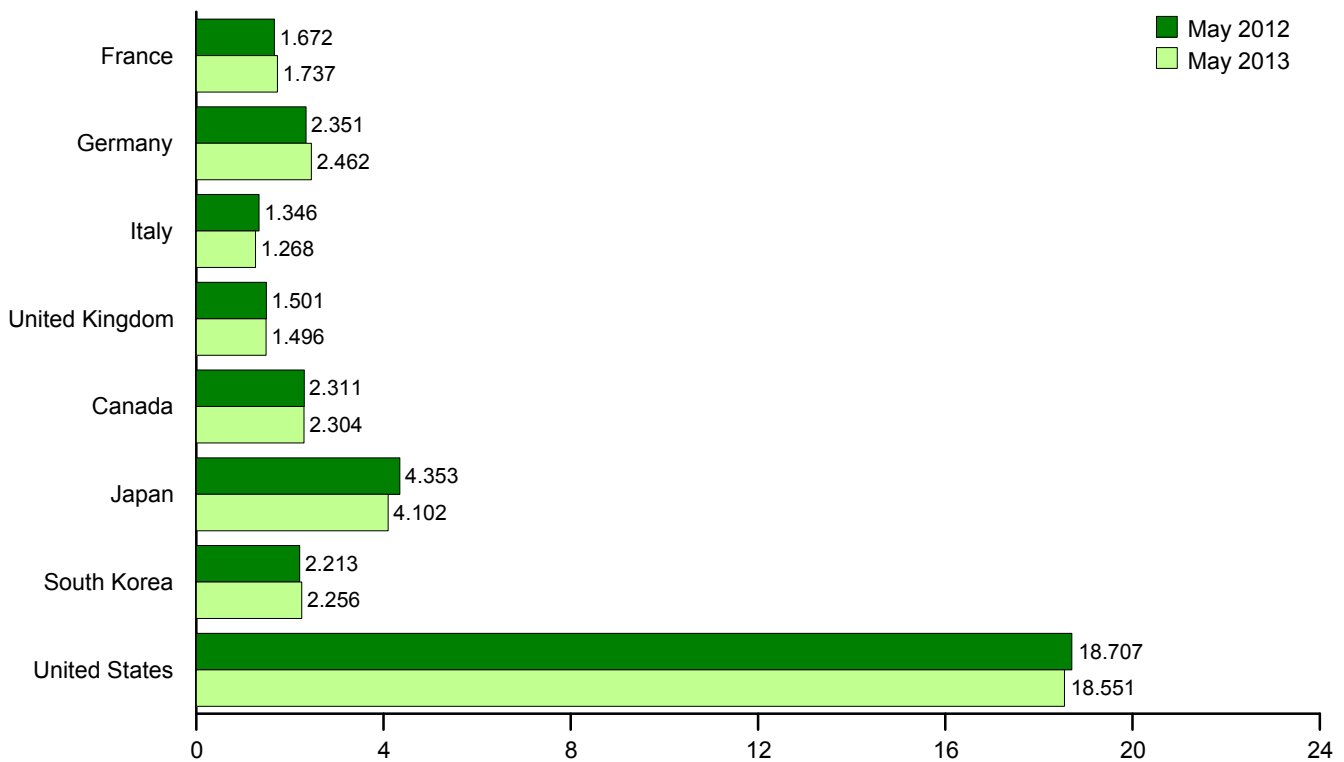
Overview, 1973–2012



OECD Total, May



By Selected OECD Country



Note: OECD is the Organization for Economic Cooperation and Development.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.
Source: Table 11.2.

Table 11.2 Petroleum Consumption in OECD Countries
(Thousand Barrels per Day)

	France	Germany ^a	Italy	United Kingdom	OECD Europe ^b	Canada	Japan	South Korea	United States	Other OECD ^c	OECD ^d	World
1973 Average	2,601	3,324	2,068	2,341	15,879	1,729	4,949	281	17,308	1,768	41,913	57,237
1975 Average	2,252	2,957	1,855	1,911	14,314	1,779	4,621	311	16,322	1,885	39,232	56,198
1980 Average	2,256	3,082	1,934	1,725	14,995	1,873	4,960	537	17,056	2,449	41,870	63,113
1985 Average	1,753	2,651	1,705	1,617	12,772	1,514	4,436	552	15,726	2,699	37,699	60,083
1990 Average	1,826	2,682	1,868	1,776	13,762	1,722	5,315	1,048	16,988	3,040	41,875	66,533
1995 Average	1,920	2,882	1,942	1,816	14,762	1,799	5,693	2,008	17,725	3,452	45,439	70,099
1996 Average	1,949	2,922	1,920	1,852	15,055	1,853	5,739	2,101	18,309	3,509	46,566	71,714
1997 Average	1,969	2,917	1,934	1,810	15,195	1,940	5,702	2,255	18,620	3,629	47,342	73,464
1998 Average	2,043	2,923	1,943	1,792	15,500	1,931	5,507	1,917	18,917	3,757	47,529	74,117
1999 Average	2,031	2,836	1,891	1,811	15,409	2,016	5,642	2,084	19,519	3,844	48,514	75,833
2000 Average	2,000	2,767	1,854	1,765	15,272	2,014	5,515	2,135	19,701	3,902	48,539	76,784
2001 Average	2,054	2,807	1,832	1,747	15,442	2,043	5,412	2,132	19,649	3,892	48,570	77,476
2002 Average	1,985	2,710	1,870	1,739	15,379	2,065	5,319	2,149	19,761	3,877	48,551	78,173
2003 Average	2,001	2,662	1,860	1,759	15,486	2,191	5,428	2,175	20,034	3,920	49,234	79,714
2004 Average	2,009	2,649	1,829	1,785	15,589	2,282	5,319	2,155	20,731	4,021	50,096	82,579
2005 Average	1,991	2,621	1,781	1,820	15,704	2,315	5,328	2,191	20,802	4,100	50,441	84,085
2006 Average	1,991	2,639	1,777	1,806	15,708	2,229	5,197	2,180	20,687	4,135	50,137	85,148
2007 Average	1,979	2,416	1,729	1,753	15,528	2,283	5,037	2,241	20,680	4,256	50,025	85,932
2008 Average	1,945	2,542	1,667	1,727	15,435	2,225	4,798	2,142	19,498	4,226	48,324	85,523
2009 Average	1,868	2,453	1,544	1,637	14,692	2,163	4,390	2,189	18,771	4,169	46,374	84,835
2010 Average	1,833	2,470	1,544	1,621	14,662	2,265	4,455	2,269	19,180	4,154	46,984	87,389
2011 January	1,774	2,227	1,391	1,577	13,620	2,232	4,852	2,456	18,993	3,870	46,024	NA
February	1,917	2,429	1,598	1,626	14,760	2,290	5,058	2,379	18,873	4,324	47,685	NA
March	1,790	2,390	1,484	1,612	14,248	2,367	4,552	2,322	19,329	4,312	47,130	NA
April	1,748	2,254	1,502	1,596	13,927	2,121	4,098	2,039	18,650	4,155	44,989	NA
May	1,735	2,400	1,464	1,531	14,010	2,161	3,778	2,049	18,479	4,168	44,644	NA
June	1,787	2,267	1,550	1,663	14,351	2,317	3,944	2,140	19,253	4,323	46,327	NA
July	1,800	2,405	1,517	1,538	14,359	2,298	4,228	2,215	18,778	4,247	46,125	NA
August	1,805	2,635	1,439	1,593	14,702	2,433	4,454	2,239	19,415	4,286	47,529	NA
September	1,920	2,547	1,581	1,646	14,937	2,278	4,294	2,269	18,892	4,269	46,937	NA
October	1,777	2,505	1,504	1,554	14,341	2,167	4,403	2,243	18,844	4,064	46,062	NA
November	1,731	2,443	1,445	1,570	14,133	2,252	4,592	2,280	19,080	4,336	46,673	NA
December	1,738	2,259	1,463	1,508	13,696	2,275	5,428	2,463	18,803	4,362	47,027	NA
Average	1,792	2,397	1,494	1,584	14,252	2,266	4,471	2,258	18,949	4,225	46,421	R 88,275
2012 January	1,746	2,134	1,305	1,424	12,955	2,116	5,149	2,398	18,280	4,190	45,088	NA
February	1,951	2,567	1,351	1,548	14,452	2,200	5,537	2,444	18,760	4,376	47,769	NA
March	1,726	2,263	1,358	1,598	13,643	2,266	5,145	2,185	18,213	4,420	45,872	NA
April	1,688	2,291	1,337	1,584	13,587	2,171	4,375	2,132	18,330	4,207	44,802	NA
May	1,672	2,351	1,346	1,501	13,602	2,311	4,353	2,213	18,707	4,311	45,498	NA
June	1,781	2,521	1,411	1,510	14,111	2,203	4,114	2,337	18,915	4,328	46,009	NA
July	1,801	2,496	1,422	1,491	13,983	2,308	4,358	2,228	18,601	4,312	45,790	NA
August	1,665	2,333	1,369	1,459	13,650	2,428	4,615	2,267	19,226	4,420	46,608	NA
September	1,727	2,388	1,358	1,509	13,722	2,297	4,428	2,298	18,173	4,174	45,092	NA
October	1,809	2,573	1,399	1,406	14,126	2,314	4,408	2,231	18,722	4,423	46,225	NA
November	1,710	2,548	1,299	1,490	13,811	2,445	4,627	2,456	18,604	4,441	46,383	NA
December	1,613	2,212	1,277	1,517	12,976	2,373	5,478	2,432	18,130	4,377	45,766	NA
Average	1,740	2,388	1,353	1,503	13,713	2,287	4,715	2,301	18,555	4,332	45,902	R 89,054
2013 January	1,684	2,234	1,230	1,420	R 12,790	R 2,310	5,180	2,402	18,646	R 4,196	R 45,525	NA
February	1,812	2,321	1,323	1,522	R 13,455	R 2,287	5,299	2,387	18,659	R 4,305	R 46,393	NA
March	1,746	R 2,342	1,282	R 1,494	R 13,182	R 2,258	4,745	2,159	18,476	R 4,143	R 44,962	NA
April	1,807	2,589	1,302	1,597	R 14,009	R 2,309	4,319	2,267	18,553	R 4,299	R 45,756	NA
May	1,737	2,462	1,268	1,496	13,655	2,304	4,102	2,256	18,551	4,196	45,064	NA
5-Month Average	1,756	2,389	1,280	1,505	13,414	2,293	4,721	2,293	18,575	4,226	45,522	NA
2012 5-Month Average	1,755	2,318	1,339	1,531	13,637	2,213	4,907	2,273	18,455	4,300	45,786	NA
2011 5-Month Average	1,791	2,339	1,486	1,588	14,102	2,234	4,458	2,248	18,866	4,163	46,070	NA

^a Data are for unified Germany, i.e., the former East Germany and West Germany.

^b "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom; for 1984 forward, Czech Republic, Hungary, Poland, and Slovakia; and, for 2000 forward, Slovenia.

^c "Other OECD" consists of Australia, New Zealand, and the U.S. Territories; for 1984 forward, Mexico; and, for 2000 forward, Chile, Estonia, and Israel.

^d The Organization for Economic Cooperation and Development (OECD) consists of "OECD Europe," Canada, Japan, South Korea, the United States, and "Other OECD."

R=Revised. NA=Not available.

Notes: • Totals may not equal sum of components due to independent

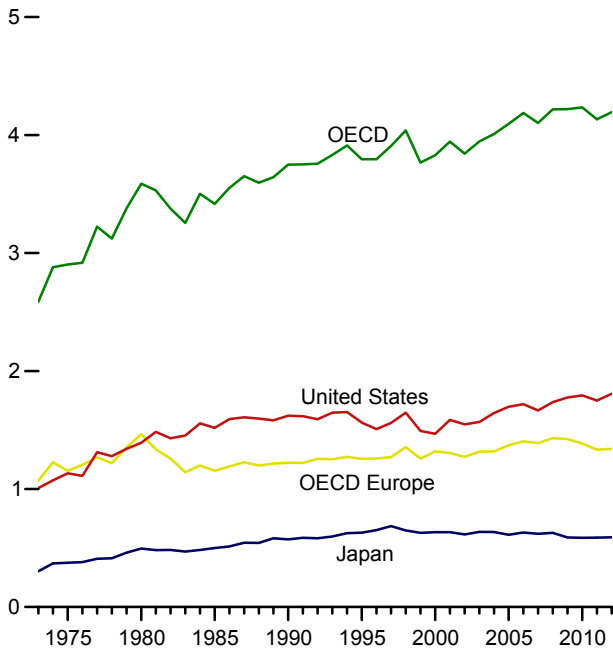
rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> for all available data beginning in 1973.

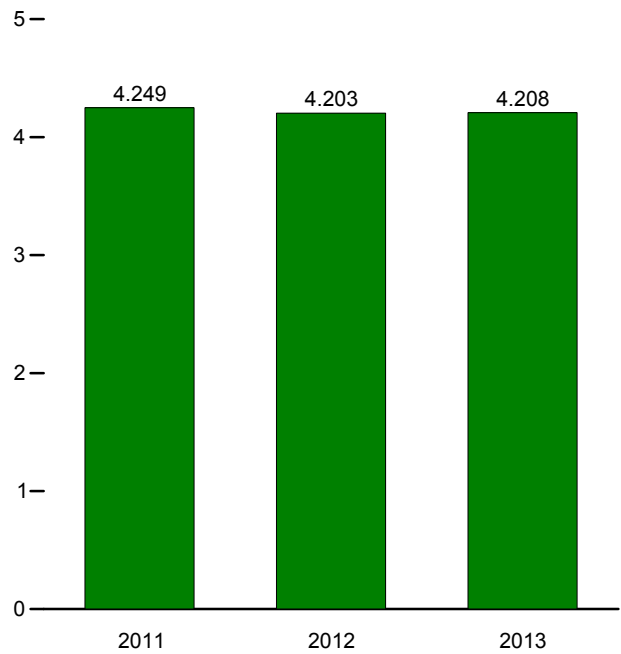
Sources: • **United States:** Table 3.1. • **Chile, East Germany, Former Czechoslovakia, Hungary, Mexico, Poland, South Korea, Non-OECD Countries, U.S. Territories, and World: 1973–1979**—U.S. Energy Information Administration (EIA), International Energy Database. • **Countries Other Than United States: 1980–2008**—EIA, International Energy Statistics (IES). • **OECD Countries, and U.S. Territories: 2009 forward**—EIA, IES. • **World: 2009 forward**—EIA, *Short Term Energy Outlook*, September 2013, Table 3a. • **All Other Data:**—International Energy Agency (IEA), *Quarterly Oil Statistics and Energy Balances in OECD Countries*, various issues.

Figure 11.3 Petroleum Stocks in OECD Countries
(Billion Barrels)

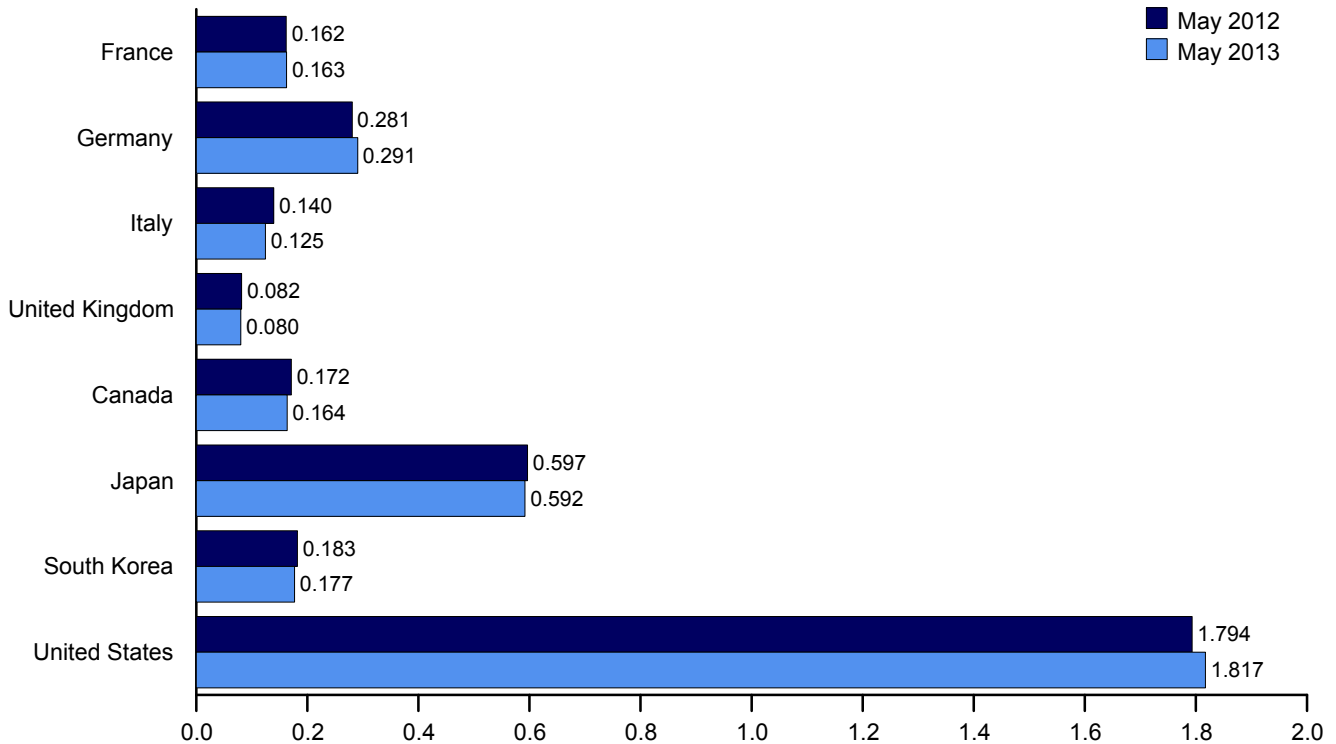
Overview, End of Year, 1973–2012



OECD Stocks, End of Month, May



By Selected OECD Country, End of Month



Note: OECD is the Organization for Economic Cooperation and Development.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.
Source: Table 11.3.

Table 11.3 Petroleum Stocks in OECD Countries
(Million Barrels)

	France	Germany ^a	Italy	United Kingdom	OECD Europe ^b	Canada	Japan	South Korea	United States	Other OECD ^c	OECD ^d
1973 Year	201	181	152	156	1,070	140	303	NA	1,008	67	2,588
1975 Year	225	187	143	165	1,154	174	375	NA	1,133	67	2,903
1980 Year	243	319	170	168	1,464	164	495	NA	1,392	72	3,587
1985 Year	139	277	156	131	1,154	112	500	13	1,519	119	3,417
1990 Year	143	280	171	103	1,222	143	572	64	1,621	126	3,749
1995 Year	155	302	162	101	1,256	132	631	92	1,563	122	3,795
1996 Year	154	303	152	103	1,259	127	651	123	1,507	127	3,794
1997 Year	161	299	147	100	1,271	144	685	124	1,560	123	3,907
1998 Year	169	323	153	104	1,355	139	649	129	1,647	120	4,039
1999 Year	160	290	148	101	1,258	141	629	132	1,493	114	3,766
2000 Year	170	272	157	100	1,318	143	634	140	1,468	126	3,829
2001 Year	165	273	151	113	1,306	154	634	143	1,586	120	3,944
2002 Year	170	253	156	104	1,273	155	615	140	1,548	112	3,843
2003 Year	179	273	153	100	1,316	165	636	155	1,568	105	3,945
2004 Year	177	267	154	101	1,319	154	635	149	1,645	108	4,010
2005 Year	185	283	151	95	1,371	168	612	135	1,698	112	4,095
2006 Year	182	283	153	103	1,404	169	631	152	1,720	113	4,187
2007 Year	180	275	152	92	1,389	163	621	143	1,665	121	4,103
2008 Year	179	279	148	93	1,431	162	629	135	1,737	124	4,218
2009 Year	175	284	146	89	1,424	157	589	155	1,776	118	4,219
2010 Year	168	287	143	83	1,385	184	587	165	1,794	120	4,234
2011 January	173	291	149	90	1,426	174	596	168	1,809	120	4,293
February	170	288	140	89	1,396	169	591	162	1,780	122	4,222
March	167	286	141	87	1,385	172	580	170	1,776	118	4,201
April	163	291	142	89	1,373	179	601	173	1,779	125	4,229
May	168	288	139	85	1,373	177	598	170	1,807	124	4,249
June	167	286	141	79	1,367	177	593	175	1,809	121	4,242
July	164	290	140	81	1,357	177	599	173	1,816	124	4,245
August	162	283	142	83	1,360	176	598	171	1,796	124	4,224
September	160	277	140	78	1,339	176	601	174	1,781	121	4,191
October	165	278	140	79	1,328	178	599	174	1,769	120	4,168
November	164	277	141	86	1,344	179	603	170	1,770	117	4,183
December	165	281	138	80	1,333	178	589	167	1,750	117	4,134
2012 January	166	288	141	84	1,363	178	594	164	1,772	121	4,192
February	165	286	141	84	1,360	180	583	171	1,765	113	4,173
March	165	284	142	82	1,371	171	580	164	1,778	113	4,176
April	163	284	140	85	1,363	170	592	174	1,777	115	4,191
May	162	281	140	82	1,341	R 172	597	183	1,794	117	R 4,203
June	164	280	138	82	1,343	R 170	601	177	1,808	112	R 4,212
July	163	285	135	80	1,353	R 173	608	181	1,809	116	R 4,240
August	168	284	142	82	1,370	R 177	603	179	1,801	114	R 4,244
September	164	283	146	75	1,351	R 179	606	184	1,818	117	R 4,255
October	160	282	144	75	1,333	R 175	614	180	1,810	110	R 4,221
November	160	287	141	85	1,348	R 174	604	177	1,809	106	R 4,219
December	162	287	129	81	R 1,340	R 173	590	175	1,807	108	4,194
2013 January	162	R 292	133	86	1,384	R 170	591	179	1,812	105	R 4,242
February	162	289	133	R 81	1,376	170	581	176	1,791	110	4,205
March	161	R 291	134	79	1,374	R 162	589	188	1,793	R 114	R 4,220
April	159	289	135	R 84	R 1,372	R 161	596	176	1,807	114	R 4,226
May	163	291	125	80	1,345	164	592	177	1,817	111	4,208

^a Through December 1983, the data for Germany are for the former West Germany only. Beginning with January 1984, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

^b "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom; for 1984 forward, Czech Republic, Hungary, Poland, and Slovakia; and, for 2000 forward, Slovenia.

^c "Other OECD" consists of Australia, New Zealand, and the U.S. Territories; for 1984 forward, Mexico; and, for 2000 forward, Chile, Estonia, and Israel.

^d The Organization for Economic Cooperation and Development (OECD) consists of "OECD Europe," Canada, Japan, South Korea, the United States, and "Other OECD."

R=Revised. NA=Not available.

Notes: • Stocks are at end of period. • Petroleum stocks include crude oil

(including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. • In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, thereby affecting subsequent stocks reported. New-basis end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,425 in 1980, and 1,461 in 1982. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> for all available data beginning in 1973.

Sources: • **United States:** Table 3.4. • **U.S. Territories:** 1983 forward—U.S. Energy Information Administration, International Energy Database. • **All Other Data:** 1973–1982—International Energy Agency (IEA), *Quarterly Oil Statistics and Energy Balances*, various issues. 1983—IEA, Monthly Oil and Gas Statistics Database. 1984 forward—IEA, Monthly Oil Data Service, August 9, 2013.

International Petroleum

Tables 11.1a and 11.1b Sources

United States

Table 3.1.

All Other Countries and World, Annual Data

1973–1979: U.S. Energy Information Administration (EIA), *International Energy Annual 1981*, Table 8.

1980 forward: EIA, International Energy Database, September 2013.

All Other Countries and World, Monthly Data

1973–1980: *Petroleum Intelligence Weekly (PIW)*, *Oil & Gas Journal (OGJ)*, and EIA adjustments.

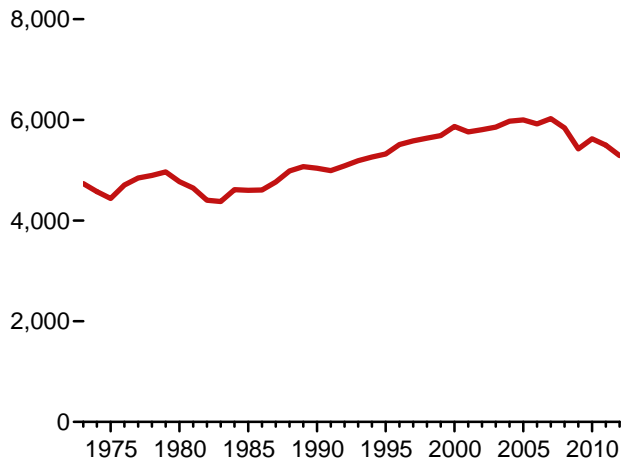
1981–1993: *PIW*, *OGJ*, and other industry sources.

1994 forward: EIA, International Energy Database, September 2013.

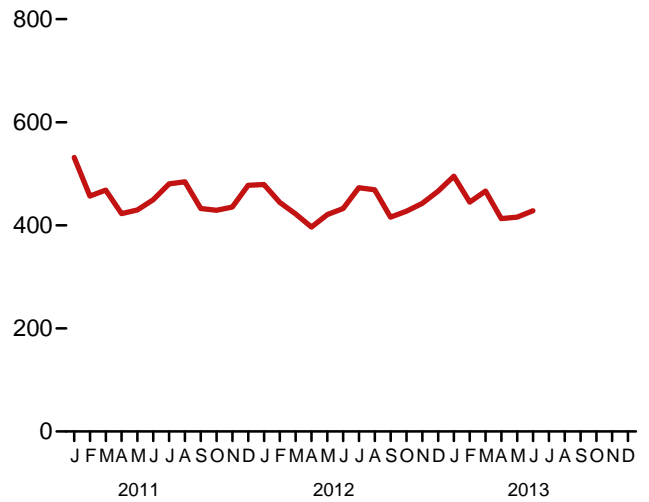
12. Environment

Figure 12.1 Carbon Dioxide Emissions From Energy Consumption by Source
(Million Metric Tons of Carbon Dioxide)

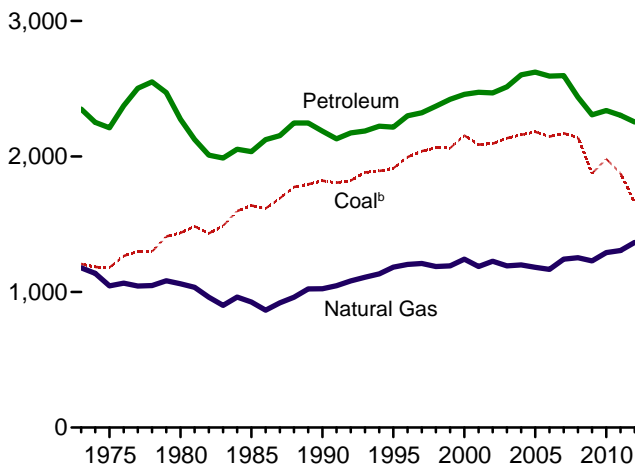
Total,^a 1973–2012



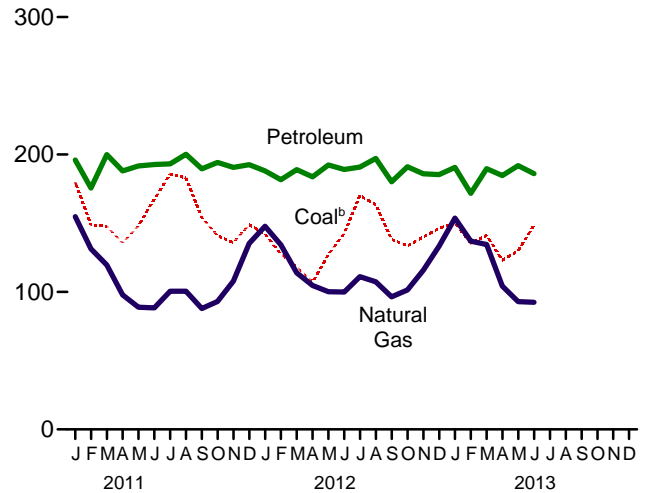
Total,^a Monthly



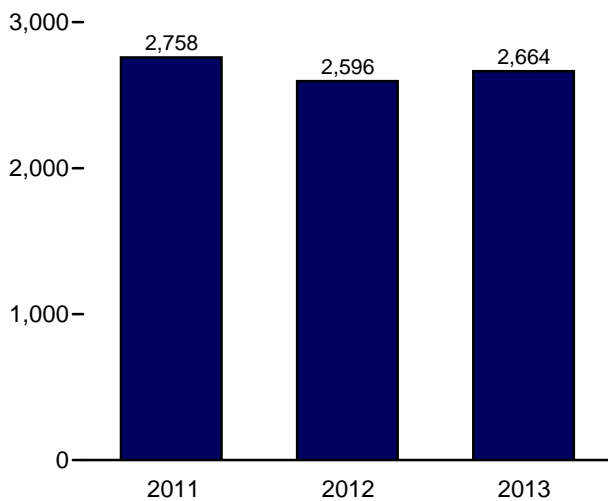
By Major Source, 1973–2012



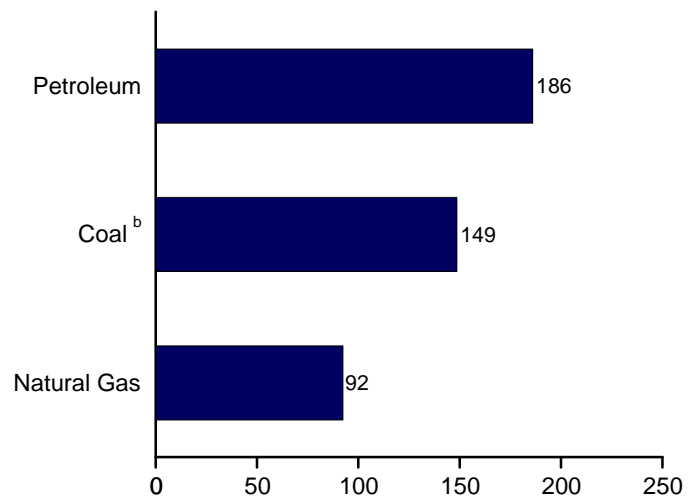
By Major Source, Monthly



Total,^a January–June



By Major Source, June 2013



^aExcludes emissions from biomass energy consumption.
^bIncludes coal coke net imports.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#environment>.
Source: Table 12.1.

Table 12.1 Carbon Dioxide Emissions From Energy Consumption by Source
(Million Metric Tons of Carbon Dioxide^a)

	Coal ^b	Natural Gas ^c	Petroleum										Total ^{h,i}	
			Aviation Gasoline	Distillate Fuel Oil ^d	Jet Fuel	Kero-sene	LPG ^e	Lubri-cants	Motor Gasoline ^f	Petroleum Coke	Residual Fuel Oil	Other ^g		
1973 Total	1,207	1,178	6	480	155	32	92	13	911	54	508	100	2,350	4,735
1975 Total	1,181	1,046	5	443	146	24	82	11	911	51	443	97	2,212	4,439
1980 Total	1,436	1,061	4	446	156	24	87	13	900	49	453	142	2,275	4,771
1985 Total	1,638	926	3	445	178	17	87	12	930	54	216	93	2,036	4,600
1990 Total	1,821	1,024	3	470	223	6	67	13	988	70	220	127	2,187	5,039
1995 Total	1,913	1,183	3	498	222	8	80	13	1,044	76	152	121	2,216	5,323
1996 Total	1,995	1,204	3	525	232	9	86	12	1,063	79	152	139	2,300	5,510
1997 Total	2,040	1,210	3	534	234	10	87	13	1,075	80	142	145	2,323	5,584
1998 Total	2,064	1,189	2	538	238	12	82	14	1,107	93	158	128	2,372	5,635
1999 Total	2,062	1,193	3	555	245	11	90	14	1,127	96	148	133	2,422	5,688
2000 Total	2,155	1,243	3	580	254	10	97	14	1,135	86	163	118	2,459	5,868
2001 Total	2,088	1,188	2	598	243	11	88	13	1,151	89	144	135	2,474	5,761
2002 Total	2,095	1,227	2	587	237	6	91	12	1,183	96	125	130	2,470	5,804
2003 Total	2,136	1,193	2	610	231	8	87	11	1,188	96	138	142	2,514	5,855
2004 Total	2,160	1,200	2	632	240	10	87	12	1,214	107	155	144	2,603	5,975
2005 Total	2,182	1,183	2	640	246	10	84	12	1,214	106	165	143	2,623	5,999
2006 Total	2,147	1,168	2	648	240	8	80	11	1,224	106	122	152	2,593	5,920
2007 Total	2,172	1,243	2	652	238	5	83	12	1,227	100	129	150	2,596	6,023
2008 Total	2,139	1,253	2	615	226	2	79	11	1,166	93	111	132	2,437	5,841
2009 Total	1,876	1,230	2	564	204	3	78	10	1,157	87	91	112	2,307	5,424
2010 Total	1,982	1,290	2	590	210	3	79	11	1,146	81	96	122	2,339	5,623
2011 January	180	155	(s)	52	17	(s)	10	1	91	7	9	10	196	532
February	149	131	(s)	47	15	1	8	1	84	5	8	8	176	457
March	148	120	(s)	53	17	(s)	8	1	95	6	7	11	200	468
April	136	98	(s)	48	18	(s)	6	1	92	6	7	10	188	423
May	148	89	(s)	49	18	(s)	6	1	95	8	7	8	192	430
June	168	88	(s)	50	19	(s)	6	1	95	7	7	9	193	450
July	186	101	(s)	47	18	(s)	6	1	98	7	5	11	193	481
August	183	101	(s)	53	19	(s)	7	1	96	8	5	10	200	485
September	154	88	(s)	50	17	(s)	6	1	92	6	7	10	190	433
October	141	93	(s)	53	17	(s)	7	1	93	7	6	10	194	429
November	136	108	(s)	52	17	(s)	8	1	89	7	6	11	191	435
December	149	135	(s)	51	17	(s)	9	1	94	4	8	10	193	478
Total	1,876	1,306	2	603	209	2	87	10	1,113	78	82	118	2,304	5,498
2012 January	142	148	(s)	50	16	(s)	8	1	89	7	6	11	188	479
February	128	134	(s)	49	16	(s)	8	1	87	5	6	10	182	444
March	118	114	(s)	49	17	(s)	7	1	93	6	6	9	189	422
April	107	105	(s)	47	16	(s)	6	1	92	6	6	9	184	397
May	127	100	(s)	49	18	(s)	7	1	97	7	4	9	192	421
June	143	100	(s)	47	19	(s)	6	1	94	7	5	10	189	433
July	170	111	(s)	47	18	(s)	7	1	95	6	6	10	191	473
August	164	107	(s)	49	18	(s)	7	1	99	7	5	11	197	469
September	138	97	(s)	47	17	(s)	7	1	90	6	4	8	180	416
October	134	102	(s)	50	17	(s)	8	1	94	6	4	11	191	427
November	140	116	(s)	50	17	(s)	8	1	89	7	4	11	186	443
December	146	133	(s)	46	17	(s)	9	1	90	7	3	13	185	466
Total	1,657	1,367	2	579	206	1	88	9	1,110	76	61	122	2,254	5,290
2013 January	150	154	(s)	53	16	(s)	10	1	89	7	5	10	191	495
February	135	137	(s)	47	15	(s)	9	1	82	5	4	9	172	445
March	141	134	(s)	49	17	(s)	9	1	93	6	7	8	190	466
April	123	104	(s)	49	17	(s)	7	1	91	5	4	10	185	413
May	130	93	(s)	49	18	(s)	6	1	97	7	3	11	192	416
June	149	92	(s)	46	17	(s)	6	1	93	7	4	10	186	428
6-Month Total	828	715	1	294	100	(s)	47	5	546	36	28	58	1,115	2,664
2012 6-Month Total	765	701	1	291	102	(s)	43	5	553	37	34	58	1,124	2,596
2011 6-Month Total	928	681	1	299	103	1	44	5	552	38	45	56	1,144	2,758

^a Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

^b Includes coal coke net imports.

^c Natural gas, excluding supplemental gaseous fuels.

^d Distillate fuel oil, excluding biodiesel.

^e Liquefied petroleum gases.

^f Finished motor gasoline, excluding fuel ethanol.

^g Aviation gasoline blending components, crude oil, motor gasoline blending components, pentanes plus, petrochemical feedstocks, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products.

^h Includes electric power sector use of geothermal energy and non-biomass waste. See Table 12.6.

ⁱ Excludes emissions from biomass energy consumption. See Table 12.7.

(s)=Less than 0.5 million metric tons.

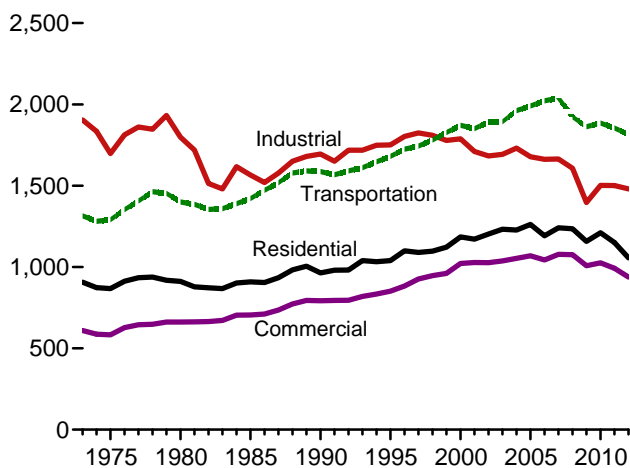
Notes: • Data are estimates for carbon dioxide emissions from energy consumption, including the nonfuel use of fossil fuels. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#environment> for all available data beginning in 1973.

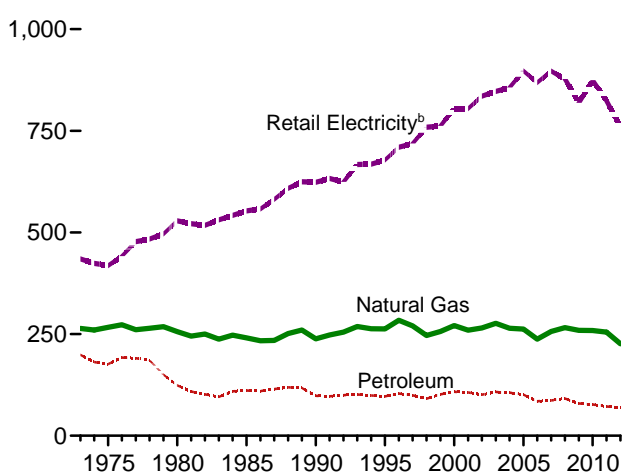
Sources: See end of section.

Figure 12.2 Carbon Dioxide Emissions From Energy Consumption by Sector
(Million Metric Tons of Carbon Dioxide)

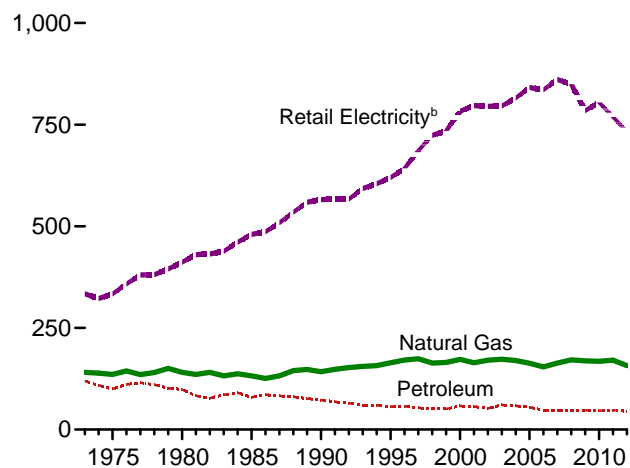
Total^a by End-Use Sector,^b 1973–2012



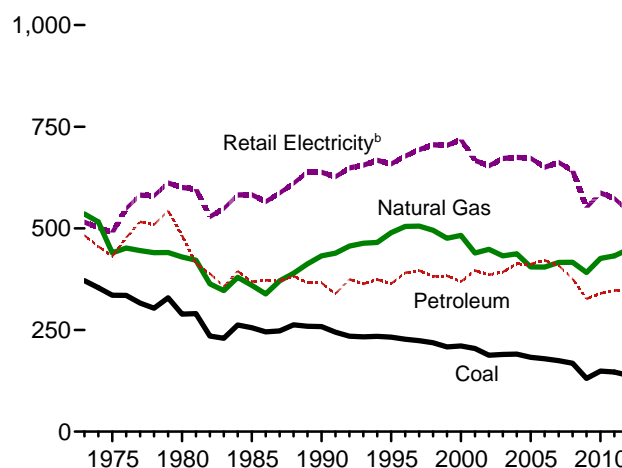
Residential Sector by Major Source, 1973–2012



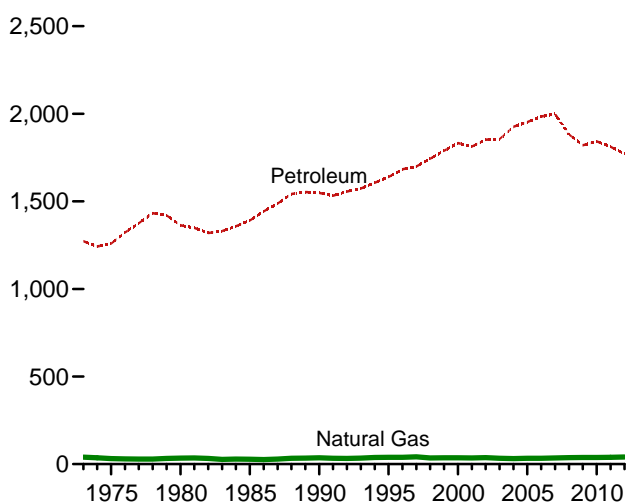
Commercial Sector by Major Source, 1973–2012



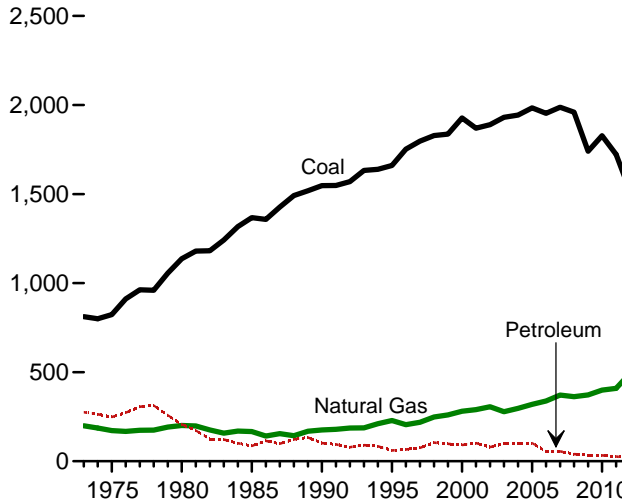
Industrial Sector by Major Source, 1973–2012



Transportation Sector by Major Source, 1973–2012



Electric Power Sector by Major Source, 1973–2012



^a Excludes emissions from biomass energy consumption.

^b Emissions from energy consumption in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of

total electricity retail sales.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#environment>.
Sources: Tables 12.2–12.6.

Table 12.2 Carbon Dioxide Emissions From Energy Consumption: Residential Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Natural Gas ^b	Petroleum				Retail Elec- tricity ^e	Total ^f
			Distillate Fuel Oil ^c	Kerosene	LPG ^d	Total		
1973 Total	9	264	147	16	36	199	435	907
1975 Total	6	266	132	12	32	176	419	867
1980 Total	3	256	96	8	20	124	529	911
1985 Total	4	241	80	11	20	111	553	909
1990 Total	3	238	72	5	22	98	624	963
1995 Total	2	263	66	5	25	96	678	1,039
1996 Total	2	284	68	6	30	104	710	1,099
1997 Total	2	270	64	7	29	99	719	1,090
1998 Total	1	247	56	8	27	91	759	1,097
1999 Total	1	257	61	8	33	102	762	1,122
2000 Total	1	271	66	7	35	108	805	1,185
2001 Total	1	259	66	7	33	106	805	1,172
2002 Total	1	265	63	4	34	101	835	1,203
2003 Total	1	276	68	5	34	108	847	1,232
2004 Total	1	264	68	6	32	106	856	1,228
2005 Total	1	262	62	6	32	101	897	1,261
2006 Total	1	237	52	5	28	85	869	1,192
2007 Total	1	257	53	3	31	87	897	1,241
2008 Total	NA	266	55	2	35	92	878	1,235
2009 Total	NA	259	43	2	35	79	819	1,157
2010 Total	NA	259	41	2	33	77	875	1,210
2011 January	NA	52	5	(s)	3	8	87	147
February	NA	42	4	(s)	3	8	67	116
March	NA	33	3	(s)	3	6	59	98
April	NA	19	2	(s)	2	5	53	76
May	NA	11	2	(s)	2	4	57	73
June	NA	7	2	(s)	2	5	75	87
July	NA	6	2	(s)	2	5	95	106
August	NA	6	3	(s)	3	5	92	103
September	NA	7	3	(s)	2	5	68	80
October	NA	12	3	(s)	3	6	53	72
November	NA	23	4	(s)	3	7	53	82
December	NA	37	5	(s)	3	8	66	112
Total	NA	255	38	1	32	72	824	1,150
2012 January	NA	43	5	(s)	3	8	68	120
February	NA	36	4	(s)	3	7	58	101
March	NA	22	4	(s)	3	6	51	79
April	NA	15	3	(s)	2	5	44	65
May	NA	9	3	(s)	3	5	55	69
June	NA	7	3	(s)	2	5	69	81
July	NA	6	2	(s)	3	5	92	103
August	NA	6	3	(s)	3	6	85	96
September	NA	6	2	(s)	3	5	65	76
October	NA	13	2	(s)	3	5	54	72
November	NA	26	3	(s)	3	6	56	88
December	NA	37	3	(s)	3	6	65	108
Total	NA	226	37	(s)	32	69	760	1,056
2013 January	NA	48	4	(s)	3	8	72	128
February	NA	41	4	(s)	3	7	61	109
March	NA	36	3	(s)	3	6	62	105
April	NA	20	3	(s)	3	5	50	75
May	NA	11	2	(s)	2	4	51	66
June	NA	7	1	(s)	2	4	67	78
6-Month Total	NA	162	17	(s)	17	34	364	560
2012 6-Month Total	NA	132	21	(s)	16	37	345	514
2011 6-Month Total	NA	164	18	1	16	35	397	597

^a Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Liquefied petroleum gases.

^e Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

^f Excludes emissions from biomass energy consumption. See Table 12.7.

NA=Not available. (s)=Less than 0.5 million metric tons.

Notes: • Data are estimates for carbon dioxide emissions from energy consumption. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#environment> for all available data beginning in 1973.

Sources: See end of section.

Table 12.3 Carbon Dioxide Emissions From Energy Consumption: Commercial Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Natural Gas ^b	Petroleum							Retail Electricity ^f	Total ^g
			Distillate Fuel Oil ^c	Kerosene	LPG ^d	Motor Gasoline ^e	Petroleum Coke	Residual Fuel Oil	Total		
1973 Total	15	141	47	5	9	6	NA	52	120	334	609
1975 Total	14	136	43	4	8	6	NA	39	100	333	583
1980 Total	11	141	38	3	6	8	NA	44	98	412	662
1985 Total	13	132	46	2	6	7	NA	18	79	480	704
1990 Total	12	142	39	1	6	8	0	18	73	566	793
1995 Total	11	164	35	2	7	1	(s)	11	56	620	851
1996 Total	12	171	35	2	8	2	(s)	11	57	643	883
1997 Total	12	174	32	2	8	3	(s)	9	54	686	926
1998 Total	9	164	31	2	7	3	(s)	7	51	724	947
1999 Total	10	165	32	2	9	2	(s)	6	51	735	960
2000 Total	9	173	36	2	9	3	(s)	7	58	783	1,022
2001 Total	9	164	37	2	9	3	(s)	6	57	797	1,027
2002 Total	9	170	32	1	9	3	(s)	6	52	795	1,026
2003 Total	8	173	36	1	10	4	(s)	9	61	796	1,037
2004 Total	10	170	34	1	10	3	(s)	10	58	816	1,054
2005 Total	9	163	33	2	8	3	(s)	9	55	842	1,069
2006 Total	6	154	29	1	8	3	(s)	6	48	836	1,043
2007 Total	7	164	28	1	8	4	(s)	6	47	861	1,078
2008 Total	7	171	28	(s)	10	3	(s)	6	47	850	1,075
2009 Total	7	169	29	(s)	9	4	(s)	6	47	785	1,008
2010 Total	6	168	29	(s)	9	4	(s)	5	46	805	1,025
2011 January	1	29	4	(s)	1	(s)	(s)	1	5	65	99
February	1	23	3	(s)	1	(s)	(s)	(s)	5	55	85
March	1	20	3	(s)	1	(s)	(s)	(s)	4	58	83
April	(s)	13	2	(s)	1	(s)	0	(s)	3	57	73
May	(s)	9	1	(s)	1	(s)	0	(s)	2	63	75
June	(s)	7	2	(s)	1	(s)	0	(s)	3	70	81
July	(s)	7	2	(s)	1	(s)	0	(s)	3	79	89
August	(s)	7	2	(s)	1	(s)	0	(s)	4	77	89
September	(s)	8	2	(s)	1	(s)	0	(s)	4	66	77
October	(s)	11	3	(s)	1	(s)	0	(s)	4	61	77
November	(s)	15	3	(s)	1	(s)	(s)	(s)	4	57	77
December	(s)	21	4	(s)	1	(s)	(s)	1	6	60	87
Total	6	171	31	(s)	9	3	(s)	4	47	769	992
2012 January	1	24	4	(s)	1	(s)	(s)	(s)	6	57	87
February	(s)	21	3	(s)	1	(s)	(s)	(s)	5	53	79
March	(s)	14	3	(s)	1	(s)	(s)	(s)	4	52	71
April	(s)	11	2	(s)	1	(s)	(s)	(s)	3	51	66
May	(s)	8	2	(s)	1	(s)	0	(s)	3	60	72
June	(s)	7	2	(s)	1	(s)	0	(s)	3	66	77
July	(s)	7	2	(s)	1	(s)	(s)	(s)	3	76	87
August	(s)	7	2	(s)	1	(s)	(s)	(s)	4	73	85
September	(s)	8	2	(s)	1	(s)	(s)	(s)	3	64	75
October	(s)	12	2	(s)	1	(s)	(s)	(s)	3	61	76
November	(s)	17	2	(s)	1	(s)	(s)	(s)	4	59	80
December	(s)	21	3	(s)	1	(s)	(s)	(s)	4	59	85
Total	4	157	29	(s)	9	3	(s)	3	45	732	938
2013 January	(s)	26	3	(s)	1	(s)	(s)	(s)	5	59	90
February	(s)	23	3	(s)	1	(s)	(s)	(s)	5	55	83
March	(s)	21	3	(s)	1	(s)	(s)	(s)	4	58	84
April	1	13	2	(s)	1	(s)	(s)	(s)	3	53	70
May	1	9	1	(s)	1	(s)	0	(s)	2	59	71
June	(s)	7	1	(s)	1	(s)	0	(s)	2	67	77
6-Month Total	3	100	13	(s)	5	1	(s)	1	21	351	475
2012 6-Month Total	2	86	16	(s)	5	2	(s)	2	24	339	452
2011 6-Month Total	3	101	15	(s)	5	1	(s)	2	23	369	496

^a Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Liquefied petroleum gases.

^e Finished motor gasoline, excluding fuel ethanol.

^f Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

^g Excludes emissions from biomass energy consumption. See Table 12.7. NA=Not available. (s)=Less than 0.5 million metric tons.

Notes: • Data are estimates for carbon dioxide emissions from energy consumption. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#environment> for all available data beginning in 1973.

Sources: See end of section.

Table 12.4 Carbon Dioxide Emissions From Energy Consumption: Industrial Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Coal Coke Net Imports	Natural Gas ^b	Petroleum								Retail Elec- tricity ^g	Total ^h	
				Distillate Fuel Oil ^c	Kero- sene	LPG ^d	Lubri- cants	Motor Gasoline ^e	Petroleum Coke	Residual Fuel Oil	Other ^f			Total
1973 Total	371	-1	536	106	11	44	7	18	52	144	100	483	515	1,904
1975 Total	336	2	440	97	9	39	6	16	51	117	97	431	490	1,697
1980 Total	289	-4	429	96	13	61	7	11	48	105	142	483	601	1,798
1985 Total	256	-2	360	81	3	59	6	15	54	57	93	369	583	1,566
1990 Total	258	1	432	84	1	37	7	13	67	31	127	366	638	1,695
1995 Total	233	7	489	82	1	47	7	14	67	25	121	364	659	1,751
1996 Total	227	3	505	87	1	48	6	14	71	24	139	391	678	1,803
1997 Total	224	5	505	88	1	50	7	15	70	21	145	396	694	1,824
1998 Total	219	8	495	88	2	47	7	14	80	16	128	382	706	1,809
1999 Total	208	7	475	86	1	47	7	11	85	14	133	383	704	1,778
2000 Total	211	7	483	87	1	52	7	11	76	17	118	369	719	1,788
2001 Total	204	3	440	95	2	45	6	21	79	14	135	396	667	1,711
2002 Total	188	7	448	88	1	47	6	22	79	13	130	386	654	1,683
2003 Total	190	6	432	85	2	41	6	23	78	16	142	393	672	1,692
2004 Total	191	16	437	88	2	44	6	26	84	18	144	413	675	1,731
2005 Total	183	5	405	92	3	42	6	25	81	20	143	412	673	1,678
2006 Total	179	7	405	92	2	43	6	26	84	16	152	421	650	1,662
2007 Total	175	3	416	92	1	43	6	21	82	13	150	409	662	1,665
2008 Total	168	5	417	99	(s)	32	6	17	77	13	132	376	642	1,607
2009 Total	131	-3	391	78	(s)	33	5	16	72	9	112	326	551	1,396
2010 Total	149	-1	426	84	1	35	6	18	67	8	122	340	587	1,502
2011 January	13	(s)	40	9	(s)	5	(s)	1	5	1	10	33	48	133
February	12	(s)	36	7	(s)	4	(s)	1	4	1	8	26	42	117
March	13	(s)	38	10	(s)	4	1	1	5	1	11	33	46	130
April	12	(s)	35	7	(s)	3	(s)	1	5	1	10	28	45	120
May	12	(s)	35	7	(s)	3	(s)	1	7	1	8	28	48	123
June	12	(s)	33	7	(s)	3	(s)	1	5	1	9	27	50	123
July	12	(s)	34	5	(s)	3	(s)	2	5	1	11	26	54	125
August	12	(s)	35	7	(s)	3	(s)	2	7	1	10	31	53	131
September	12	(s)	34	7	(s)	3	(s)	1	5	1	10	28	47	122
October	12	(s)	36	8	(s)	4	(s)	1	6	1	10	30	47	125
November	12	(s)	37	9	(s)	4	(s)	1	6	1	11	32	46	126
December	13	(s)	40	6	(s)	5	(s)	1	3	1	10	27	45	124
Total	147	1	432	90	(s)	44	5	17	63	9	118	347	574	1,501
2012 January	12	(s)	41	8	(s)	4	(s)	1	5	1	11	31	43	127
February	12	(s)	38	10	(s)	4	(s)	1	4	1	10	31	42	122
March	12	(s)	38	8	(s)	4	(s)	1	5	1	9	29	41	120
April	11	1	36	7	(s)	3	(s)	1	5	1	9	27	41	116
May	11	(s)	36	7	(s)	4	(s)	2	6	1	9	29	46	123
June	11	(s)	35	6	(s)	3	(s)	1	6	1	10	27	47	120
July	11	(s)	36	5	(s)	3	(s)	1	5	1	10	26	52	125
August	12	(s)	37	6	(s)	4	(s)	2	7	1	11	29	50	127
September	11	(s)	36	7	(s)	4	(s)	1	6	(s)	8	26	44	118
October	11	(s)	38	9	(s)	4	(s)	1	5	(s)	11	31	46	126
November	12	(s)	38	9	(s)	4	(s)	1	6	(s)	11	32	46	127
December	12	(s)	40	6	(s)	5	(s)	1	6	(s)	13	32	44	128
Total	138	(s)	449	87	(s)	45	5	17	67	7	122	350	543	1,480
2013 January	12	(s)	42	11	(s)	5	(s)	1	6	1	10	34	43	131
February	12	(s)	38	9	(s)	5	(s)	1	4	(s)	9	29	40	119
March	12	(s)	40	8	(s)	5	(s)	1	5	1	8	29	44	124
April	11	(s)	37	9	(s)	4	(s)	1	4	(s)	10	29	41	118
May	11	(s)	37	R 9	(s)	3	(s)	2	5	(s)	11	30	45	123
June	11	(s)	36	7	(s)	3	(s)	1	6	1	10	29	46	121
6-Month Total	68	-1	231	53	(s)	25	3	9	30	3	58	179	259	736
2012 6-Month Total	70	1	224	46	(s)	22	3	9	32	4	58	173	259	728
2011 6-Month Total	74	1	218	48	(s)	22	3	9	31	5	56	174	280	746

^a Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Liquefied petroleum gases.

^e Finished motor gasoline, excluding fuel ethanol.

^f Aviation gasoline blending components, crude oil, motor gasoline blending components, pentanes plus, petrochemical feedstocks, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products.

^g Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

^h Excludes emissions from biomass energy consumption. See Table 12.7.

R=Revised. (s)=Less than 0.5 million metric tons and greater than -0.5 million metric tons.

Notes: • Data are estimates for carbon dioxide emissions from energy consumption, including the nonfuel use of fossil fuels. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#environment> for all available data beginning in 1973.

Sources: See end of section.

Table 12.5 Carbon Dioxide Emissions From Energy Consumption: Transportation Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Natural Gas ^b	Petroleum							Retail Elec- tricity ^f	Total ^g	
			Aviation Gasoline	Distillate Fuel Oil ^c	Jet Fuel	LPG ^d	Lubri- cants	Motor Gasoline ^e	Residual Fuel Oil			Total
1973 Total	(s)	39	6	163	152	3	6	886	57	1,273	2	1,315
1975 Total	(s)	32	5	155	145	3	6	889	56	1,258	2	1,292
1980 Total	(h)	34	4	204	155	1	6	881	110	1,363	2	1,400
1985 Total	(h)	28	3	232	178	2	6	908	62	1,391	3	1,421
1990 Total	(h)	36	3	268	223	1	7	967	80	1,548	3	1,588
1995 Total	(h)	38	3	307	222	1	6	1,029	72	1,639	3	1,681
1996 Total	(h)	39	3	327	232	1	6	1,047	67	1,683	3	1,725
1997 Total	(h)	41	3	342	234	1	6	1,057	56	1,699	3	1,744
1998 Total	(h)	35	2	352	238	1	7	1,090	53	1,743	3	1,782
1999 Total	(h)	36	3	366	245	1	7	1,115	52	1,789	3	1,828
2000 Total	(h)	36	3	378	254	1	7	1,121	70	1,833	4	1,872
2001 Total	(h)	35	2	387	243	1	6	1,127	46	1,813	4	1,852
2002 Total	(h)	37	2	394	237	1	6	1,158	53	1,851	4	1,892
2003 Total	(h)	33	2	409	231	1	6	1,161	45	1,856	5	1,893
2004 Total	(h)	32	2	434	240	1	6	1,185	58	1,926	5	1,962
2005 Total	(h)	33	2	444	246	2	6	1,186	66	1,953	5	1,991
2006 Total	(h)	33	2	469	240	2	5	1,194	71	1,984	5	2,022
2007 Total	(h)	35	2	472	238	1	6	1,201	78	1,999	5	2,040
2008 Total	(h)	37	2	427	226	3	5	1,146	73	1,882	5	1,924
2009 Total	(h)	38	2	408	204	2	5	1,137	62	1,820	5	1,863
2010 Total	(h)	38	2	429	210	2	5	1,125	70	1,843	5	1,886
2011 January	(h)	5	(s)	34	17	(s)	(s)	89	6	147	(s)	152
February	(h)	4	(s)	31	15	(s)	(s)	82	6	135	(s)	139
March	(h)	4	(s)	37	17	(s)	1	93	5	154	(s)	158
April	(h)	3	(s)	36	18	(s)	(s)	91	5	150	(s)	154
May	(h)	3	(s)	38	18	(s)	(s)	93	5	156	(s)	159
June	(h)	3	(s)	38	19	(s)	(s)	93	5	156	(s)	159
July	(h)	3	(s)	38	18	(s)	(s)	96	3	157	(s)	160
August	(h)	3	(s)	40	19	(s)	(s)	94	4	158	(s)	162
September	(h)	3	(s)	37	17	(s)	(s)	90	6	150	(s)	153
October	(h)	3	(s)	38	17	(s)	(s)	92	5	152	(s)	156
November	(h)	3	(s)	36	17	(s)	(s)	87	5	146	(s)	150
December	(h)	4	(s)	35	17	(s)	(s)	92	6	150	(s)	155
Total	(h)	39	2	439	209	2	5	1,093	61	1,812	4	1,855
2012 January	(h)	4	(s)	32	16	(s)	(s)	87	5	141	(s)	146
February	(h)	4	(s)	32	16	(s)	(s)	86	4	138	(s)	142
March	(h)	3	(s)	34	17	(s)	(s)	92	5	149	(s)	152
April	(h)	3	(s)	35	16	(s)	(s)	90	5	147	(s)	151
May	(h)	3	(s)	37	18	(s)	(s)	95	3	154	(s)	157
June	(h)	3	(s)	36	19	(s)	(s)	93	4	152	(s)	155
July	(h)	3	(s)	37	18	(s)	(s)	94	5	154	(s)	158
August	(h)	3	(s)	38	18	(s)	(s)	97	4	157	(s)	161
September	(h)	3	(s)	35	17	(s)	(s)	88	3	144	(s)	147
October	(h)	3	(s)	37	17	(s)	(s)	92	3	150	(s)	153
November	(h)	3	(s)	35	17	(s)	(s)	88	3	143	(s)	147
December	(h)	4	(s)	34	17	(s)	(s)	89	2	142	(s)	146
Total	(h)	41	2	422	206	2	5	1,089	45	1,771	4	1,816
2013 January	(h)	5	(s)	34	16	(s)	(s)	87	4	142	(s)	147
February	(h)	4	(s)	31	15	(s)	(s)	81	3	130	(s)	134
March	(h)	4	(s)	35	17	(s)	(s)	91	5	149	(s)	153
April	(h)	3	(s)	36	17	(s)	(s)	90	3	146	(s)	149
May	(h)	3	(s)	37	18	(s)	(s)	95	2	153	(s)	156
June	(h)	3	(s)	37	17	(s)	(s)	92	3	150	(s)	153
6-Month Total	(h)	21	1	209	100	1	2	535	20	869	2	892
2012 6-Month Total	(h)	21	1	206	102	1	2	543	26	880	2	903
2011 6-Month Total	(h)	20	1	215	103	1	3	541	34	898	2	920

^a Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Liquefied petroleum gases.

^e Finished motor gasoline, excluding fuel ethanol.

^f Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

^g Excludes emissions from biomass energy consumption. See Table 12.7.

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

(s)=Less than 0.5 million metric tons.

Notes: • Data are estimates for carbon dioxide emissions from energy consumption, including the nonfuel use of fossil fuels. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#environment> for all available data beginning in 1973.

Sources: See end of section.

Table 12.6 Carbon Dioxide Emissions From Energy Consumption: Electric Power Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Natural Gas ^b	Petroleum				Geo-thermal	Non-Biomass Waste ^d	Total ^e
			Distillate Fuel Oil ^c	Petroleum Coke	Residual Fuel Oil	Total			
1973 Total	812	199	20	2	254	276	NA	NA	1,286
1975 Total	824	172	17	(s)	231	248	NA	NA	1,244
1980 Total	1,137	200	12	1	194	207	NA	NA	1,544
1985 Total	1,367	166	6	1	79	86	NA	NA	1,619
1990 Total	1,548	176	7	3	92	102	(s)	6	1,831
1995 Total	1,661	228	8	8	45	61	(s)	10	1,960
1996 Total	1,752	205	8	8	50	66	(s)	10	2,033
1997 Total	1,797	219	8	10	56	75	(s)	10	2,101
1998 Total	1,828	248	10	13	82	105	(s)	10	2,192
1999 Total	1,836	260	10	11	76	97	(s)	10	2,204
2000 Total	1,927	281	13	10	69	91	(s)	10	2,310
2001 Total	1,870	290	12	11	79	102	(s)	11	2,273
2002 Total	1,890	306	9	18	52	79	(s)	13	2,288
2003 Total	1,931	278	12	18	69	98	(s)	11	2,319
2004 Total	1,943	297	8	23	69	100	(s)	11	2,352
2005 Total	1,984	319	8	25	69	102	(s)	11	2,417
2006 Total	1,954	338	5	22	28	56	(s)	12	2,359
2007 Total	1,987	372	7	17	31	55	(s)	11	2,426
2008 Total	1,959	362	5	16	19	40	(s)	12	2,374
2009 Total	1,741	373	5	14	14	34	(s)	11	2,159
2010 Total	1,828	399	6	15	12	33	(s)	11	2,271
2011 January	166	29	1	2	1	3	(s)	1	200
February	136	26	(s)	1	1	2	(s)	1	165
March	134	26	(s)	2	1	3	(s)	1	163
April	124	28	(s)	1	1	2	(s)	1	155
May	135	31	(s)	1	1	2	(s)	1	169
June	155	38	(s)	1	1	2	(s)	1	196
July	174	51	(s)	2	1	3	(s)	1	228
August	170	50	(s)	1	1	2	(s)	1	223
September	141	37	(s)	1	(s)	2	(s)	1	182
October	128	31	(s)	1	(s)	2	(s)	1	162
November	124	29	(s)	1	(s)	2	(s)	1	155
December	136	33	(s)	1	(s)	2	(s)	1	172
Total	1,723	409	5	15	7	27	(s)	11	2,171
2012 January	130	35	(s)	1	1	2	(s)	1	168
February	115	35	(s)	1	(s)	2	(s)	1	153
March	105	37	(s)	1	(s)	1	(s)	1	144
April	95	39	(s)	(s)	(s)	1	(s)	1	136
May	115	44	(s)	1	(s)	1	(s)	1	162
June	131	48	(s)	1	1	2	(s)	1	182
July	159	59	(s)	1	1	2	(s)	1	221
August	152	54	(s)	1	1	2	(s)	1	209
September	127	44	(s)	1	(s)	2	(s)	1	173
October	122	36	(s)	1	(s)	1	(s)	1	161
November	128	31	(s)	1	(s)	1	(s)	1	162
December	134	32	(s)	1	(s)	1	(s)	1	168
Total	1,514	494	4	9	6	19	(s)	11	2,039
2013 January	138	34	(s)	1	1	2	(s)	1	175
February	123	31	(s)	1	1	2	(s)	1	156
March	129	33	(s)	1	(s)	2	(s)	1	164
April	112	30	(s)	1	(s)	2	(s)	1	145
May	119	33	(s)	1	(s)	2	(s)	1	155
June	138	40	(s)	1	(s)	2	(s)	1	181
6-Month Total	758	201	2	6	3	11	(s)	6	976
2012 6-Month Total	692	238	2	5	3	9	(s)	6	945
2011 6-Month Total	850	178	3	8	4	14	(s)	6	1,048

^a Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Municipal solid waste from non-biogenic sources, and tire-derived fuels.

^e Excludes emissions from biomass energy consumption. See Table 12.7.

NA=Not available. (s)=Less than 0.5 million metric tons.

Notes: • Data are estimates for carbon dioxide emissions from energy consumption. See "Section 12 Methodology and Sources" at end of section.

• See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#environment> for all available data beginning in 1973.

Sources: See end of section.

Table 12.7 Carbon Dioxide Emissions From Biomass Energy Consumption
(Million Metric Tons of Carbon Dioxide^a)

	By Source					By Sector					
	Wood ^b	Biomass Waste ^c	Fuel Ethanol ^d	Bio-diesel	Total	Residential	Commercial ^e	Industrial ^f	Transportation	Electric Power ^g	Total
1973 Total	143	(s)	NA	NA	143	33	1	109	NA	(s)	143
1975 Total	140	(s)	NA	NA	141	40	1	100	NA	(s)	141
1980 Total	232	(s)	NA	NA	232	80	2	150	NA	(s)	232
1985 Total	252	14	3	NA	270	95	2	168	3	1	270
1990 Total	208	24	4	NA	237	54	8	147	4	23	237
1995 Total	222	30	8	NA	260	49	9	166	8	28	260
1996 Total	229	32	6	NA	266	51	10	170	6	30	266
1997 Total	222	30	7	NA	259	40	10	172	7	30	259
1998 Total	205	30	8	NA	242	36	9	160	8	30	242
1999 Total	208	29	8	NA	245	37	9	161	8	30	245
2000 Total	212	27	9	NA	248	39	9	161	9	29	248
2001 Total	188	33	10	(s)	231	35	9	147	10	31	231
2002 Total	187	36	12	(s)	235	36	9	144	12	35	235
2003 Total	188	36	16	(s)	240	38	9	141	16	37	240
2004 Total	199	35	20	(s)	255	38	10	151	20	36	255
2005 Total	200	37	23	1	261	40	10	150	23	37	261
2006 Total	197	36	31	2	266	36	9	151	33	38	266
2007 Total	196	37	39	3	276	39	9	146	41	39	276
2008 Total	193	39	55	3	290	44	10	139	57	40	290
2009 Total	181	41	62	3	287	47	10	125	64	41	287
2010 Total	186	42	73	2	303	41	10	136	74	42	303
2011 January	17	3	6	(s)	26	4	1	12	6	3	26
February	15	3	6	(s)	24	3	1	11	6	3	24
March	16	3	6	(s)	26	4	1	12	6	3	26
April	15	3	6	1	25	3	1	11	6	3	25
May	15	3	6	1	25	4	1	11	7	3	25
June	16	3	6	1	26	3	1	12	7	3	26
July	16	4	6	1	26	4	1	12	7	4	26
August	16	4	7	1	27	4	1	12	7	4	27
September	16	3	6	1	26	3	1	11	7	3	26
October	16	4	6	1	26	4	1	12	7	3	26
November	16	4	6	1	26	3	1	12	7	3	26
December	17	4	6	1	28	4	1	12	7	4	28
Total	189	42	73	8	312	42	11	139	80	40	312
2012 January	16	4	6	(s)	25	3	1	12	6	3	25
February	15	3	6	1	24	3	1	11	6	3	24
March	15	4	6	1	25	3	1	11	7	3	25
April	14	3	6	1	24	3	1	11	7	3	24
May	15	4	6	1	26	3	1	12	7	3	26
June	15	3	6	1	26	3	1	11	7	3	26
July	16	4	6	1	26	3	1	12	7	4	26
August	15	4	7	1	26	3	1	11	7	3	26
September	15	3	6	1	25	3	1	11	6	3	25
October	15	4	6	1	26	3	1	11	7	3	26
November	15	4	6	1	25	3	1	11	6	3	25
December	16	4	6	(s)	26	3	1	12	6	4	26
Total	182	42	73	8	306	39	10	137	80	39	306
2013 January	16	4	6	1	26	3	1	12	6	3	26
February	14	3	5	1	24	3	1	11	6	3	24
March	16	4	6	1	26	3	1	12	7	3	26
April	14	3	6	1	25	3	1	11	7	3	25
May	15	4	7	1	26	3	1	11	7	3	26
June	15	4	6	1	26	3	1	11	7	3	26
6-Month Total	90	21	37	5	153	20	5	68	41	19	153
2012 6-Month Total	90	21	36	4	151	20	5	68	40	19	151
2011 6-Month Total	93	20	36	3	152	21	5	68	38	19	152

^a Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.
^b Wood and wood-derived fuels.
^c Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass.
^d Fuel ethanol minus denaturant.
^e Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants.
^f Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants.
^g 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.

NA=Not available. (s)=Less than 0.5 million metric tons.
 Notes: • Carbon dioxide emissions from biomass energy consumption are excluded from the energy-related carbon dioxide emissions reported in Tables 12.1–12.6. See Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary.
 • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
 Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#environment> for all available data beginning in 1973.
 Sources: See end of section.

Environment

Note 1. Emissions of Carbon Dioxide and Other Greenhouse Gases. Greenhouse gases are those gases—such as water vapor, carbon dioxide (CO₂), methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride—that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

Energy-related carbon dioxide emissions account for about 98 percent of U.S. CO₂ emissions. The vast majority of CO₂ emissions come from fossil fuel combustion, with smaller amounts from the nonfuel use of fossil fuels, as well as from electricity generation using geothermal energy and non-biomass waste. Other sources of CO₂ emissions include industrial processes, such as cement and limestone production. Data in the U.S. Energy Information Administration's (EIA) *Monthly Energy Review (MER)* Tables 12.1–12.6 are estimates for U.S. CO₂ emissions from energy consumption, including the nonfuel use of fossil fuels (excluded are estimates for CO₂ emissions from biomass energy consumption, which appear in Table 12.7).

For annual U.S. estimates for emissions of CO₂ from all sources, as well as for emissions of other greenhouse gases, see EIA's *Emissions of Greenhouse Gases Report* at http://www.eia.gov/environment/emissions/ghg_report/.

Note 2. Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion. Carbon dioxide (CO₂) emissions from the combustion of biomass to produce energy are excluded from the energy-related CO₂ emissions reported in MER Tables 12.1–12.6, but appear in Table 12.7. According to current international convention (see the Intergovernmental Panel on Climate Change's "2006 IPCC Guidelines for National Greenhouse Gas Inventories"), carbon released through biomass combustion is excluded from reported energy-related emissions. The release of carbon from biomass combustion is assumed to be balanced by the uptake of carbon when the feedstock is grown, resulting in zero net emissions over some period of time. (This is not to say that biomass energy is carbon-neutral. Energy inputs are required in order to grow, fertilize, and harvest the feedstock and to produce and process the biomass into fuels.)

However, analysts have debated whether increased use of biomass energy may result in a decline in terrestrial carbon stocks, leading to a net positive release of carbon rather than the zero net release assumed by its exclusion from reported energy-related emissions. For example, the clearing of forests for biofuel crops could result in an initial release of carbon that is not fully recaptured in subsequent use of the land for agriculture.

To reflect the potential net emissions, the international convention for greenhouse gas inventories is to report

biomass emissions in the category "agriculture, forestry, and other land use," usually based on estimates of net changes in carbon stocks over time.

This indirect accounting of CO₂ emissions from biomass can potentially lead to confusion in accounting for and understanding the flow of CO₂ emissions within energy and non-energy systems. In recognition of this issue, reporting of CO₂ emissions from biomass combustion alongside other energy-related CO₂ emissions offers an alternative accounting treatment. It is important, however, to avoid misinterpreting emissions from fossil energy and biomass energy sources as necessarily additive. Instead, the combined total of direct CO₂ emissions from biomass and energy-related CO₂ emissions implicitly assumes that none of the carbon emitted was previously or subsequently reabsorbed in terrestrial sinks or that other emissions sources offset any such sequestration.

Section 12 Methodology and Sources

To estimate carbon dioxide emissions from energy consumption for the *Monthly Energy Review (MER)*, Tables 12.1–12.7, the U.S. Energy Information Administration (EIA) uses the following methodology and sources:

Step 1. Determine Fuel Consumption

Coal—Coal sectoral (residential, commercial, coke plants, other industrial, transportation, electric power) consumption data in thousand short tons are from MER Table 6.2. Coal sectoral consumption data are converted to trillion Btu by multiplying by the coal heat content factors in MER Table A5.

Coal Coke Net Imports—Coal coke net imports data in trillion Btu are derived from coal coke imports and exports data in MER Tables 1.4a and 1.4b.

Natural Gas (excluding supplemental gaseous fuels)—Natural gas sectoral consumption data in trillion Btu are from MER Tables 2.2–2.6.

Petroleum—Total and sectoral consumption (product supplied) data in thousand barrels per day for asphalt and road oil, aviation gasoline, distillate fuel oil, jet fuel, kerosene, liquefied petroleum gases (LPG), lubricants, motor gasoline, petroleum coke, and residual fuel oil are from MER Tables 3.5 and 3.7a–3.7c. For the component products of LPG (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene) and "other petroleum" (aviation gasoline blending components, crude oil, motor gasoline blending components, naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, pentanes plus, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products), consumption (product supplied) data in thousand barrels per day are from EIA's *Petroleum Supply Annual (PSA)*, *Petroleum Supply Monthly (PSM)*, and earlier

publications (see sources for MER Table 3.5). Petroleum consumption data by product are converted to trillion Btu by multiplying by the petroleum heat content factors in MER Table A1 (Table A3 for motor gasoline).

Biomass—Sectoral consumption data in trillion Btu for wood, biomass waste, fuel ethanol (minus denaturant), and biodiesel are from MER Tables 10.2a–10.2c.

Step 2. Remove Biofuels From Petroleum

Distillate Fuel Oil—Beginning in 2009, the distillate fuel oil data (for total and transportation sector) in Step 1 include biodiesel, a non-fossil renewable fuel. To remove the biodiesel portion from distillate fuel oil, data in thousand barrels per day for refinery and blender net inputs of renewable diesel fuel (from the PSA/PSM) are converted to trillion Btu by multiplying by the biodiesel heat content factor in MER Table A3, and then subtracted from the distillate fuel oil consumption values.

Motor Gasoline—Beginning in 1993, the motor gasoline data (for total, commercial sector, industrial sector, and transportation sector) in Step 1 include fuel ethanol, a non-fossil renewable fuel. To remove the fuel ethanol portion from motor gasoline, data in trillion Btu for fuel ethanol consumption (from MER Tables 10.2a, 10.2b, and 10.3) are subtracted from the motor gasoline consumption values. (Note that about 2 percent of fuel ethanol is fossil-based petroleum denaturant, to make the fuel ethanol undrinkable. For 1993–2008, petroleum denaturant is double counted in the PSA product supplied statistics, in both the original product category—e.g., pentanes plus—and also in the finished motor gasoline category; for this time period for MER Section 12, petroleum denaturant is removed along with the fuel ethanol from motor gasoline, but left in the original product. Beginning in 2009, petroleum denaturant is counted only in the PSA/PSM product supplied statistics for motor gasoline; for this time period for MER Section 12, petroleum denaturant is left in motor gasoline.)

Step 3. Remove Carbon Sequestered by Nonfuel Use

The following fuels have industrial nonfuel uses as chemical feedstocks and other products: coal, natural gas, asphalt and road oil, distillate fuel oil, liquefied petroleum gases (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene), lubricants (which have industrial and transportation nonfuel uses), naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, pentanes plus, petroleum coke, residual fuel oil, special naphthas, still gas, waxes, and miscellaneous petroleum products. In the nonfuel use of these fuels, some of the carbon is sequestered, and is thus subtracted from the fuel consumption values in Steps 1 and 2.

Estimates of annual nonfuel use and associated carbon sequestration are developed by EIA using the methodology

detailed in “Documentation for *Emissions of Greenhouse Gases in the United States 2008*” at [http://www.eia.gov/oiaf/1605/ggprt/documentation/pdf/0638\(2006\).pdf](http://www.eia.gov/oiaf/1605/ggprt/documentation/pdf/0638(2006).pdf).

To obtain monthly estimates of nonfuel use and associated carbon sequestration, monthly patterns for industrial consumption and product supplied data series are used. For coal nonfuel use, the monthly pattern for coke plants coal consumption from MER Table 6.2 is used. For natural gas, the monthly pattern for other industrial non-CHP natural gas consumption from MER Table 4.3 is used. For distillate fuel oil, petroleum coke, and residual fuel oil, the monthly patterns for industrial consumption from MER Table 3.7b are used. For the other petroleum products, the monthly patterns for product supplied from the PSA and PSM are used.

Step 4. Determine Carbon Dioxide Emissions From Energy Consumption

Carbon dioxide (CO₂) emissions data in million metric tons are calculated by multiplying consumption values in trillion Btu from Steps 1 and 2 (minus the carbon sequestered in nonfuel use in Step 3) by the CO₂ emissions factors at http://www.eia.gov/oiaf/1605/ggprt/excel/CO2_coefs_09_v2.xls. Beginning in 2010, the 2009 factors are used.

Coal—CO₂ emissions for coal are calculated for each sector (residential, commercial, coke plants, other industrial, transportation, electric power). Total coal emissions are the sum of the sectoral coal emissions.

Coal Coke Net Imports—CO₂ emissions for coal coke net imports are calculated.

Natural Gas—CO₂ emissions for natural gas are calculated for each sector (residential, commercial, industrial, transportation, electric power). Total natural gas emissions are the sum of the sectoral natural gas emissions.

Petroleum—CO₂ emissions are calculated for each petroleum product. Total petroleum emissions are the sum of the product emissions. Total LPG emissions are the sum of the emissions for the component products (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene); residential, commercial, and transportation sector LPG emissions are estimated by multiplying consumption values in trillion Btu from MER Tables 3.8a and 3.8c by the propane emissions factor; industrial sector LPG emissions are estimated as total LPG emissions minus emissions by the other sectors.

Geothermal and Non-Biomass Waste—Annual CO₂ emissions data for geothermal and non-biomass waste are EIA estimates based on Form EIA-923, “Power Plant Operations Report” (and predecessor forms). Monthly estimates are created by dividing the annual data by the number of days in the year and then multiplying by the number of days in the month. (Annual estimates for the current year are set equal to those of the previous year.)

Biomass—CO₂ emissions for wood, biomass waste, fuel ethanol (minus denaturant), and biodiesel are calculated for each sector. Total emissions for each biomass fuel are the sum of the sectoral emissions. The following factors, in million metric tons CO₂ per quadrillion Btu, are used: wood—93.80; biomass waste—90.70; fuel ethanol—68.44; and biodiesel—73.84. For 1973–1988, the biomass portion

of waste in MER Tables 10.2a–10.2c is estimated as 67 percent; for 1989–2000, the biomass portion of waste is estimated as 67 percent in 1989 to 58 percent in 2000, based on the biogenic shares of total municipal solid waste shown in EIA’s “Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy,” Table 1 at <http://www.eia.gov/cneaf/solar.renewables/page/mswaste/msw.pdf>.

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Appendix A

British Thermal Unit Conversion Factors

The thermal conversion factors presented in the following tables can be used to estimate the heat content in British thermal units (Btu) of a given amount of energy measured in physical units, such as barrels or cubic feet. For example, 10 barrels of asphalt has a heat content of approximately 66.36 million Btu (10 barrels x 6.636 million Btu per barrel = 66.36 million Btu).

The heat content rates (i.e., thermal conversion factors) provided in this section represent the gross (or higher or upper) energy content of the fuels. Gross heat content rates are applied in all Btu calculations for the *Monthly Energy Review* and are commonly used in energy calculations in the United States; net (or lower) heat content rates are typically used in European energy calculations. The difference between the two rates is the amount of energy that is consumed to vaporize water that is created during the combustion process. Generally, the difference ranges from 2 percent to 10 percent, depending on the specific fuel and its hydrogen content. Some fuels, such as unseasoned wood, can be more than 40 percent different in their gross

and net heat content rates. See “Heat Content” and “British Thermal Unit (Btu)” in the Glossary for more information.

Thermal conversion factors for hydrocarbon mixes (Table A1) are weighted averages of the thermal conversion factors for each hydrocarbon included in the mix. For example, in calculating the thermal conversion factor for a 60-40 butane-propane mixture, the thermal conversion factor for butane is weighted 1.5 times the thermal conversion factor for propane.

In general, the annual thermal conversion factors presented in Tables A2 through A6 are computed from final annual data or from the best available data and labeled “preliminary.” Often, the previous year’s factor is used as a preliminary value until data become available to calculate the factor appropriate to the year. The source of each factor is described in the section entitled “Thermal Conversion Factor Source Documentation,” which follows Table A6 in this appendix.

Table A1. Approximate Heat Content of Petroleum Products (Million Btu per Barrel)

Petroleum Product	Heat Content	Petroleum Product	Heat Content
Asphalt	6.636	Pentanes Plus	4.620
Aviation Gasoline	5.048	Petrochemical Feedstocks	
Butane	4.326	Naptha Less Than 401°F	5.248
Butane-Propane Mixture ^a	4.130	Other Oils Equal to or Greater Than 401°F	5.825
Distillate Fuel Oil ^b	5.825	Still Gas	6.000
Ethane	3.082	Petroleum Coke	6.024
Ethane-Propane Mixture ^c	3.308	Plant Condensate	5.418
Isobutane	3.974	Propane	3.836
Jet Fuel, Kerosene Type	5.670	Residual Fuel Oil	6.287
Jet Fuel, Naphtha Type	5.355	Road Oil	6.636
Kerosene	5.670	Special Naphthas	5.248
Lubricants	6.065	Still Gas	6.000
Motor Gasoline ^d		Unfinished Oils	5.825
Conventional	5.253	Unfractionated Stream	5.418
Reformulated	5.150	Waxes	5.537
Oxygenated	5.150	Miscellaneous	5.796
Natural Gasoline and Isopentane	4.620		

^a 60 percent butane and 40 percent propane.

^b Does not include biodiesel. See Table A3 for biodiesel heat contents.

^c 70 percent ethane and 30 percent propane.

^d See Table A3 for motor gasoline weighted heat contents beginning in 1994, and for fuel ethanol heat contents.

Note: The values in this table are for gross heat contents. See “Heat Content” in Glossary.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#appendices>.

Sources: See “Thermal Conversion Factor Source Documentation,” which follows Table A6.

Table A2. Approximate Heat Content of Petroleum Production, Imports, and Exports
(Million Btu per Barrel)

	Production		Imports			Exports		
	Crude Oil ^a	Natural Gas Plant Liquids	Crude Oil ^a	Petroleum Products	Total	Crude Oil ^a	Petroleum Products	Total
1950	5.800	4.522	5.943	6.263	6.080	5.800	5.751	5.766
1955	5.800	4.406	5.924	6.234	6.040	5.800	5.765	5.768
1960	5.800	4.295	5.911	6.161	6.021	5.800	5.835	5.834
1965	5.800	4.264	5.872	6.123	5.997	5.800	5.742	5.743
1970	5.800	4.146	5.822	6.088	5.985	5.800	5.811	5.810
1975	5.800	3.984	5.821	5.935	5.858	5.800	5.747	5.748
1980	5.800	3.914	5.812	5.748	5.796	5.800	5.841	5.820
1981	5.800	3.930	5.818	5.659	5.775	5.800	5.837	5.821
1982	5.800	3.872	5.826	5.664	5.775	5.800	5.829	5.820
1983	5.800	3.839	5.825	5.677	5.774	5.800	5.800	5.800
1984	5.800	3.812	5.823	5.613	5.745	5.800	5.867	5.850
1985	5.800	3.815	5.832	5.572	5.736	5.800	5.819	5.814
1986	5.800	3.797	5.903	5.624	5.808	5.800	5.839	5.832
1987	5.800	3.804	5.901	5.599	5.820	5.800	5.860	5.858
1988	5.800	3.800	5.900	5.618	5.820	5.800	5.842	5.840
1989	5.800	3.826	5.906	5.641	5.833	5.800	5.869	5.857
1990	5.800	3.822	5.934	5.614	5.849	5.800	5.838	5.833
1991	5.800	3.807	5.948	5.636	5.873	5.800	5.827	5.823
1992	5.800	3.804	5.953	5.623	5.877	5.800	5.774	5.777
1993	5.800	3.801	5.954	5.620	5.883	5.800	5.777	5.779
1994	5.800	3.794	5.950	5.534	5.861	5.800	5.777	5.779
1995	5.800	3.796	5.938	5.483	5.855	5.800	5.740	5.746
1996	5.800	3.777	5.947	5.468	5.847	5.800	5.728	5.736
1997	5.800	3.762	5.954	5.469	5.862	5.800	5.726	5.734
1998	5.800	3.769	5.953	5.462	5.861	5.800	5.710	5.720
1999	5.800	3.744	5.942	5.421	5.840	5.800	5.684	5.699
2000	5.800	3.733	5.959	5.432	5.849	5.800	5.651	5.658
2001	5.800	3.735	5.976	5.443	5.862	5.800	5.751	5.752
2002	5.800	3.729	5.971	5.451	5.863	5.800	5.687	5.688
2003	5.800	3.739	5.970	5.438	5.857	5.800	5.739	5.740
2004	5.800	3.724	5.981	5.475	5.863	5.800	5.753	5.754
2005	5.800	3.724	5.977	5.474	5.845	5.800	5.741	5.743
2006	5.800	3.712	5.980	5.454	5.842	5.800	5.723	5.724
2007	5.800	3.701	5.985	5.503	5.862	5.800	5.749	5.750
2008	5.800	3.706	5.990	5.479	5.866	5.800	5.762	5.762
2009	5.800	3.692	5.988	5.525	5.882	5.800	5.737	5.738
2010	5.800	3.674	5.989	5.557	5.894	5.800	5.670	5.672
2011	5.800	3.672	6.008	5.507	5.896	5.800	5.596	5.599
2012 ^P	5.800	3.684	6.021	5.485	5.915	5.800	5.584	5.588
2013 ^E	5.800	3.684	6.021	5.485	5.915	5.800	5.584	5.588

^a Includes lease condensate.

P=Preliminary, E=Estimate.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#appendices> for all data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for all data beginning in 1973.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table A3. Approximate Heat Content of Petroleum Consumption and Biofuels Production
(Million Btu per Barrel)

	Total Petroleum ^a Consumption by Sector						Liquefied Petroleum Gases Consumption ^f	Motor Gasoline Consumption ^g	Fuel Ethanol ^h	Fuel Ethanol Feed-stock Factor ⁱ	Biodiesel	Biodiesel Feed-stock Factor ⁱ
	Residential	Commercial ^b	Industrial ^b	Transportation ^{b,c}	Electric Power ^{d,e}	Total ^{b,c}						
1950	5.473	5.817	5.953	5.461	6.254	5.649	4.011	5.253	NA	NA	NA	NA
1955	5.469	5.781	5.881	5.407	6.254	5.591	4.011	5.253	NA	NA	NA	NA
1960	5.417	5.781	5.818	5.387	6.267	5.555	4.011	5.253	NA	NA	NA	NA
1965	5.364	5.760	5.748	5.386	6.267	5.532	4.011	5.253	NA	NA	NA	NA
1970	5.260	5.708	5.595	5.393	6.252	5.503	^l 3.779	5.253	NA	NA	NA	NA
1975	5.253	5.649	5.513	5.392	6.250	5.494	3.715	5.253	NA	NA	NA	NA
1980	5.321	5.751	5.366	5.441	6.254	5.479	3.674	5.253	3.563	6.586	NA	NA
1981	5.283	5.693	5.299	5.433	6.258	5.448	3.643	5.253	3.563	6.562	NA	NA
1982	5.266	5.698	5.247	5.423	6.258	5.415	3.615	5.253	3.563	6.539	NA	NA
1983	5.140	5.591	5.254	5.416	6.255	5.406	3.614	5.253	3.563	6.515	NA	NA
1984	5.307	5.657	5.207	5.418	6.251	5.395	3.599	5.253	3.563	6.492	NA	NA
1985	5.263	5.598	5.199	5.423	6.247	5.387	3.603	5.253	3.563	6.469	NA	NA
1986	5.268	5.632	5.269	5.426	6.257	5.418	3.640	5.253	3.563	6.446	NA	NA
1987	5.239	5.594	5.233	5.429	6.249	5.403	3.659	5.253	3.563	6.423	NA	NA
1988	5.257	5.597	5.228	5.433	6.250	5.410	3.652	5.253	3.563	6.400	NA	NA
1989	5.194	5.549	5.219	5.438	^d 6.240	5.410	3.683	5.253	3.563	6.377	NA	NA
1990	5.145	5.553	5.253	5.442	6.244	5.411	3.625	5.253	3.563	6.355	NA	NA
1991	5.094	5.528	5.167	5.441	6.246	5.384	3.614	5.253	3.563	6.332	NA	NA
1992	5.124	5.513	5.168	5.443	6.238	5.378	3.624	5.253	3.563	6.309	NA	NA
1993	5.102	^b 5.505	^b 5.178	^b 5.436	6.230	^b 5.379	3.606	5.253	3.563	6.287	NA	NA
1994	5.098	5.515	5.150	5.424	6.213	5.361	3.635	^g 5.230	3.563	6.264	NA	NA
1995	5.063	5.478	5.121	5.417	6.188	5.341	3.623	5.215	3.563	6.242	NA	NA
1996	4.998	5.433	5.114	5.420	6.195	5.336	3.613	5.216	3.563	6.220	NA	NA
1997	4.989	5.391	5.120	5.416	6.199	5.336	3.616	5.213	3.563	6.198	NA	NA
1998	4.975	5.365	5.137	5.413	6.210	5.349	3.614	5.212	3.563	6.176	NA	NA
1999	4.902	5.291	5.092	5.413	6.205	5.328	3.616	5.211	3.563	6.167	NA	NA
2000	4.908	5.316	5.057	5.422	6.189	5.326	3.607	5.210	3.563	6.159	NA	NA
2001	4.937	5.325	5.142	5.412	6.199	5.345	3.614	5.210	3.563	6.151	5.359	5.433
2002	4.886	5.293	5.093	5.411	6.173	5.324	3.613	5.208	3.563	6.143	5.359	5.433
2003	4.921	5.316	5.144	5.407	6.182	5.340	3.629	5.207	3.563	6.116	5.359	5.433
2004	4.953	5.328	5.144	5.421	6.192	5.350	3.618	5.215	3.563	6.089	5.359	5.433
2005	4.916	5.364	5.178	5.427	6.188	5.365	3.620	5.218	3.563	6.063	5.359	5.433
2006	4.894	5.310	5.160	5.431	6.143	5.353	3.605	5.218	3.563	6.036	5.359	5.433
2007	4.850	5.298	5.127	5.434	6.151	5.346	3.591	5.219	3.563	6.009	5.359	5.433
2008	4.790	5.186	5.154	5.424	6.123	5.339	3.600	5.218	3.563	5.983	5.359	5.433
2009	4.679	5.250	5.019	^c 5.414	6.105	^c 5.301	3.558	5.218	3.563	5.957	5.359	5.433
2010	4.679	5.228	4.985	5.423	6.084	5.297	3.557	5.218	3.561	5.931	5.359	5.433
2011	4.658	5.219	4.949	5.425	6.058	5.286	3.541	5.218	3.560	5.905	5.359	5.433
2012	^E 4.630	^E 5.185	^E 4.933	^E 5.416	^P 6.064	^P 5.272	^P 3.539	^P 5.219	^P 3.560	^E 5.880	5.359	5.433
2013	^E 4.630	^E 5.185	^E 4.933	^E 5.416	^E 6.064	^E 5.272	^E 3.539	^E 5.219	^E 3.560	^E 5.880	5.359	5.433

^a Petroleum products supplied, including natural gas plant liquids and crude oil burned directly as fuel. Quantity-weighted averages of the petroleum products included in each category are calculated by using heat content values shown in Table A1.

^b Beginning in 1993, includes fuel ethanol blended into motor gasoline.

^c Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

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

^e Electric power sector factors are weighted average heat contents for distillate fuel oil, petroleum coke, and residual fuel oil; they exclude other liquids.

^f There is a discontinuity in this time series between 1966 and 1967; beginning in 1967, the single constant factor is replaced by a quantity-weighted factor—quantity-weighted averages of the major components of liquefied petroleum gases are calculated by using heat content values shown in Table A1.

^g There is a discontinuity in this time series between 1993 and 1994; beginning in 1994, the single constant factor is replaced by a quantity-weighted factor—quantity-weighted averages of the major components of motor gasoline, including fuel ethanol, are calculated by using heat content values shown in Table A1.

^h Includes denaturant (petroleum added to ethanol to make it undrinkable). Fuel ethanol factors are weighted average heat contents for undenatured ethanol (3.539 million Btu per barrel), pentanes plus used as denaturant (4.620 million Btu per barrel), and conventional motor gasoline and motor gasoline blending components used as denaturant (5.253 million Btu per barrel). The factor for 2009 is used as the estimated factor for 1980–2008.

ⁱ Corn input to the production of undenatured ethanol (million Btu corn per barrel undenatured ethanol), used as the factor to estimate total biomass inputs to the production of undenatured ethanol. Observed ethanol yields (gallons undenatured ethanol per bushel of corn) are 2.5 in 1980, 2.666 in 1998, 2.68 in 2002, and 2.764 in 2009; yields in other years are estimated. Corn is assumed to have a gross heat content of 0.392 million Btu per bushel. Undenatured ethanol is assumed to have a gross heat content of 3.539 million Btu per barrel.

^j Soybean oil input to the production of biodiesel (million Btu soybean oil per barrel biodiesel), used as the factor to estimate total biomass inputs to the production of biodiesel. It is assumed that 7.65 pounds of soybean oil are needed to produce one gallon of biodiesel, and 5.433 million Btu of soybean oil are needed to produce one barrel of biodiesel. Soybean oil is assumed to have a gross heat content of 16,909 Btu per pound, or 5.483 million Btu per barrel. Biodiesel is assumed to have a gross heat content of 17,253 Btu per pound, or 5.359 million Btu per barrel.

^P—Preliminary. ^E—Estimate. NA=Not available.

Note: The heat content values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#appendices> for all data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for all data beginning in 1973.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Selected years of data from 1949 through 1972 have been added to this table.
For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table A4. Approximate Heat Content of Natural Gas
(Btu per Cubic Foot)

	Production		Consumption ^a			Imports	Exports
	Marketed	Dry	End-Use Sectors ^b	Electric Power Sector ^c	Total		
1950	1,119	1,035	1,035	1,035	1,035	--	1,035
1955	1,120	1,035	1,035	1,035	1,035	1,035	1,035
1960	1,107	1,035	1,035	1,035	1,035	1,035	1,035
1965	1,101	1,032	1,032	1,032	1,032	1,032	1,032
1970	1,102	1,031	1,031	1,031	1,031	1,031	1,031
1975	1,095	1,021	1,020	1,026	1,021	1,026	1,014
1980	1,098	1,026	1,024	1,035	1,026	1,022	1,013
1981	1,103	1,027	1,025	1,035	1,027	1,014	1,011
1982	1,107	1,028	1,026	1,036	1,028	1,018	1,011
1983	1,115	1,031	1,031	1,030	1,031	1,024	1,010
1984	1,109	1,031	1,030	1,035	1,031	1,005	1,010
1985	1,112	1,032	1,031	1,038	1,032	1,002	1,011
1986	1,110	1,030	1,029	1,034	1,030	997	1,008
1987	1,112	1,031	1,031	1,032	1,031	999	1,011
1988	1,109	1,029	1,029	1,028	1,029	1,002	1,018
1989	1,107	1,031	1,031	^c 1,028	1,031	1,004	1,019
1990	1,105	1,029	1,030	1,027	1,029	1,012	1,018
1991	1,108	1,030	1,031	1,025	1,030	1,014	1,022
1992	1,110	1,030	1,031	1,025	1,030	1,011	1,018
1993	1,106	1,027	1,028	1,025	1,027	1,020	1,016
1994	1,105	1,028	1,029	1,025	1,028	1,022	1,011
1995	1,106	1,026	1,027	1,021	1,026	1,021	1,011
1996	1,109	1,026	1,027	1,020	1,026	1,022	1,011
1997	1,107	1,026	1,027	1,020	1,026	1,023	1,011
1998	1,109	1,031	1,033	1,024	1,031	1,023	1,011
1999	1,107	1,027	1,028	1,022	1,027	1,022	1,006
2000	1,107	1,025	1,026	1,021	1,025	1,023	1,006
2001	1,105	1,028	1,029	1,026	1,028	1,023	1,010
2002	1,103	1,024	1,025	1,020	1,024	1,022	1,008
2003	1,103	1,028	1,029	1,025	1,028	1,025	1,009
2004	1,104	1,026	1,026	1,027	1,026	1,025	1,009
2005	1,104	1,028	1,028	1,028	1,028	1,025	1,009
2006	1,103	1,028	1,028	1,028	1,028	1,025	1,009
2007	1,102	1,027	1,027	1,027	1,027	1,025	1,009
2008	1,100	1,027	1,027	1,027	1,027	1,025	1,009
2009	1,101	1,025	1,025	1,025	1,025	1,025	1,009
2010	1,098	1,023	1,023	1,022	1,023	1,025	1,009
2011	1,094	1,022	1,022	1,021	1,022	1,025	1,009
2012	^E 1,094	^E 1,022	^E 1,022	^P 1,022	^E 1,022	^E 1,025	^E 1,009
2013	^E 1,094	^E 1,022	^E 1,022	^E 1,022	^E 1,022	^E 1,025	^E 1,009

^a Consumption factors are for natural gas, plus a small amount of supplemental gaseous fuels.

^b Residential, commercial, industrial, and transportation sectors.

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

P=Preliminary. E=Estimate. -- =Not applicable.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#appendices> for all data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for all data beginning in 1973.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table A5. Approximate Heat Content of Coal and Coal Coke
(Million Btu per Short Ton)

	Coal									Coal Coke	
	Production ^a	Waste Coal Supplied ^b	Consumption					Imports	Exports		Imports and Exports
			Residential and Commercial Sectors ^c	Industrial Sector		Electric Power Sector ^{e,f}	Total				
				Coke Plants	Other ^d						
1950	25.090	NA	24.461	26.798	24.820	23.937	24.989	25.020	26.788	24.800	
1955	25.201	NA	24.373	26.794	24.821	24.056	24.982	25.000	26.907	24.800	
1960	24.906	NA	24.226	26.791	24.609	23.927	24.713	25.003	26.939	24.800	
1965	24.775	NA	24.028	26.787	24.385	23.780	24.537	25.000	26.973	24.800	
1970	23.842	NA	23.203	26.784	22.983	22.573	23.440	25.000	26.982	24.800	
1975	22.897	NA	22.261	26.782	22.436	21.642	22.506	25.000	26.562	24.800	
1980	22.415	NA	22.543	26.790	22.690	21.295	21.947	25.000	26.384	24.800	
1981	22.308	NA	22.474	26.794	22.585	21.085	21.713	25.000	26.160	24.800	
1982	22.239	NA	22.695	26.797	22.712	21.194	21.674	25.000	26.223	24.800	
1983	22.052	NA	22.775	26.798	22.691	21.133	21.576	25.000	26.291	24.800	
1984	22.010	NA	22.844	26.799	22.543	21.101	21.573	25.000	26.402	24.800	
1985	21.870	NA	22.646	26.798	22.020	20.959	21.366	25.000	26.307	24.800	
1986	21.913	NA	22.947	26.798	22.198	21.084	21.462	25.000	26.292	24.800	
1987	21.922	NA	23.404	26.799	22.381	21.136	21.517	25.000	26.291	24.800	
1988	21.823	NA	23.571	26.799	22.360	20.900	21.328	25.000	26.299	24.800	
1989	21.765	^b 10.391	23.650	26.800	22.347	^e 20.898	21.307	25.000	26.160	24.800	
1990	21.822	9.303	23.137	26.799	22.457	20.779	21.197	25.000	26.202	24.800	
1991	21.681	10.758	23.114	26.799	22.460	20.730	21.120	25.000	26.188	24.800	
1992	21.682	10.396	23.105	26.799	22.250	20.709	21.068	25.000	26.161	24.800	
1993	21.418	10.638	22.994	26.800	22.123	20.677	21.010	25.000	26.335	24.800	
1994	21.394	11.097	23.112	26.800	22.068	20.589	20.929	25.000	26.329	24.800	
1995	21.326	11.722	23.118	26.800	21.950	20.543	20.880	25.000	26.180	24.800	
1996	21.322	12.147	23.011	26.800	22.105	20.547	20.870	25.000	26.174	24.800	
1997	21.296	12.158	22.494	26.800	22.172	20.518	20.830	25.000	26.251	24.800	
1998	21.418	12.639	21.620	27.426	23.164	20.516	20.881	25.000	26.800	24.800	
1999	21.070	12.552	23.880	27.426	22.489	20.490	20.818	25.000	26.081	24.800	
2000	21.072	12.360	25.020	27.426	22.433	20.511	20.828	25.000	26.117	24.800	
2001	^a 20.772	12.169	24.909	27.426	22.622	20.337	20.671	25.000	25.998	24.800	
2002	20.673	12.165	22.962	27.426	22.562	20.238	20.541	25.000	26.062	24.800	
2003	20.499	12.360	22.242	27.425	22.468	20.082	20.387	25.000	25.972	24.800	
2004	20.424	12.266	22.324	27.426	22.473	19.980	20.290	25.000	26.108	24.800	
2005	20.348	12.093	22.342	26.279	22.178	19.988	20.246	25.000	25.494	24.800	
2006	20.310	12.080	22.066	26.271	22.050	19.931	20.181	25.000	25.453	24.800	
2007	20.340	12.090	22.069	26.329	22.371	19.909	20.168	25.000	25.466	24.800	
2008	20.208	12.121	^c 21.887	26.281	22.348	19.713	19.977	25.000	25.399	24.800	
2009	19.963	12.076	22.059	26.334	21.893	19.521	19.742	25.000	25.633	24.800	
2010	20.173	11.960	21.826	26.296	21.005	19.623	19.829	25.000	25.713	24.800	
2011	20.142	11.604	21.179	26.300	21.738	19.341	19.605	25.000	25.645	24.800	
2012	^E 20.142	^E 11.604	^E 21.179	^E 26.300	^E 21.738	^P 19.223	^E 19.508	^E 25.000	^E 25.645	^E 24.800	
2013	^E 20.142	^E 11.604	^E 21.179	^E 26.300	^E 21.738	^E 19.223	^E 19.508	^E 25.000	^E 25.645	^E 24.800	

^a Beginning in 2001, includes a small amount of refuse recovery (coal recaptured from a refuse mine, and cleaned to reduce the concentration of noncombustible materials).

^b Waste coal (including fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste) consumed by the electric power and industrial sectors. Beginning in 1989, waste coal supplied is counted as a supply-side item to balance the same amount of waste coal included in "Consumption."

^c Through 2007, used as the thermal conversion factor for coal consumption by the residential and commercial sectors. Beginning in 2008, used as the thermal conversion factor for coal consumption by the commercial sector only.

^d Includes transportation. Excludes coal synfuel plants.

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

^f P=Preliminary. E=Estimate. NA=Not available.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#appendices> for all data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for all data beginning in 1973.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Table A6. Approximate Heat Rates for Electricity, and Heat Content of Electricity
(Btu per Kilowatthour)

	Approximate Heat Rates ^a for Electricity Net Generation						Heat Content ^j of Electricity ^k
	Fossil Fuels ^b				Nuclear ^h	Noncombustible Renewable Energy ^{g,i}	
	Coal ^c	Petroleum ^d	Natural Gas ^e	Total Fossil Fuels ^{f,g}			
1950	NA	NA	NA	14,030	--	14,030	3,412
1955	NA	NA	NA	11,699	--	11,699	3,412
1960	NA	NA	NA	10,760	11,629	10,760	3,412
1965	NA	NA	NA	10,453	11,804	10,453	3,412
1970	NA	NA	NA	10,494	10,977	10,494	3,412
1975	NA	NA	NA	10,406	11,013	10,406	3,412
1980	NA	NA	NA	10,388	10,908	10,388	3,412
1981	NA	NA	NA	10,453	11,030	10,453	3,412
1982	NA	NA	NA	10,454	11,073	10,454	3,412
1983	NA	NA	NA	10,520	10,905	10,520	3,412
1984	NA	NA	NA	10,440	10,843	10,440	3,412
1985	NA	NA	NA	10,447	10,622	10,447	3,412
1986	NA	NA	NA	10,446	10,579	10,446	3,412
1987	NA	NA	NA	10,419	10,442	10,419	3,412
1988	NA	NA	NA	10,324	10,602	10,324	3,412
1989	NA	NA	NA	10,432	10,583	10,432	3,412
1990	NA	NA	NA	10,402	10,582	10,402	3,412
1991	NA	NA	NA	10,436	10,484	10,436	3,412
1992	NA	NA	NA	10,342	10,471	10,342	3,412
1993	NA	NA	NA	10,309	10,504	10,309	3,412
1994	NA	NA	NA	10,316	10,452	10,316	3,412
1995	NA	NA	NA	10,312	10,507	10,312	3,412
1996	NA	NA	NA	10,340	10,503	10,340	3,412
1997	NA	NA	NA	10,213	10,494	10,213	3,412
1998	NA	NA	NA	10,197	10,491	10,197	3,412
1999	NA	NA	NA	10,226	10,450	10,226	3,412
2000	NA	NA	NA	10,201	10,429	10,201	3,412
2001	10,378	10,742	10,051	^b 10,333	10,443	10,333	3,412
2002	10,314	10,641	9,533	10,173	10,442	10,173	3,412
2003	10,297	10,610	9,207	10,125	10,421	10,125	3,412
2004	10,331	10,571	8,647	10,016	10,427	10,016	3,412
2005	10,373	10,631	8,551	9,999	10,436	9,999	3,412
2006	10,351	10,809	8,471	9,919	10,436	9,919	3,412
2007	10,375	10,794	8,403	9,884	10,485	9,884	3,412
2008	10,378	11,015	8,305	9,854	10,453	9,854	3,412
2009	10,414	10,923	8,160	9,760	10,460	9,760	3,412
2010	10,415	10,984	8,185	9,756	10,452	9,756	3,412
2011	10,444	10,829	8,152	9,716	10,464	9,716	3,412
2012	^E 10,444	^E 10,829	^E 8,152	^E 9,716	^E 10,464	^E 9,716	3,412
2013	^E 10,444	^E 10,829	^E 8,152	^E 9,716	^E 10,464	^E 9,716	3,412

^a The values in columns 1–6 of this table are for net heat rates. See "Heat Rate" in Glossary.
^b Through 2000, heat rates are for fossil-fueled steam-electric plants at electric utilities. Beginning in 2001, heat rates are for all fossil-fueled plants at electric utilities and electricity-only independent power producers.
^c Includes anthracite, bituminous coal, subbituminous coal, lignite, and, beginning in 2002, waste coal and coal synfuel.
^d Includes distillate fuel oil, residual fuel oil, jet fuel, kerosene, petroleum coke, and waste oil.
^e Includes natural gas and supplemental gaseous fuels.
^f Includes coal, petroleum, natural gas, and, beginning in 2001, other gases (blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels).
^g The fossil-fuels heat rate is used as the thermal conversion factor for electricity net generation from noncombustible renewable energy (hydro, geothermal, solar thermal, photovoltaic, and wind) to approximate the quantity of fossil fuels replaced by these sources. Through 2000, also used as the thermal conversion factor for wood and waste electricity net generation at electric utilities; beginning in 2001, Btu data for wood and waste at electric utilities are available from surveys.
^h Used as the thermal conversion factor for nuclear electricity net generation.
ⁱ Technology-based geothermal heat rates are no longer used in Btu calculations in this report. For technology-based geothermal heat rates for 1960–2010, see the *Annual Energy Review 2010*, Table A6.
^j See "Heat Content" in Glossary.
^k The value of 3,412 Btu per kilowatthour is a constant. It is used as the thermal conversion factor for electricity retail sales, and electricity imports and exports.
E=Estimate. NA=Not available. -- =Not applicable.
Web Pages: • See <http://www.eia.gov/totalenergy/data/annual/#appendices> for all data from 1949–1972. • See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for all data beginning in 1973.
Sources: See "Thermal Conversion Factor Source Documentation," which follows this table.

Selected years of data from 1949 through 1972 have been added to this table. For all years of data from 1949 through 2013, see the "Web Pages" cited above.

Thermal Conversion Factor Source Documentation

Approximate Heat Content of Petroleum and Natural Gas Plant Liquids

Asphalt. The U.S. Energy Information Administration (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 thermal conversion factor of 5.048 million Btu per barrel as adopted by the Bureau of Mines from the Texas Eastern Transmission Corporation publication *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 Exports. Assumed by EIA to be 5.800 million Btu per barrel or equal to the thermal conversion factor for crude oil produced in the United States. See **Crude Oil Production**.

Crude Oil Imports. Calculated annually by EIA as the average of the thermal conversion factors for each type of crude oil imported weighted by the quantities imported. Thermal conversion factors for each type were calculated on a foreign country basis, by determining the average American Petroleum Institute (API) gravity of crude oil imported from each foreign country from Form ERA-60 in 1977 and converting average API gravity to average Btu content by using National Bureau of Standards, Miscellaneous Publication No. 97, *Thermal Properties of Petroleum Products*, 1933.

Crude Oil Production. 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 Values of Various Fuels, Adopted January 3, 1950.”

Distillate Fuel Oil. EIA adopted the Bureau of Mines 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 Values 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 calculation of 3.308 million Btu per barrel based on 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 the report *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 the report *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics.

Kerosene. EIA adopted the Bureau of Mines 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 Consumption. • 1949–1966: 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 the average of the thermal conversion factors for all liquefied petroleum gases consumed (see Table A1) weighted by the quantities consumed. The component products of liquefied petroleum gases are ethane (including ethylene), propane (including propylene), normal butane (including butylene), butane-propane mixtures, ethane-propane mixtures, and isobutane. For 1967–1980, quantities consumed are from EIA, Energy Data Reports, “Petroleum Statement, Annual,” Table 1. For 1981 forward, quantities consumed are from EIA, *Petroleum Supply Annual*, Table 2.

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 Consumption. • 1949–1993: 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 calculated

national annual quantity-weighted average conversion factors for conventional, reformulated, and oxygenated motor gasolines (see Table A3). 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 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." See **Fuel Ethanol (Denatured)**.

Natural Gas Plant Liquids Production. Calculated annually by EIA as the average of the thermal conversion factors for each natural gas plant liquid produced weighted by the quantities produced.

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 or equal to that for natural gasoline. See **Natural Gasoline**.

Petrochemical Feedstocks, Naphtha less than 401° F. Assumed by EIA to be 5.248 million Btu per barrel or equal to the thermal conversion factor for special naphthas. See **Special Naphthas**.

Petrochemical Feedstocks, Other Oils equal to or greater than 401° F. Assumed by EIA to be 5.825 million Btu per barrel or equal to the thermal conversion factor for distillate fuel oil. See **Distillate Fuel Oil**.

Petrochemical Feedstocks, Still Gas. Assumed by EIA to be 6.000 million Btu per barrel or 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 the Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950." The Bureau of Mines calculated this factor by dividing 30.120 million 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 Consumption, Commercial Sector. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the commercial sector weighted by the estimated quantities consumed by the commercial sector. The quantities of petroleum products consumed by the commercial sector are estimated in the State Energy Data System—see

documentation at http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf.

Petroleum Consumption, Electric Power Sector. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the electric power sector weighted by the quantities consumed by the electric power sector. Data are from Form EIA-923, "Power Plant Operations Report," and predecessor forms.

Petroleum Consumption, Industrial Sector. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the industrial sector weighted by the estimated quantities consumed by the industrial sector. The quantities of petroleum products consumed by the industrial sector are estimated in the State Energy Data System—see documentation at http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf.

Petroleum Consumption, Residential Sector. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the residential sector weighted by the estimated quantities consumed by the residential sector. The quantities of petroleum products consumed by the residential sector are estimated in the State Energy Data System—see documentation at http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf.

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

Petroleum Consumption, Transportation Sector. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the transportation sector weighted by the estimated quantities consumed by the transportation sector. The quantities of petroleum products consumed by the transportation sector are estimated in the State Energy Data System—see documentation at http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf.

Petroleum Products Exports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product exported weighted by the quantities exported.

Petroleum Products Imports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product imported weighted by the quantities imported.

Plant Condensate. Estimated to be 5.418 million Btu per barrel by EIA 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 the 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, which was assumed to be equal to that of asphalt (see **Asphalt**) and was first published by the Bureau of Mines in the *Petroleum Statement, Annual, 1970*.

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

Total Petroleum Exports. Calculated annually by EIA as the average of the thermal conversion factors for crude oil and each petroleum product exported weighted by the quantities exported. See **Crude Oil Exports** and **Petroleum Products Exports**.

Total Petroleum Imports. Calculated annually by EIA as the average of the thermal conversion factors for each type of crude oil and petroleum product imported weighted by the quantities imported. See **Crude Oil Imports** and **Petroleum Products Imports**.

Unfinished Oils. EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel or equal to that for distillate fuel oil (see **Distillate Fuel Oil**) and first published it in EIA's *Annual Report to Congress, Volume 3, 1977*.

Unfractionated Stream. EIA assumed the thermal conversion factor to be 5.418 million Btu per barrel or equal to that for plant condensate (see **Plant Condensate**) and first published it in EIA's *Annual Report to Congress, Volume 2, 1981*.

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 *Petroleum Statement, Annual, 1956*.

Approximate Heat Content of Biofuels

Biodiesel. EIA estimated the thermal conversion factor for biodiesel to be 5.359 million Btu per barrel, or 17,253 Btu per pound.

Biodiesel Feedstock. EIA used soybean oil input to the production of biodiesel (million Btu soybean oil per barrel biodiesel) as the factor to estimate total biomass inputs to the production of biodiesel. EIA assumed that 7.65 pounds of soybean oil are needed to produce one gallon of biodiesel, and 5.433 million Btu of soybean oil are needed to produce one barrel of biodiesel. EIA also assumed that soybean oil has a gross heat content of 16,909 Btu per pound, or 5.483 million Btu per barrel.

Ethanol (Undenatured). 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.

Fuel Ethanol (Denatured). • 1981–2008: EIA used the 2009 factor. • 2009 forward: Calculated by EIA as the annual quantity-weighted average of the thermal conversion factors for undenatured ethanol (3.539 million Btu per barrel), pentanes plus used as denaturant (4.620 million Btu per barrel), and conventional motor gasoline and motor gasoline blending components used as denaturant (5.253 million Btu per barrel). The quantity of ethanol consumed is from EIA's *Petroleum Supply Annual (PSA)* and *Petroleum Supply Monthly (PSM)*, Table 1, data for renewable fuels and oxygenate plant net production of fuel ethanol. The quantity of pentanes plus used as denaturant is from PSA/PSM, Table 1, data for renewable fuels and oxygenate plant net production of pentanes plus, multiplied by -1. The quantity of conventional motor gasoline and motor gasoline blending components used as denaturant is from PSA/PSM, Table 1, data for renewable fuels and oxygenate plant net production of conventional motor gasoline and motor gasoline blending components, multiplied by -1.

Fuel Ethanol Feedstock. EIA used corn input to the production of undenatured ethanol (million Btu corn per barrel undenatured ethanol) as the annual factor to estimate total biomass inputs to the production of undenatured ethanol. U.S. Department of Agriculture observed ethanol yields (gallons undenatured ethanol per bushel of corn) were 2.5 in 1980, 2.666 in 1998, 2.68 in 2002, and 2.764 in 2009; EIA estimated the ethanol yields in other years. EIA also assumed that corn has a gross heat content of 0.392 million Btu per bushel.

Approximate Heat Content of Natural Gas

Natural Gas Consumption, Electric Power Sector. Calculated annually by EIA by dividing the heat content of natural gas consumed by the electric power sector by the quantity consumed. Data are from Form EIA-923, “Power Plant Operations Report,” and predecessor forms.

Natural Gas Consumption, End-Use Sectors. Calculated annually by EIA by dividing the heat content of natural gas consumed by the end-use sectors (residential, commercial, industrial, and transportation) by the quantity consumed. Data are from Form EIA-176, “Annual Report of Natural and Supplemental Gas Supply and Disposition.”

Natural Gas Consumption, Total. • 1949–1962: 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*. • 1963–1979: EIA adopted the thermal conversion factor calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual publication. • 1980 forward: Calculated annually by EIA by dividing the total heat content of natural gas consumed by the total quantity consumed.

Natural Gas Exports. • 1949–1972: Assumed by EIA to be equal to the thermal conversion factor for dry natural gas consumed (see **Natural Gas Consumption, Total**). • 1973 forward: Calculated annually by EIA by dividing the heat content of natural gas exported by the quantity exported. For 1973–1995, data are from Form FPC-14, “Annual Report for Importers and Exporters of Natural Gas.” Beginning in 1996, data are from U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports*.

Natural Gas Imports. • 1949–1972: Assumed by EIA to be equal to the thermal conversion factor for dry natural gas consumed (see **Natural Gas Consumption, Total**). • 1973 forward: Calculated annually by EIA by dividing the heat content of natural gas imported by the quantity imported. For 1973–1995, data are from Form FPC-14, “Annual Report for Importers and Exporters of Natural Gas.” Beginning in 1996, data are from U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports*.

Natural Gas Production, Dry. Assumed by EIA to be equal to the thermal conversion factor for dry natural gas consumed. See **Natural Gas Consumption, Total**.

Natural Gas Production, Marketed. Calculated annually by EIA by dividing the heat content of dry natural gas produced (see **Natural Gas Production, Dry**) and natural gas plant liquids produced (see **Natural Gas Plant Liquids Production**) by the total quantity of marketed natural gas produced.

Approximate Heat Content of Coal and Coal Coke

Coal Coke Imports and Exports. EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

Coal Consumption, Electric Power Sector. Calculated annually by EIA by dividing the heat content of coal consumed by the electric power sector by the quantity consumed. Data are from Form EIA-923, “Power Plant Operations Report,” and predecessor forms.

Coal Consumption, Industrial Sector, Coke Plants. Calculated annually by EIA by dividing the heat content of coal consumed by coke plants by the quantity consumed. Data are from Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants.”

Coal Consumption, Industrial Sector, Other. Calculated annually by EIA by dividing the heat content of coal consumed by manufacturing plants by the quantity consumed. Data are from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing Plants.”

Coal Consumption, Residential and Commercial Sectors. Calculated annually by EIA by dividing the heat content of coal consumed by the residential and commercial sectors by the quantity consumed. Through 1999, data are from Form EIA-6, “Coal Distribution Report.” Beginning in 2000, data are for commercial combined-heat-and-power (CHP) plants from Form EIA-923, “Power Plant Operations Report,” and predecessor forms.

Coal Consumption, Total. Calculated annually by EIA by dividing the total heat content of coal consumed by all sectors by the total quantity consumed.

Coal Exports. Calculated annually by EIA by dividing the heat content of steam coal and metallurgical coal exported by the quantity exported. Data are from U.S. Department of Commerce, Bureau of the Census, “Monthly Report EM 545.”

Coal Imports. • 1949–1963: Calculated annually by EIA by dividing the heat content of coal imported by the quantity imported. • 1964 forward: Assumed by EIA to be 25.000 million Btu per short ton.

Coal Production. Calculated annually by EIA to balance the heat content of coal supply (production and imports) and the heat content of coal disposition (exports, stock change, and consumption).

Waste Coal Supplied. Calculated annually by EIA by dividing the total heat content of waste coal supplied by the quantity supplied. For 1989–1997, data are from Form EIA-867, “Annual Nonutility Power Producer Report.” For 1998–2000, data are from Form EIA-860B, “Annual Electric Generator Report—Nonutility.” For 2001 forward, data are from Form EIA-3, “Quarterly Coal Consumption and Quality

Report—Manufacturing Plants”; Form EIA-923, “Power Plant Operations Report”; and predecessor forms.

Approximate Heat Rates for Electricity

Electricity Net Generation, Coal. • 2001 forward: Calculated annually by EIA by using fuel consumption and net generation data reported on Form EIA-923, “Power Plant Operations Report,” and predecessor forms. The computation includes data for all electric utilities and electricity-only independent power producers using anthracite, bituminous coal, subbituminous coal, lignite, and beginning in 2002, waste coal and coal synfuel.

Electricity Net Generation, Natural Gas. • 2001 forward: Calculated annually by EIA by using fuel consumption and net generation data reported on Form EIA-923, “Power Plant Operations Report,” and predecessor forms. The computation includes data for all electric utilities and electricity-only independent power producers using natural gas and supplemental gaseous fuels.

Electricity Net Generation, Noncombustible Renewable Energy. There is no generally accepted practice for measuring the thermal conversion rates for power plants that generate electricity from hydro, geothermal, solar thermal, photovoltaic, and wind energy sources. Therefore, EIA calculates a rate factor that is equal to the annual average heat rate factor for fossil-fueled power plants in the United States (see “Electricity Net Generation, Total Fossil Fuels”). By using that factor it is possible to evaluate fossil fuel requirements for replacing those sources during periods of interruption, such as droughts.

Electricity Net Generation, Nuclear. • 1957–1984: Calculated annually 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 were reported on Form FERC-1, “Annual Report of Major Electric Utilities, Licensees, and Others”; Form EIA-412, “Annual Report of Public Electric Utilities”; and predecessor forms. For 1982, the

factors were published in EIA, *Historical Plant Cost and Annual Production Expenses for Selected Electric Plants 1982*, page 215. For 1983 and 1984, the factors were published in EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 13. • 1985 forward: Calculated annually by EIA by using the heat rate data reported on Form EIA-860, “Annual Electric Generator Report,” and predecessor forms.

Electricity Net Generation, Petroleum. • 2001 forward: Calculated annually by EIA by using fuel consumption and net generation data reported on Form EIA-923, “Power Plant Operations Report,” and predecessor forms. The computation includes data for all electric utilities and electricity-only independent power producers using distillate fuel oil, residual fuel oil, jet fuel, kerosene, petroleum coke, and waste oil.

Electricity Net Generation, Total Fossil Fuels. • 1949–1955: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published by EIA in *Thermal-Electric Plant Construction Cost and Annual Production Expenses—1981* and *Steam-Electric Plant Construction Cost and Annual Production Expenses—1978*. • 1956–1988: The weighted annual average heat rate for fossil-fueled steam-electric power plants in the United States, as published in EIA, *Electric Plant Cost and Power Production Expenses 1991*, Table 9. • 1989–2000: Calculated annually by EIA by using heat rate data reported on Form EIA-860, “Annual Electric Generator Report,” and predecessor forms; and net generation data reported on Form EIA-759, “Monthly Power Plant Report.” The computation includes data for all electric utility steam-electric plants using fossil fuels. • 2001 forward: Calculated annually by EIA by using fuel consumption and net generation data reported on Form EIA-923, “Power Plant Operations Report,” and predecessor forms. The computation includes data for all electric utilities and electricity-only independent power producers using coal, petroleum, natural gas, and other gases (blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels).

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Appendix B

Metric Conversion Factors, Metric Prefixes, and Other Physical Conversion Factors

Data presented in the *Monthly Energy Review* and in other U.S. Energy Information Administration publications are expressed predominately in units that historically have been used in the United States, such as British thermal units, barrels, cubic feet, and short tons. The metric conversion factors presented in Table B1 can be used to calculate the metric-unit equivalents of values expressed in U.S. Customary units. For example, 500 short tons are the equivalent of 453.6 metric tons (500 short tons x 0.9071847 metric tons/short ton = 453.6 metric tons).

In the metric system of weights and measures, the names of multiples and subdivisions of any unit may be derived

by combining the name of the unit with prefixes, such as deka, hecto, and kilo, meaning, respectively, 10, 100, 1,000, and deci, centi, and milli, meaning, respectively, one-tenth, one-hundredth, and one-thousandth. Common metric prefixes can be found in Table B2.

The conversion factors presented in Table B3 can be used to calculate equivalents in various physical units commonly used in energy analyses. For example, 10 barrels are the equivalent of 420 U.S. gallons (10 barrels x 42 gallons/barrel = 420 gallons).

Table B1. Metric Conversion Factors

Type of Unit	U.S. Unit		Equivalent in	Metric Units
Mass	1 short ton (2,000 lb)	=	0.907 184 7	metric tons (t)
	1 long ton	=	1.016 047	metric tons (t)
	1 pound (lb)	=	0.453 592 37 ^a	kilograms (kg)
	1 pound uranium oxide (lb U ₃ O ₈)	=	0.384 647 ^b	kilograms uranium (kgU)
	1 ounce, avoirdupois (avdp oz)	=	28.349 52	grams (g)
Volume	1 barrel of oil (bbl)	=	0.158 987 3	cubic meters (m ³)
	1 cubic yard (yd ³)	=	0.764 555	cubic meters (m ³)
	1 cubic foot (ft ³)	=	0.028 316 85	cubic meters (m ³)
	1 U.S. gallon (gal)	=	3.785 412	liters (L)
	1 ounce, fluid (fl oz)	=	29.573 53	milliliters (mL)
	1 cubic inch (in ³)	=	16.387 06	milliliters (mL)
Length	1 mile (mi)	=	1.609 344 ^a	kilometers (km)
	1 yard (yd)	=	0.914 4 ^a	meters (m)
	1 foot (ft)	=	0.304 8 ^a	meters (m)
	1 inch (in)	=	2.54 ^a	centimeters (cm)
Area	1 acre	=	0.404 69	hectares (ha)
	1 square mile (mi ²)	=	2.589 988	square kilometers (km ²)
	1 square yard (yd ²)	=	0.836 127 4	square meters (m ²)
	1 square foot (ft ²)	=	0.092 903 04 ^a	square meters (m ²)
	1 square inch (in ²)	=	6.451 6 ^a	square centimeters (cm ²)
Energy	1 British thermal unit (Btu) ^c	=	1,055.055 852 62 ^a	joules (J)
	1 calorie (cal)	=	4.186 8 ^a	joules (J)
	1 kilowatthour (kWh)	=	3.6 ^a	megajoules (MJ)
Temperature^d	32 degrees Fahrenheit (°F)	=	0 ^a	degrees Celsius (°C)
	212 degrees Fahrenheit (°F)	=	100 ^a	degrees Celsius (°C)

^aExact conversion.

^bCalculated by the U.S. Energy Information Administration.

^cThe Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.

^dTo convert degrees Fahrenheit (°F) to degrees Celsius (°C) exactly, subtract 32, then multiply by 5/9.

Notes: • Spaces have been inserted after every third digit to the right of the decimal for ease of reading. • Most metric units belong to the International System of Units (SI), and the liter, hectare, and metric ton are accepted for use with the SI units. For more information about the SI units, see <http://physics.nist.gov/cuu/Units/index.html>.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#appendices>.

Sources: • General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 1993), pp. 9-11, 13, and 16. • U.S. Department of Commerce, National Institute of Standards and Technology, Special Publications 330, 811, and 814. • American National Standards Institute/Institute of Electrical and Electronic Engineers, ANSI/IEEE Std 268-1992, pp. 28 and 29.

Table B2. Metric Prefixes

Unit Multiple	Prefix	Symbol	Unit Subdivision	Prefix	Symbol
10 ¹	deka	da	10 ⁻¹	deci	d
10 ²	hecto	h	10 ⁻²	centi	c
10 ³	kilo	k	10 ⁻³	milli	m
10 ⁶	mega	M	10 ⁻⁶	micro	μ
10 ⁹	giga	G	10 ⁻⁹	nano	n
10 ¹²	tera	T	10 ⁻¹²	pico	p
10 ¹⁵	peta	P	10 ⁻¹⁵	femto	f
10 ¹⁸	exa	E	10 ⁻¹⁸	atto	a
10 ²¹	zetta	Z	10 ⁻²¹	zepto	z
10 ²⁴	yotta	Y	10 ⁻²⁴	yocto	y

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#appendices>.

Source: U.S. Department of Commerce, National Institute of Standards and Technology, *The International System of Units (SI)*, NIST Special Publication 330, 1991 Edition (Washington, DC, August 1991), p.10.

Table B3. Other Physical Conversion Factors

Energy Source	Original Unit		Equivalent in Final Units
Petroleum	1 barrel (bbl)	=	42 ^a U.S. gallons (gal)
Coal	1 short ton	=	2,000 ^a pounds (lb)
	1 long ton	=	2,240 ^a pounds (lb)
	1 metric ton (t)	=	1,000 ^a kilograms (kg)
Wood	1 cord (cd)	=	1.25 ^b shorts tons
	1 cord (cd)	=	128 ^a cubic feet (ft ³)

^aExact conversion.

^bCalculated by the U.S. Energy Information Administration.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#appendices>.

Source: U.S. Department of Commerce, National Institute of Standards and Technology, *Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, NIST Handbook 44, 1994 Edition (Washington, DC, October 1993), pp. B-10, C-17 and C-21.

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Glossary

Alcohol: The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a **hydrocarbon** plus a hydroxyl group; $\text{CH}_3\text{-(CH}_2)_n\text{-OH}$ (e.g., **methanol**, **ethanol**, and tertiary butyl alcohol). See **Fuel Ethanol**.

Alternative Fuel: Alternative fuels, for transportation applications, include the following: **methanol**; denatured **ethanol**, and other **alcohols**; fuel mixtures containing 85 percent or more by volume of methanol, denatured ethanol, and other alcohols with **motor gasoline** or other fuels; **natural gas**; **liquefied petroleum gas (propane)**; **hydrogen**; **coal-derived liquid fuels**; fuels (other than alcohol) derived from biological materials (**biofuels** such as soy **diesel fuel**); **electricity** (including electricity from **solar energy**); and "... any other fuel the Secretary determines, by rule, is substantially not **petroleum** and would yield substantial energy security benefits and substantial environmental benefits." The term "alternative fuel" does not include alcohol or other blended portions of primarily petroleum-based fuels used as **oxygenates** or extenders, i.e., **MTBE**, **ETBE**, other ethers, and the 10-percent ethanol portion of **gasohol**.

Alternative-Fuel Vehicle (AFV): A vehicle designed to operate on an **alternative fuel** (e.g., compressed **natural gas**, **methane** blend, or **electricity**). The vehicle could be either a dedicated vehicle designed to operate exclusively on alternative fuel or a nondedicated vehicle designed to operate on alternative fuel and/or a traditional fuel.

Anthracite: The highest rank of **coal**; used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite generally is less than 15 percent. The heat content of anthracite ranges from 22 to 28 million **Btu per short ton** on a moist, mineral-matter-free basis. The heat content of anthracite coal consumed in the United States averages 25 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). *Note:* Since the 1980's, anthracite refuse or mine waste has been used for steam-electric power generation. This fuel typically has a heat content of 15 million Btu per ton or less.

Anthropogenic: Made or generated by a human or caused by human activity. The term is used in the context of global **climate change** to refer to gaseous emissions that are the result of human activities, as well as other potentially climate-altering activities, such as deforestation.

Asphalt: A dark-brown-to-black cement-like material containing bitumens as the predominant constituents obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts.

ASTM: The American Society for Testing and Materials.

Aviation Gasoline Blending Components: Naphthas that will be used for blending or compounding into finished aviation gasoline (e.g., straight run gasoline, alkylate, reformate, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus.

Aviation Gasoline, Finished: A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in aviation reciprocating engines. Fuel specifications are provided in ASTM Specification D 910 and Military Specification MIL-G-5572. *Note:* Data on blending components are not counted in data on finished aviation gasoline.

Barrel (Petroleum): A unit of volume equal to 42 U.S. Gallons.

Base Gas: The volume of gas needed as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the withdrawal season. All native gas is included in the base gas volume.

Biodiesel: A fuel typically made from soybean, canola, or other vegetable oils; animal fats; and recycled grease. It can serve as a substitute for **petroleum-derived diesel fuel** or **distillate fuel oil**. For U.S. Energy Information Administration reporting, it is a fuel composed of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats, designated B100, and meeting the requirements of ASTM (American Society for Testing & Materials) D 6751.

Biofuels: Liquid fuels and blending components produced from **biomass** (plant) feedstocks, used primarily for transportation. See **Biodiesel** and **Fuel Ethanol**.

Biogenic: Produced by biological processes of living organisms. *Note:* EIA uses the term "biogenic" to refer only to organic nonfossil material of biological origin.

Biomass: Organic non-fossil material of biological origin constituting a **renewable energy** source. See **Biodiesel**,

Biofuels, Biomass Waste, Fuel Ethanol, and Wood and Wood-Derived Fuels.

Biomass Waste: Organic non-fossil material of biological origin that is a byproduct or a discarded product. "Biomass waste" includes municipal solid waste from **biogenic** sources, landfill gas, sludge waste, agricultural crop byproducts, straw, and other **biomass** solids, liquids, and gases; but excludes **wood and wood-derived fuels** (including **black liquor**), **biofuels** feedstock, **biodiesel**, and **fuel ethanol**. **Note:** EIA "biomass waste" data also include energy crops grown specifically for energy production, which would not normally constitute waste.

Bituminous Coal: A dense **coal**, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make **coke**. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content usually is less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million **Btu per short ton** on a moist, mineral-matter-free basis. The heat content of bituminous coal consumed in the United States averages 24 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Black Liquor: A byproduct of the paper production process, alkaline spent liquor, that can be used as a source of energy. Alkaline spent liquor is removed from the digesters in the process of chemically pulping wood. After evaporation, the residual "black" liquor is burned as a fuel in a recovery furnace that permits the recovery of certain basic chemicals.

British Thermal Unit (Btu): The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit). See **Heat Content**.

Btu: See **British Thermal Unit**.

Btu Conversion Factor: A factor for converting **energy** data between one unit of measurement and **British thermal units (Btu)**. Btu conversion factors are generally used to convert energy data from physical units of measure (such as **barrels**, **cubic feet**, or **short tons**) into the energy-equivalent measure of Btu. (See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for further information on Btu conversion factors.)

Butane: A normally gaseous straight-chain or branched-chain hydrocarbon (C₄H₁₀). It is extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

Isobutane: A normally gaseous branched-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams.

Normal Butane: A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 31.1° F. It is extracted from natural gas or refinery gas streams.

Butylene: An olefinic hydrocarbon (C₄H₈) recovered from refinery processes.

Capacity Factor: The ratio of the electrical energy produced by a generating unit for a given period of time to the electrical energy that could have been produced at continuous full-power operation during the same period.

Carbon Dioxide (CO₂): A colorless, odorless, non-poisonous gas that is a normal part of Earth's atmosphere. Carbon dioxide is a product of **fossil-fuel** combustion as well as other processes. It is considered a **greenhouse gas** as it traps heat (infrared energy) radiated by the Earth into the atmosphere and thereby contributes to the potential for **global warming**. The **global warming potential (GWP)** of other greenhouse gases is measured in relation to that of carbon dioxide, which by international scientific convention is assigned a value of one (1).

Chained Dollars: A measure used to express **real prices**. Real prices are those that have been adjusted to remove the effect of changes in the purchasing power of the dollar; they usually reflect buying power relative to a reference year. Prior to 1996, real prices were expressed in constant dollars, a measure based on the weights of goods and services in a single year, usually a recent year. In 1996, the U.S. Department of Commerce introduced the chained-dollar measure. The new measure is based on the average weights of goods and services in successive pairs of years. It is "chained" because the second year in each pair, with its weights, becomes the first year of the next pair. The advantage of using the chained-dollar measure is that it is more closely related to any given period and is therefore subject to less distortion over time.

CIF: See **Cost, Insurance, Freight**.

Citygate: A point or measuring station at which a distribution gas utility receives gas from a natural gas pipeline company or transmission system.

Climate Change: A term used to refer to all forms of climatic inconsistency, but especially to significant change from one prevailing climatic condition to another. In some cases, "climate change" has been used synonymously with the term "**global warming**"; scientists, however, tend to use the term in a wider sense inclusive of natural changes in climate, including climatic cooling.

Coal: A readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time. See **Anthracite**, **Bituminous Coal**, **Lignite**, **Subbituminous Coal**, **Waste Coal**, and **Coal Synfuel**.

Coal Coke: See **Coke**, **Coal**.

Coal Stocks: Coal quantities that are held in storage for future use and disposition. Note: When coal data are collected for a particular reporting period (month, quarter, or year), coal stocks are commonly measured as of the last day of the period.

Coal Synfuel: Coal-based solid fuel that has been processed by a **coal synfuel plant**; and coal-based fuels such as briquettes, pellets, or extrusions, which are formed from fresh or recycled coal and binding materials.

Coal Synfuel Plant: A plant engaged in the chemical transformation of coal into **coal synfuel**.

Coke, Coal: A solid carbonaceous residue derived from low-ash, low-sulfur bituminous coal from which the volatile constituents are driven off by baking in an oven at temperatures as high as 2,000° F so that the fixed carbon and residual ash are fused together. Coke is used as a fuel and as a reducing agent in smelting iron ore in a blast furnace. Coke (coal) has a heating value of 24.8 million Btu per ton.

Coke, Petroleum: A residue high in carbon content and low in hydrogen that is the final product of thermal decomposition in the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion is 5 barrels (42 U.S. gallons each) per short ton. Coke (petroleum) has a heating value of 6.024 million Btu per barrel.

Coking Coal: Bituminous coal suitable for making coke. See **Coke**, **Coal**.

Combined-Heat-and-Power (CHP) Plant: A plant designed to produce both heat and electricity from a single heat source. Note: This term is being used in place of the term "cogenerator" that was used by EIA in the past. CHP better describes the facilities because some of the plants included do not produce heat and power in a sequential fashion and, as a result, do not meet the legal definition of cogeneration specified in the Public Utility Regulatory Policies Act (PURPA).

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. It also includes sewage treatment facilities. 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. Various EIA programs differ in sectoral coverage—for more information see <http://www.eia.gov/neic/datadefinitions/Guideforwebcom.htm>. See **End-Use Sectors** and **Energy-Use Sectors**.

Completion: The installation of permanent equipment for the production of oil or gas. If a well is equipped to produce only oil or gas from one zone or reservoir, the definition of a well (classified as an oil well or gas well) and the definition of a completion are identical. However, if a well is equipped to produce oil and/or gas separately from more than one reservoir, a well is not synonymous with a completion.

Conventional Hydroelectric Power: Hydroelectric power generated from flowing water that is not created by **hydroelectric pumped storage**.

Conventional Motor Gasoline: See **Motor Gasoline Conventional**.

Conversion Factor: A factor for converting data between one unit of measurement and another (such as between **short tons** and **British thermal units**, or between **barrels** and **gallons**). (See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for further information on conversion factors.) See **Btu Conversion Factor** and **Thermal Conversion Factor**.

Cost, Insurance, Freight (CIF): A sales transaction in which the seller pays for the transportation and insurance of the goods to the port of destination specified by the buyer.

Crude Oil: A mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Depending upon the characteristics of the crude stream, it may also include: 1) small amounts of hydrocarbons that exist in gaseous phase in natural underground reservoirs but are liquid at atmospheric pressure after being recovered from oil well (casinghead) gas in lease separators and are subsequently commingled with the crude stream without being separately measured. Lease condensate recovered as a liquid from natural gas wells in lease or field separation facilities and later mixed into the crude stream is also included; 2) small amounts of nonhydrocarbons produced with the oil, such as sulfur and various metals; and 3) drip gases, and liquid hydrocarbons produced from tar sands, oil sands, gilsonite, and oil shale.

Liquids produced at natural gas processing plants are excluded. Crude oil is refined to produce a wide array of petroleum products, including heating oils; gasoline, diesel and jet fuels; lubricants; asphalt; ethane, propane, and butane; and many other products used for their energy or chemical content.

Crude Oil F.O.B. Price: The crude oil price actually charged at the oil-producing country's port of loading. Includes deductions for any rebates and discounts or additions of premiums, where applicable. It is the actual price paid with no adjustment for credit terms.

Crude Oil (Including Lease Condensate): A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Where identifiable, liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded.

Crude Oil Landed Cost: The price of crude oil at the port of discharge, including charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. The cost does not include charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage).

Crude Oil Refinery Input: The total crude oil put into processing units at refineries.

Crude Oil Stocks: Stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

Crude Oil Used Directly: Crude oil consumed as fuel by crude oil pipelines and on crude oil leases.

Crude Oil Well: A well completed for the production of crude oil from one or more oil zones or reservoirs. Wells producing both crude oil and natural gas are classified as oil wells.

Cubic Foot (Natural Gas): A unit of volume equal to 1 cubic foot at a pressure base of 14.73 pounds standard per square inch absolute and a temperature base of 60° F.

Degree-Day Normals: Simple arithmetic averages of monthly or annual degree-days over a long period of time (usually the 30-year period 1961-1990). The averages may be simple degree-day normals or population-weighted degree-day normals.

Degree-Days, Cooling (CDD): A measure of how warm a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees

Fahrenheit. The measure is computed for each day by subtracting the base temperature (65 degrees) from the average of the day's high and low temperatures, with negative values set equal to zero. Each day's cooling degree-days are summed to create a cooling degree-day measure for a specified reference period. Cooling degree-days are used in energy analysis as an indicator of air conditioning energy requirements or use.

Degree-Days, Heating (HDD): A measure of how cold a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the average of the day's high and low temperatures from the base temperature (65 degrees), with negative values set equal to zero. Each day's heating degree-days are summed to create a heating degree-day measure for a specified reference period. Heating degree-days are used in energy analysis as an indicator of space heating energy requirements or use.

Degree-Days, Population-Weighted: Heating or cooling degree-days weighted by the population of the area in which the degree-days are recorded. To compute state population-weighted degree-days, each state is divided into from one to nine climatically homogeneous divisions, which are assigned weights based on the ratio of the population of the division to the total population of the state. Degree-day readings for each division are multiplied by the corresponding population weight for each division and those products are then summed to arrive at the state population-weighted degree-day figure. To compute national population-weighted degree-days, the nation is divided into nine Census regions, each comprising from three to eight states, which are assigned weights based on the ratio of the population of the region to the total population of the nation. Degree-day readings for each region are multiplied by the corresponding population weight for each region and those products are then summed to arrive at the national population-weighted degree-day figure.

Denaturant: Petroleum, typically **pentanes plus** or **conventional motor gasoline**, added to **fuel ethanol** to make it unfit for human consumption. Fuel ethanol is denatured, usually prior to transport from the ethanol production facility, by adding 2 to 5 volume percent denaturant. See **Fuel Ethanol** and **Fuel Ethanol Minus Denaturant**.

Design Electrical Rating, Net: The nominal net electrical output of a nuclear unit as specified by the electric utility for the purpose of plant design.

Development Well: A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

Diesel Fuel: A fuel composed of **distillate fuel oils** obtained in petroleum refining operation or blends of such

distillate fuel oils with **residual fuel oil** used in motor vehicles. The boiling point and specific gravity are higher for diesel fuels than for gasoline.

Direct Use: Use of electricity that 1) is self-generated, 2) is produced by either the same entity that consumes the power or an affiliate, and 3) is used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of **station use**.

Distillate Fuel Oil: A general classification for one of the **petroleum** fractions produced in conventional distillation operations. It includes **diesel fuels** and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and **electricity generation**.

Dry Hole: An exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

Dry Natural Gas Production: See **Natural Gas (Dry) Production**.

E85: A fuel containing a mixture of 85 percent **ethanol** and 15 percent **motor gasoline**.

Electric Power Plant: A station containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

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. See also **Combined-Heat-and-Power (CHP) Plant**, **Electricity-Only Plant**, **Electric Utility**, and **Independent Power Producer**.

Electric Utility: Any entity that generates, transmits, or distributes **electricity** and recovers the cost of its generation, transmission or distribution assets and operations, either directly or indirectly, through cost-based rates set by a separate regulatory authority (e.g., State Public Service Commission), or is owned by a governmental unit or the consumers that the entity serves. Examples of these entities include: investor-owned entities, public power districts, public utility districts, municipalities, rural electric cooperatives, and state and federal agencies. Electric utilities may have Federal Energy Regulatory Commission approval for interconnection agreements and wholesale trade tariffs covering either cost-of-service and/or market-based rates under the authority of the Federal Power Act. See **Electric Power Sector**.

Electrical System Energy Losses: The amount of energy lost during generation, transmission, and distribution of electricity, including plant and unaccounted-for uses.

Electricity: A form of energy characterized by the presence and motion of elementary charged particles generated by friction, induction, or chemical change.

Electricity Generation: The process of producing electric energy, or the amount of electric energy produced by transforming other forms of energy, commonly expressed in **kilowatt-hours** (kWh) or megawatt-hours (Mwh).

Electricity Generation, Gross: The total amount of electric energy produced by generating units and measured at the generating terminal in **kilowatt-hours** (kWh) or megawatt-hours (MWh).

Electricity Generation, Net: The amount of **gross electricity generation** less **station use** (the **electric energy** consumed at the generating station(s) for station service or auxiliaries). *Note:* Electricity required for pumping at **hydroelectric pumped-storage** plants is regarded as electricity for station service and is deducted from gross generation.

Electricity-Only Plant: A plant designed to produce electricity only. See also **Combined-Heat-and-Power (CHP) Plant**.

Electricity Retail Sales: The amount of electricity sold to customers purchasing electricity for their own use and not for resale.

End-Use Sectors: The **residential**, **commercial**, **industrial**, and **transportation** sectors of the economy.

Energy: The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatt-hours, while heat energy is usually measured in British thermal units.

Energy Consumption: The use of energy as a source of heat or power or as an input in the manufacturing process.

Energy Service Provider: An energy entity that provides service to a retail or end-use customer.

Energy-Use Sectors: A group of major energy-consuming components of U.S. society developed to measure and analyze energy use. The sectors most commonly referred to in EIA are: **residential**, **commercial**, **industrial**, **transportation**, and **electric power**.

Ethane: A normally gaseous straight-chain hydrocarbon (C₂H₆). It is a colorless, paraffinic gas that boils at a temperature of -127.48° F. It is extracted from natural gas and refinery gas streams.

Ethanol (C₂H₅OH): A clear, colorless, flammable alcohol. Ethanol is typically produced biologically from **biomass** feedstocks such as agricultural crops and cellulosic residues from agricultural crops or wood. Ethanol can also be produced chemically from **ethylene**. See **Biomass**, **Fuel Ethanol**, and **Fuel Ethanol Minus Denaturant**.

Ethylene: An olefinic hydrocarbon (C₂H₄) recovered from refinery processes or petrochemical processes.

Exploratory Well: A well drilled to find and produce oil or gas in an area previously considered an unproductive area, to find a new reservoir in a known field (i.e., one previously found to be producing oil or gas in another reservoir), or to extend the limit of a known oil or gas reservoir.

Exports: Shipments of goods from within the 50 states and the District of Columbia to U.S. possessions and territories or to foreign countries.

Extraction Loss: The reduction in volume of natural gas due to the removal of natural gas liquid constituents, such as ethane, propane, and butane, at natural gas processing plants.

Federal Energy Administration (FEA): A predecessor of the U.S. Energy Information Administration.

Federal Energy Regulatory Commission (FERC): The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the U.S. Department of Energy and is the successor to the Federal Power Commission.

Federal Power Commission (FPC): The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the U.S. Department of Energy was created. Its functions were divided between the U.S. Department of Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

First Purchase Price: The price for domestic crude oil reported by the company that owns the crude oil the first time it is removed from the lease boundary.

Flared Natural Gas: Natural gas burned in flares on the base site or at gas processing plants.

F.O.B. (Free on Board): A sales transaction in which the seller makes the product available for pick up at a specified port or terminal at a specified price and the buyer pays for the subsequent transportation and insurance.

Footage Drilled: Total footage for wells in various categories, as reported for any specified period, includes (1) the deepest total depth (length of well bores) of all wells drilled from the surface, (2) the total of all bypassed footage drilled in connection with reported wells, and (3) all new footage drilled for directional sidetrack wells. Footage reported for directional sidetrack wells does not include footage in the common bore, which is reported as footage for the original well. In the case of old wells drilled deeper, the reported footage is that which was drilled below the total depth of the old well.

Former U.S.S.R.: See **Union of Soviet Socialist Republics (U.S.S.R.)**.

Fossil Fuel: An energy source formed in the Earth's crust from decayed organic material, such as **petroleum**, **coal**, and **natural gas**.

Fossil-Fueled Steam-Electric Power Plant: An electricity generation plant in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

Fuel Ethanol: Ethanol intended for fuel use. Fuel ethanol in the United States must be anhydrous (less than 1 percent water). Fuel ethanol is denatured (made unfit for human consumption), usually prior to transport from the ethanol production facility, by adding 2 to 5 volume percent petroleum, typically **pentanes plus** or **conventional motor gasoline**. Fuel ethanol is used principally for blending in low concentrations with **motor gasoline** as an **oxygenate** or octane enhancer. In high concentrations, it is used to fuel **alternative-fuel vehicles** specially designed for its use. See **Alternative-Fuel Vehicle**, **Denaturant**, **E85**, **Ethanol**, **Fuel Ethanol Minus Denaturant**, and **Oxygenates**.

Fuel Ethanol Minus Denaturant: An unobserved quantity of anhydrous, **biomass**-derived, undenatured **ethanol** for fuel use. The quantity is obtained by subtracting the estimated **denaturant** volume from **fuel ethanol** volume. Fuel ethanol minus denaturant is counted as **renewable energy**, while denaturant is counted as **nonrenewable fuel**. See **Denaturant**, **Ethanol**, **Fuel Ethanol**, **Nonrenewable Fuels**, **Oxygenates**, and **Renewable Energy**.

Full-Power Operation: Operation of a nuclear generating unit at 100 percent of its design capacity. Full-power operation precedes commercial operation.

Gasohol: A blend of finished motor gasoline containing alcohol (generally **ethanol** but sometimes methanol) at a

concentration between 5.7 percent and 10 percent by volume. See **Motor Gasoline, Oxygenated**.

Gas Well: A well completed for the production of natural gas from one or more gas zones or reservoirs. (Wells producing both crude oil and natural gas are classified as oil wells.)

Geothermal Energy: Hot water or steam extracted from geothermal reservoirs in the earth's crust and used for geothermal heat pumps, water heating, or electricity generation.

Global Warming: An increase in the near-surface temperature of the Earth. Global warming has occurred in the distant past as the result of natural influences, but the term is today most often used to refer to the warming some scientists predict will occur as a result of increased **anthropogenic** emissions of **greenhouse gases**. See **Climate Change**.

Global Warming Potential (GWP): An index used to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emission of one kilogram of a **greenhouse gas** to that from the emission of one kilogram of **carbon dioxide** over a fixed period of time, such as 100 years.

Greenhouse Gases: Those gases, such as water vapor, **carbon dioxide**, nitrous oxide, **methane**, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride, that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

Gross Domestic Product (GDP): The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the supplier (that is, the workers and, for property, the owners) may be either U.S. residents or residents of foreign countries.

GT/IC: Gas turbine and internal combustion plants.

Heat Content: The amount of heat energy available to be released by the transformation or use of a specified physical unit of an energy form (e.g., a ton of coal, a barrel of oil, a kilowatthour of electricity, a cubic foot of natural gas, or a pound of steam). The amount of heat energy is commonly expressed in **British thermal units (Btu)**. *Note:* Heat content of combustible energy forms can be expressed in terms of either gross heat content (higher or upper heating value) or net heat content (lower heating value), depending upon whether or not the available heat energy includes or excludes the energy used to vaporize water (contained in the original energy form or created during the combustion

process). The U.S. Energy Information Administration typically uses gross heat content values.

Heat Rate: A measure of generating station thermal efficiency commonly stated as **Btu per kilowatthour**. *Note:* Heat rates can be expressed as either gross or net heat rates, depending whether the electricity output is gross or net generation. Heat rates are typically expressed as net heat rates.

Hydrocarbon: An organic chemical compound of hydrogen and carbon in the gaseous, liquid, or solid phase. The molecular structure of hydrocarbon compounds varies from the simplest (methane, the primary constituent of natural gas) to the very heavy and very complex.

Hydroelectric Power: The production of electricity from the kinetic energy of falling water.

Hydroelectric Power Plant: A plant in which the turbine generators are driven by falling water.

Hydroelectric Pumped Storage: Hydroelectricity that is generated during peak load periods by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available to do so. When additional generating capacity is needed, the water can be released from the reservoir through a conduit to turbine generators located in a power plant at a lower level.

Hydrogen (H): The lightest of all gases, hydrogen occurs chiefly in combination with oxygen in water. It also exists in acids, bases, **alcohols**, **petroleum**, and other **hydrocarbons**.

Imports: Receipts of goods into the 50 states and the District of Columbia from U.S. possessions and territories or from foreign countries.

Independent Power Producer: A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation of electricity for use primarily by the public, and that is not an **electric utility**.

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 codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); 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. Various EIA programs differ in sectoral coverage-for more information see

<http://www.eia.gov/neic/datadefinitions/Guideforwebind.htm>. See **End-Use Sectors** and **Energy-Use Sectors**.

Injections (Natural Gas): Natural gas injected into storage reservoirs.

Isobutane: A normally gaseous branch-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams. See **Butane**.

Isobutylene: An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

Isopentane: A saturated branched-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

Jet Fuel: A refined petroleum product used in jet aircraft engines. It includes kerosene-type jet fuel and naphtha-type jet fuel.

Jet Fuel, Kerosene-Type: A kerosene-based product with a maximum distillation temperature of 400° F at the 10-percent recovery point and a final maximum boiling point of 572° F. Fuel specifications are provided in ASTM Specification D 1655 and Military Specifications MIL-T-5624P and MIL-T-83133D (Grades JP-5 and JP-8). It is used primarily for commercial turbojet and turboprop aircraft engines.

Jet Fuel, Naphtha-Type: A fuel in the heavy naphtha boiling range, with an average gravity of 52.8 degrees API, 20 to 90 percent distillation temperatures of 290° to 470° F and meeting Military Specification MIL-T-5624L (Grade JP-4). It is used by the military for turbojet and turboprop engines.

Kerosene: A petroleum distillate having a maximum distillation temperature of 401° F at the 10-percent recovery point, a final boiling point of 572° F, and a minimum flash point of 100° F. Included are the two grades designated in ASTM D3699 (No. 1-K and No. 2-K) and all grades of kerosene called range or stove oil. Kerosene is used in space heaters, cook stoves, and water heaters; it is suitable for use as an illuminant when burned in wick lamps.

Kilowatt: A unit of electrical power equal to 1,000 **watts**.

Kilowatthour (kWh): A measure of electricity defined as a unit of work or energy, measured as 1 **kilowatt** (1,000 **watts**) of power expended for 1 hour. One kilowatthour is equivalent to 3,412 Btu. See **Watthour**.

Landed Costs: The dollar-per-barrel price of crude oil at the port of discharge. Included are the charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. Not included are charges incurred at the discharge port (e.g.,

import tariffs or fees, wharfage charges, and demurrage charges).

Lease and Plant Fuel: Natural gas used in well, field, and lease operations (such as gas used in drilling operations, heaters, dehydrators, and field compressors) and used as fuel in natural gas processing plants.

Lease Condensate: A mixture consisting primarily of pentanes and heavier hydrocarbons, which is recovered as a liquid from natural gas in lease or field separation facilities. Note: This category excludes natural gas liquids, such as butane and propane, which are recovered at natural gas processing plants or facilities.

Lignite: The lowest rank of **coal**, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent. The heat content of lignite ranges from 9 to 17 million **Btu** per **short ton** on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Liquefied Natural Gas (LNG): Natural gas (primarily methane) that has been liquefied by reducing its temperature to -260° F at atmospheric pressure.

Liquefied Petroleum Gases (LPG): Ethane, ethylene, propane, propylene, normal butane, butylene, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate new natural gas plant liquids.

Low-Power Testing: The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its operating (full-power) license. The maximum level of operation during that period is 5 percent of the unit's design thermal rating.

Lubricants: Substances used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products or as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Excluded are byproducts of lubricating oil refining, such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. Included are all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Lubricant categories are paraffinic and naphthenic.

Marketed Production (Natural Gas): Gross withdrawals less gas used for repressuring, quantities vented and flared, and nonhydrocarbon gases removed in treating or processing operations. Includes all quantities of gas used in field and processing operations.

Methane: A colorless, flammable, odorless, hydrocarbon gas (CH₄) that is the principal constituent of natural gas. It is also an important source of hydrogen in various industrial processes.

Methyl Tertiary Butyl Ether (MTBE): An ether, (CH₃)₃COCH₃, intended for motor gasoline blending. See **Oxygenates**.

Methanol: A light, volatile alcohol (CH₃OH) eligible for motor gasoline blending. See **Oxygenates**.

Miscellaneous Petroleum Products: All finished petroleum products not classified elsewhere—for example, petrolatum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils.

Motor Gasoline Blending: Mechanical mixing of **motor gasoline blending components** and **oxygenates** as required, to produce finished motor gasoline. Finished motor gasoline may be further mixed with other motor gasoline blending components or oxygenates, resulting in increased volumes of finished motor gasoline and/or changes in the formulation of finished motor gasoline (e.g., conventional motor gasoline mixed with MTBE to produce oxygenated motor gasoline).

Motor Gasoline Blending Components: Naphtha (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, xylene) used for blending or compounding into finished motor gasoline. These components include reformulated gasoline blendstock (RBOB) but exclude oxygenates (alcohols, ethers), butane, and pentanes plus. *Note:* oxygenates are reported as individual components and are included in the total for other hydrocarbons, hydrogens, and oxygenates.

Motor Gasoline, Conventional: Finished motor gasoline not included in the **oxygenated** or **reformulated** motor gasoline categories. *Note:* This category excludes reformulated gasoline blendstock for oxygenate blending (RBOB) as well as other blendstock. Conventional motor gasoline can be leaded or unleaded; regular, midgrade, or premium. See **Motor Gasoline Grades**.

Motor Gasoline, Finished: A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in spark-ignition. Motor gasoline, as defined in ASTM Specification D-4814 or Federal Specification VV-G-1690C, is characterized as having a boiling range of 122°F to 158°F at the 10-percent recovery point to 365°F to 374°F at the 90-percent recovery point. “Motor gasoline” includes conventional gasoline, all types of oxygenated gasoline including gasohol, and reformulated gasoline, but excludes aviation gasoline. *Note:* Volumetric data on blending components, as well as oxygenates, are not counted in data on finished motor gasoline until the blending components are blended into the gasoline.

Motor Gasoline Grades: The classification of gasoline by octane ratings. Each type of gasoline (conventional, oxygenated, and reformulated) is classified by three grades: regular, midgrade, and premium. *Note:* Gasoline sales are reported by grade in accordance with their classification at the time of sale. In general, automotive octane requirements are lower at high altitudes. Therefore, in some areas of the United States, such as the Rocky Mountain States, the octane ratings for the gasoline grades may be 2 or more octane points lower.

Regular Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 85 and less than 88. *Note:* Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

Midgrade Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 88 and less than or equal to 90. *Note:* Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

Premium Gasoline: Gasoline having an antiknock index, i.e., octane rating, greater than 90. *Note:* Octane requirements may vary by altitude. See **Motor Gasoline Grades**.

Motor Gasoline, Oxygenated: Finished motor gasoline, other than reformulated gasoline, having an oxygen content of 2.7 percent or higher by weight and required by the U.S. Environmental Protection Agency (EPA) to be sold in areas designated by EPA as carbon monoxide (CO) nonattainment areas. *Note:* Oxygenated gasoline excludes oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB). Data on gasohol that has at least 2.7 percent oxygen, by weight, and is intended for sale inside CO nonattainment areas are included in data on oxygenated gasoline. Other data on gasohol are included in data on conventional gasoline.

Motor Gasoline, Reformulated: Finished motor gasoline formulated for use in motor vehicles, the composition and properties of which meet the requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211(k) of the Clean Air Act. *Note:* This category includes oxygenated fuels program reformulated gasoline (OPRG) but excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

Motor Gasoline Retail Prices: Motor gasoline prices calculated each month by the Bureau of Labor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). Those prices are collected in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those

providing all types of service (i.e., full-, mini-, and self-service).

Motor Gasoline (Total): For stock level data, a sum including finished motor gasoline stocks plus stocks of motor gasoline blending components but excluding stocks of oxygenates.

MTBE: See **Methyl Tertiary Butyl Ether**.

NAICS (North American Industry Classification System): A coding system developed jointly by the United States, Canada, and Mexico to classify businesses and industries according to the type of economic activity in which they are engaged. NAICS replaces the Standard Industrial Classification (SIC) codes. For additional information on NAICS, go to <http://www.census.gov/eos/www/naics/>.

Naphtha: A generic term applied to a petroleum fraction with an approximate boiling range between 122 and 400° F.

Natural Gas: A gaseous mixture of hydrocarbon compounds, primarily methane, used as a fuel for electricity generation and in a variety of ways in buildings, and as raw material input and fuel for industrial processes.

Natural Gas, Dry: Natural gas which remains after: 1) the liquefiable hydrocarbon portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of nonhydrocarbon gases have been removed where they occur in sufficient quantity to render the gas unmarketable. *Note:* Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute.

Natural Gas (Dry) Production: The process of producing consumer-grade natural gas. Natural gas withdrawn from reservoirs is reduced by volumes used at the production (lease) site and by processing losses. Volumes used at the production site include 1) the volume returned to reservoirs in cycling, repressuring of oil reservoirs, and conservation operations; and 2) gas vented and flared. Processing losses include 1) nonhydrocarbon gases (e.g., water vapor, carbon dioxide, helium, hydrogen sulfide, and nitrogen) removed from the gas stream; and 2) gas converted to liquid form, such as lease condensate and plant liquids. Volumes of dry gas withdrawn from gas storage reservoirs are not considered part of production. Dry natural gas production equals marketed production less extraction loss.

Natural Gas Marketed Production: Gross withdrawals of natural gas from production reservoirs, less gas used for reservoir repressuring; nonhydrocarbon gases removed in treating and processing operations; and quantities vented and flared.

Natural Gas Plant Liquids (NGPL): Natural gas liquids recovered from natural gas in processing plants and, in some situations, from natural gas field facilities, as well as those extracted by fractionators. Natural gas plant liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Material as follows: ethane, propane, normal butane, isobutane, pentanes plus, and other products from natural gas processing plants (i.e., products meeting the standards for finished petroleum products produced at natural gas processing plants, such as finished motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

Natural Gas Wellhead Price: The wellhead price of natural gas is calculated by dividing the total reported value at the wellhead by the total quantity produced as reported by the appropriate agencies of individual producing states and the U.S. Minerals Management Service. The price includes all costs prior to shipment from the lease, including gathering and compression costs, in addition to state production, severance, and similar charges.

Natural Gasoline: A mixture of hydrocarbons (mostly pentanes and heavier) extracted from natural gas that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane, which is a saturated branch-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

Net Summer Capacity: The maximum output, commonly expressed in **kilowatts** (kW) or megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of summer peak demand (period of June 1 through September 30). This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

Neutral Zone: A 6,200 square-mile area shared equally between Kuwait and Saudi Arabia under a 1992 agreement. The Neutral Zone contains an estimated 5 billion barrels of oil and 8 trillion cubic feet of natural gas.

Nominal Dollars: A measure used to express **nominal price**.

Nominal Price: The price paid for a product or service at the time of the transaction. Nominal prices are those that have not been adjusted to remove the effect of changes in the purchasing power of the dollar; they reflect buying power in the year in which the transaction occurred.

Non-Biomass Waste: Material of non-biological origin that is a byproduct or a discarded product. "Non-biomass waste" includes municipal solid waste from non-biogenic sources, such as plastics, and tire-derived fuels.

Nonhydrocarbon Gases: Typical nonhydrocarbon gases that may be present in reservoir natural gas are carbon dioxide, helium, hydrogen sulfide, and nitrogen.

Nonrenewable Fuels: Fuels that cannot be easily made or "renewed," such as **crude oil**, **natural gas**, and **coal**.

Nuclear Electric Power (Nuclear Power): Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

Nuclear Electric Power Plant: A single-unit or multiunit facility in which heat produced in one or more reactors by the fissioning of nuclear fuel is used to drive one or more steam turbines.

Nuclear Reactor: An apparatus in which a nuclear fission chain reaction can be initiated, controlled, and sustained at a specific rate. A reactor includes fuel (fissionable material), moderating material to control the rate of fission, a heavy-walled pressure vessel to house reactor components, shielding to protect personnel, a system to conduct heat away from the reactor, and instrumentation for monitoring and controlling the reactor's systems.

OECD: See **Organization for Economic Cooperation and Development**.

Offshore: That geographic area that lies seaward of the coastline. In general, the coastline is the line of ordinary low water along with that portion of the coast that is in direct contact with the open sea or the line marking the seaward limit of inland water.

Oil: See **Crude Oil**.

OPEC: See **Organization of the Petroleum Exporting Countries**.

Operable Unit (Nuclear): In the United States, a nuclear generating unit that has completed low-power testing and been issued a full-power operating license by the Nuclear Regulatory Commission, or equivalent permission to operate.

Organization for Economic Cooperation and Development (OECD): An international organization helping governments tackle the economic, social and governance challenges of a globalized economy. Its membership comprises about 30 member countries. With active relationships with some 70 other countries, non-governmental organizations (NGOs) and civil society, it has a global reach. For details about the organization, see <http://www.oecd.org>.

Organization of the Petroleum Exporting Countries (OPEC): An intergovernmental organization whose stated objective is to "coordinate and unify the petroleum policies of member countries." It was created at the Baghdad Conference on September 10–14, 1960. Current members

(with years of membership) include Algeria (1969–present), Angola (2007–present), Ecuador (1973–1992 and 2007–present), Iran (1960–present), Iraq (1960–present), Kuwait (1960–present), Libya (1962–present), Nigeria (1971–present), Qatar (1961–present), Saudi Arabia (1960–present), United Arab Emirates (1967–present), and Venezuela (1960–present). Countries no longer members of OPEC include Gabon (1975–1994) and Indonesia (1962–2008).

Oxygenates: Substances which, when added to gasoline, increase the amount of oxygen in that gasoline blend. **Ethanol**, **Methyl Tertiary Butyl Ether (MTBE)**, **Ethyl Tertiary Butyl Ether (ETBE)**, and **methanol** are common oxygenates.

PAD Districts: Petroleum Administration for Defense Districts. Geographic aggregations of the 50 states and the District of Columbia into five districts for the Petroleum Administration for Defense in 1950. The districts were originally instituted for economic and geographic reasons as Petroleum Administration for War (PAW) Districts, which were established in 1942.

Pentanes Plus: A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas. Includes isopentane, natural gasoline, and plant condensate.

Petrochemical Feedstocks: Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics.

Petroleum: A broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids. Note: Volumes of finished petroleum products include nonhydrocarbon compounds, such as additives and detergents, after they have been blended into the products.

Petroleum Coke: See **Coke**, **Petroleum**.

Petroleum Consumption: See **Products Supplied (Petroleum)**.

Petroleum Imports: Imports of petroleum into the 50 states and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. territories and possessions. Included are imports for the Strategic Petroleum Reserve and withdrawals from bonded warehouses for onshore consumption, offshore bunker use, and military use. Excluded are receipts of foreign petroleum into bonded warehouses and into U.S. territories and U.S. Foreign Trade Zones.

Petroleum Products: Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include

unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

Petroleum Stocks, Primary: For individual products, quantities that are held at refineries, in pipelines, and at bulk terminals that have a capacity of 50,000 barrels or more, or that are in transit thereto. Stocks held by product retailers and resellers, as well as tertiary stocks held at the point of consumption, are excluded. Stocks of individual products held at gas processing plants are excluded from individual product estimates but are included in other oils estimates and total.

Photovoltaic Energy: Direct-current electricity generated from sunlight through solid-state semiconductor devices that have no moving parts.

Pipeline Fuel: Gas consumed in the operation of pipelines, primarily in compressors.

Plant Condensate: One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquid at gas inlet separators or scrubbers in processing plants.

Primary Energy: Energy in the form that it is first accounted for in a statistical energy balance, before any transformation to secondary or tertiary forms of energy. For example, coal can be converted to synthetic gas, which can be converted to electricity; in this example, coal is primary energy, synthetic gas is secondary energy, and electricity is tertiary energy. See **Primary Energy Production** and **Primary Energy Consumption**.

Primary Energy Consumption: Consumption of primary energy. (Energy sources that are produced from other energy sources—e.g., coal coke from coal—are included in primary energy consumption only if their energy content has not already been included as part of the original energy source. Thus, U.S. primary energy consumption does include net imports of coal coke, but not the coal coke produced from domestic coal.) The U.S. Energy Information Administration includes the following in U.S. primary energy consumption: coal consumption; coal coke net imports; **petroleum consumption (petroleum products supplied**, including **natural gas plant liquids and crude oil** burned as fuel); **dry natural gas**—excluding **supplemental gaseous fuels**—consumption; **nuclear electricity net generation** (converted to Btu using the nuclear plants heat rate); **conventional hydroelectricity** net generation (converted to Btu using the fossil-fueled plants heat rate); **geothermal** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and geothermal heat pump energy and geothermal direct use

energy; **solar thermal** and **photovoltaic** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; **wind** electricity net generation (converted to Btu using the fossil-fueled plants heat rate); **wood and wood-derived fuels** consumption; **biomass waste** consumption; **fuel ethanol** and **biodiesel** consumption; losses and co-products from the production of fuel ethanol and biodiesel; and electricity net imports (converted to Btu using the electricity heat content of 3,412 Btu per kilowatt-hour). See **Total Energy Consumption**.

Primary Energy Production: Production of primary energy. The U.S. Energy Information Administration includes the following in U.S. primary energy production: **coal** production, **waste coal** supplied, and coal refuse recovery; **crude oil** and **lease condensate** production; **natural gas plant liquids** production; **dry natural gas**—excluding **supplemental gaseous fuels**—production; **nuclear electricity net generation** (converted to Btu using the nuclear plants heat rate); **conventional hydroelectricity** net generation (converted to Btu using the fossil-fueled plants heat rate); **geothermal** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and geothermal heat pump energy and geothermal direct use energy; **solar thermal** and **photovoltaic** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; **wind** electricity net generation (converted to Btu using the fossil-fueled plants heat rate); **wood and wood-derived fuels** consumption; **biomass waste** consumption; and **biofuels** feedstock.

Prime Mover: The engine, turbine, water wheel, or similar machine that drives an electric generator; or, for reporting purposes, a device that converts energy to electricity directly.

Products Supplied (Petroleum): Approximately represents consumption of petroleum products because it measures the disappearance of these products from primary sources, i.e., refineries, natural gas-processing plants, blending plants, pipelines, and bulk terminals. In general, product supplied of each product in any given period is computed as follows: field production, plus refinery production, plus imports, plus unaccounted-for crude oil (plus net receipts when calculated on a PAD District basis) minus stock change, minus crude oil losses, minus refinery inputs, and minus exports.

Propane: A normally gaseous straight-chain hydrocarbon (C₃H₈). It is a colorless paraffinic gas that boils at a temperature of -43.67° F. It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

Propylene: An olefinic hydrocarbon (C₃H₆) recovered from refinery or petrochemical processes.

Real Dollars: These are dollars that have been adjusted for inflation. See **Real Price**.

Real Price: A price that has been adjusted to remove the effect of changes in the purchasing power of the dollar. Real prices, which are expressed in constant dollars, usually reflect buying power relative to a base year.

Refiner Acquisition Cost of Crude Oil: The cost of crude oil to the refiner, including transportation and fees. The composite cost is the weighted average of domestic and imported crude oil costs.

Refinery and Blender Net Inputs: Raw materials, **unfinished oils**, and blending components processed at refineries, or blended at refineries or petroleum storage terminals to produce finished **petroleum products**. Included are gross inputs of **crude oil**, **natural gas plant liquids**, other **hydrocarbon** raw materials, **hydrogen**, **oxygenates** (excluding **fuel ethanol**), and renewable fuels (including fuel ethanol). Also included are net inputs of unfinished oils, **motor gasoline blending components**, and **aviation gasoline blending components**. Net inputs are calculated as gross inputs minus gross production. Negative net inputs indicate gross inputs are less than gross production. Examples of negative net inputs include reformulated gasoline blendstock for oxygenate blending (RBOB) produced at refineries for shipment to blending terminals, and unfinished oils produced and added to inventory in advance of scheduled maintenance of a refinery crude oil distillation unit.

Refinery and Blender Net Production: Liquefied refinery gases, and finished **petroleum products** produced at a **refinery** or petroleum storage terminal blending facility. Net production equals gross production minus gross inputs. Negative net production indicates gross production is less than gross inputs for a finished petroleum product. Examples of negative net production include reclassification of one finished product to another finished product, or reclassification of a finished product to **unfinished oils** or blending components.

Refinery (Petroleum): An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

Refuse Mine: A surface site where **coal** is recovered from previously mined coal. It may also be known as a silt bank, culm bank, refuse bank, slurry dam, or dredge operation.

Refuse Recovery: The recapture of **coal** from a **refuse mine** or the coal recaptured by that process. The resulting product has been cleaned to reduce the concentration of noncombustible materials.

Renewable Energy: Energy obtained from sources that are essentially inexhaustible (unlike, for example, the **fossil fuels**, of which there is a finite supply). Renewable sources

of energy include **conventional hydroelectric power**, **biomass**, **geothermal**, **solar**, and **wind**.

Repressuring: The injection of a pressurized fluid (such as air, gas, or water) into oil and gas reservoir formations to effect greater ultimate recovery.

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. *Note:* Various EIA programs differ in sectoral coverage for more information see

<http://www.eia.gov/naic/datadefinitions/Guideforwebres.htm>. See

End-Use Sectors and **Energy-Use Sectors**.

Residual Fuel Oil: The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations and that conform to ASTM Specifications D396 and 975. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; and No. 6, which includes Bunker C fuel oil and is used for commercial and industrial heating, for electricity generation, and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.

Road Oil: Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades, from 0, the most liquid, to 5, the most viscous.

Rotary Rig: A machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

Short Ton (Coal): A unit of weight equal to 2,000 pounds.

SIC (Standard Industrial Classification): A set of codes developed by the U.S. Office of Management and Budget which categorizes industries into groups with similar economic activities. Replaced by **NAICS (North American Industry Classification System)**.

Solar Energy: See **Solar Thermal Energy** and **Photovoltaic Energy**.

Solar Thermal Energy: The radiant energy of the sun that can be converted into other forms of energy, such as heat or electricity.

Special Naphthas: All finished products within the naphtha boiling ranges that are used as paint thinner, cleaners or solvents. Those products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline, or that are

to be used as petrochemical and synthetic natural gas (SNG) feedstocks, are excluded.

Station Use: Energy that is used to operate an **electric power plant**. It includes energy consumed for plant lighting, power, and auxiliary facilities, regardless of whether the energy is produced at the plant or comes from another source.

Steam Coal: All nonmetallurgical coal.

Steam-Electric Power Plant: A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

Still Gas (Refinery Gas): Any form or mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, and propylene. It is used primarily as refinery fuel and, petrochemical feedstock.

Stocks: See **Coal Stocks**, **Crude Oil Stocks**, or **Petroleum Stocks, Primary**.

Strategic Petroleum Reserve (SPR): Petroleum stocks maintained by the federal Government for use during periods of major supply interruption.

Subbituminous Coal: A coal whose properties range from those of **lignite** to those of **bituminous coal** and used primarily as fuel for steam-electric power generation. It may be dull, dark brown to black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. Subbituminous coal contains 20 to 30 percent inherent moisture by weight. The heat content of subbituminous coal ranges from 17 to 24 million **Btu per short ton** on a moist, mineral-matter-free basis. The heat content of subbituminous coal consumed in the United States averages 17 to 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

Supplemental Gaseous Fuels: Synthetic natural gas, propane-air, coke oven gas, refinery gas, biomass gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

Synthetic Natural Gas (SNG): (Also referred to as substitute natural gas) A manufactured product, chemically similar in most respects to **natural gas**, resulting from the conversion or reforming of **hydrocarbons** that may easily be substituted for or interchanged with pipeline-quality natural gas.

Thermal Conversion Factor: A factor for converting data between physical units of measure (such as **barrels**, **cubic feet**, or **short tons**) and thermal units of measure (such as **British thermal units**, calories, or joules); or for

converting data between different thermal units of measure. See **Btu Conversion Factor**.

Total Energy Consumption: Primary energy consumption in the **end-use sectors**, plus **electricity retail sales** and **electrical system energy losses**.

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 more information see <http://www.eia.gov/neic/datadefinitions/Guideforwebtrans.htm> See **End-Use Sectors** and **Energy-Use Sectors**.

Underground Storage: The storage of natural gas in underground reservoirs at a different location from which it was produced.

Unfinished Oils: All oils requiring further refinery processing except those requiring only mechanical blending. Includes naphthas and lighter oils, kerosene and light gas oils, heavy gas oils, and residuum.

Unfractionated Stream: Mixtures of unsegregated natural gas liquid components, excluding those in plant condensate. This product is extracted from natural gas.

Union of Soviet Socialist Republics (U.S.S.R.): A political entity that consisted of 15 constituent republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The U.S.S.R. ceased to exist as of December 31, 1991.

United States: The 50 states and the District of Columbia. Note: The United States has varying degrees of jurisdiction over a number of territories and other political entities outside the 50 states and the District of Columbia, including Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, Johnston Atoll, Midway Islands, Wake Island, and the Northern Mariana Islands. EIA data programs may include data from some or all of these areas in U.S. totals. For these programs, data products will contain notes explaining the extent of geographic coverage included under the term "United States."

Useful Thermal Output: The thermal energy made available in a combined-heat-and-power system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, i.e., total thermal energy made available for processes and applications other than electrical generation.

U.S.S.R.: See **Union of Soviet Socialist Republics (U.S.S.R.)**.

Vented Natural Gas: Gas released into the air on the production site or at processing plants.

Vessel Bunkering: Includes sales for the fueling of commercial or private boats, such as pleasure craft, fishing boats, tugboats, and ocean-going vessels, including vessels operated by oil companies. Excluded are volumes sold to the U.S. Armed Forces.

Waste Coal: Usable material that is a byproduct of previous **coal** processing operations. Waste coal is usually composed of mixed coal, soil, and rock (mine waste). Most waste coal is burned as-is in unconventional fluidized-bed combustors. For some uses, waste coal may be partially cleaned by removing some extraneous noncombustible constituents. Examples of waste coal include fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste.

Waste: See **Biomass Waste** and **Non-Biomass Waste**.

Watt (W): The unit of electrical power equal to one ampere under a pressure of one volt. A watt is equal to 1/746 horsepower.

Watt-hour (Wh): The electrical energy unit of measure equal to one watt of power supplied to, or taken from, an

electric circuit steadily for one hour.

Waxes: Solid or semisolid material derived from petroleum distillates or residues. Waxes are light-colored, more or less translucent crystalline masses, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Included are all marketable waxes, whether crude scale or fully refined. Waxes are used primarily as industrial coating for surface protection.

Wellhead Price: The value of crude oil or natural gas at the mouth of the well.

Wind Energy: Kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.

Wood and Wood-Derived Fuels: Wood and products derived from wood that are used as fuel, including round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, paper pellets, railroad ties, utility poles, **black liquor**, red liquor, sludge wood, spent sulfite liquor, and other wood-based solids and liquids.

Working Gas: The volume of gas in a reservoir that is in addition to the base gas. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any season.