

January 2015

# 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*, and *Electric Power Monthly*. For more information, contact EIA's Office of Communications via email at [infoctr@eia.gov](mailto:infoctr@eia.gov).

## Important Notes About the Data

***Data Displayed:*** For tables beginning in 1949, annual data are usually displayed only in 5-year increments between 1950 and 2000 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:*** In 2013, EIA expanded the MER to incorporate annual data as far back as 1949 in those data tables that were previously published in both the *Annual Energy Review (AER)* and MER. Analysts may wish to use the data in this report in conjunction with the AER which offers annual data beginning in 1949 for many related supplemental data series that are not 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 no later than the last work day of the month at <http://www.eia.gov/totalenergy/data/monthly>.

# Monthly Energy Review

## January 2015

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

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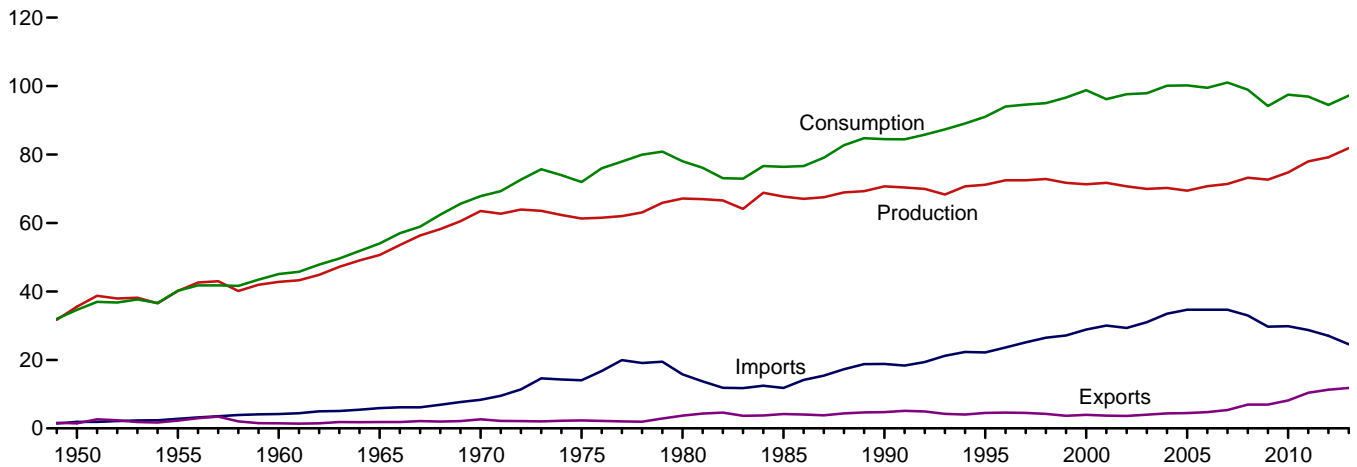
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# 1. Energy Overview

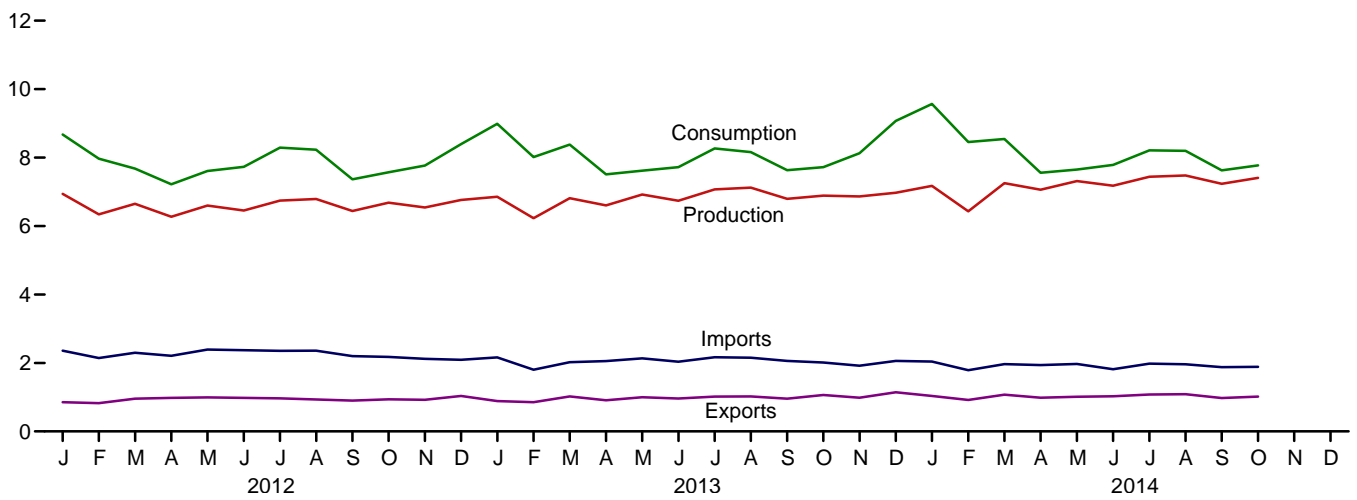
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**Figure 1.1 Primary Energy Overview**  
(Quadrillion Btu)

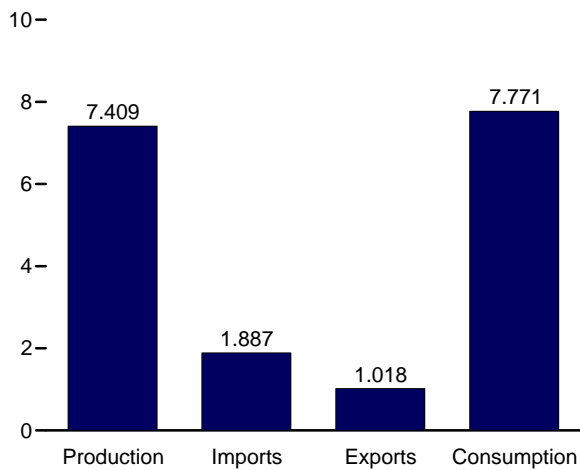
Overview, 1949–2013



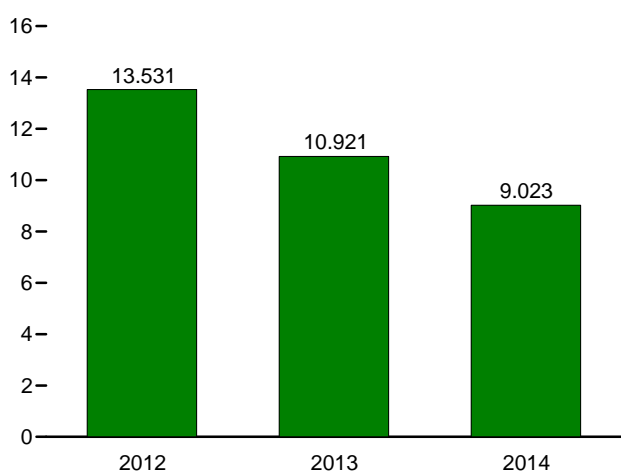
Overview, Monthly



Overview, October 2014



Net Imports, January–October



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 <sup>d</sup>	Consumption			
	Fossil Fuels <sup>a</sup>	Nuclear Electric Power	Renewable Energy <sup>b</sup>	Total	Imports	Exports	Net Imports <sup>c</sup>		Fossil Fuels <sup>e</sup>	Nuclear Electric Power	Renewable Energy <sup>b</sup>	Total <sup>f</sup>
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	R 22.180	R 4.496	R 17.684	R 2.174	R 77.262	7.075	6.560	R 91.032
2000 Total	57.366	7.862	6.104	71.332	R 28.865	R 3.962	R 24.904	R 2.583	R 84.735	7.862	6.106	R 98.819
2001 Total	58.541	8.029	5.164	71.735	R 30.052	R 3.731	R 26.321	R -1.883	R 82.906	8.029	5.163	R 96.172
2002 Total	56.834	8.145	5.734	70.713	R 29.331	R 3.608	R 25.722	R 1.211	R 83.700	8.145	5.729	R 97.647
2003 Total	56.033	7.960	5.947	69.939	R 31.007	R 4.013	R 26.994	R .989	R 83.992	7.960	5.948	R 97.922
2004 Total	55.942	8.223	6.069	70.234	R 33.492	R 4.351	R 29.141	R .721	R 85.754	8.223	6.081	R 100.096
2005 Total	55.044	8.161	6.229	69.434	R 34.659	R 4.462	R 30.197	R .565	R 85.709	8.161	6.242	R 100.196
2006 Total	55.938	8.215	6.599	70.751	R 34.649	R 4.727	R 29.921	R -1.176	R 84.570	8.215	6.649	R 99.497
2007 Total	56.436	8.459	6.528	71.422	R 34.679	R 5.338	R 29.341	R .271	R 85.928	8.459	6.541	R 101.034
2008 Total	57.587	8.426	7.219	73.233	R 32.970	R 6.949	R 26.021	R -.335	R 83.178	8.426	7.202	R 98.919
2009 Total	56.662	8.355	7.655	72.672	R 29.690	R 6.920	R 22.770	R -1.291	R 78.042	8.355	7.638	R 94.152
2010 Total	58.230	8.434	8.128	74.793	R 29.866	R 8.176	R 21.690	R 1.013	R 80.891	8.434	8.081	R 97.496
2011 Total	60.548	8.269	9.170	77.986	R 28.748	R 10.382	R 18.366	R .565	R 79.447	8.269	9.074	R 96.917
2012 January	5.409	.758	.772	6.939	R 2.360	R .853	R 1.507	R .230	R 7.156	.758	.751	R 8.676
February	4.979	.669	.693	6.341	R 2.142	R .824	R 1.317	R .308	R 6.606	.669	.681	R 7.966
March	5.212	.647	.792	6.651	R 2.295	R .954	R 1.341	R -.314	R 6.236	.647	.785	R 7.678
April	4.923	.585	.765	6.273	R 2.210	R .981	R 1.230	R -.284	R 5.861	.585	.761	R 7.220
May	5.141	.651	.806	6.597	R 2.391	R .993	R 1.398	R -.385	R 6.142	.651	.803	R 7.610
June	4.996	.683	.772	6.451	R 2.370	R .979	R 1.391	R -.111	R 6.262	.683	.772	R 7.731
July	5.277	.724	.743	6.744	R 2.353	R .967	R 1.386	R .160	R 6.803	.724	.744	R 8.290
August	5.349	.729	.712	6.791	R 2.360	R .934	R 1.425	R .013	R 6.764	.729	.718	R 8.229
September	5.119	.676	.644	6.439	R 2.198	R .900	R 1.298	R -.370	R 6.034	.676	.643	R 7.366
October	5.378	.626	.678	6.681	R 2.175	R .938	R 1.238	R -.349	R 6.249	.626	.683	R 7.570
November	5.265	.594	.683	6.543	R 2.119	R .924	R 1.194	R .029	R 6.476	.594	.684	R 7.767
December	5.276	.719	.766	6.761	R 2.092	R 1.036	R 1.056	R .574	R 6.898	.719	.763	R 8.392
Total	62.324	8.062	8.826	79.212	R 27.065	R 11.284	R 15.781	R -.497	R 77.487	8.062	8.786	R 94.496
2013 January	R 5.312	.748	.794	R 6.855	R 2.163	R .885	R 1.278	R .854	R 7.432	.748	.793	R 8.987
February	R 4.880	.644	.705	R 6.229	R 1.802	R .854	R .948	R .835	R 6.650	.644	.706	R 8.013
March	R 5.382	.660	.770	R 6.812	R 2.024	R 1.021	R 1.003	R .564	R 6.934	.660	.771	R 8.379
April	R 5.200	.595	.808	R 6.603	R 2.053	R .907	R 1.146	R -.240	R 6.093	.595	.810	R 7.509
May	R 5.404	.659	.857	R 6.920	R 2.136	R .998	R 1.138	R -.441	R 6.086	.659	.857	R 7.617
June	R 5.221	.696	.821	R 6.738	R 2.037	R .961	R 1.075	R -.095	R 6.182	.696	.823	R 7.719
July	R 5.518	.739	.813	R 7.070	R 2.166	R 1.016	R 1.150	R .046	R 6.696	.739	.812	R 8.266
August	R 5.636	.748	.737	R 7.121	R 2.152	R 1.021	R 1.131	R -.092	R 6.658	.748	.735	R 8.160
September	R 5.411	.690	.695	R 6.796	R 2.061	R .958	R 1.103	R -.265	R 6.229	.690	.699	R 7.633
October	R 5.487	.662	.740	R 6.890	R 2.013	R 1.065	R .948	R -.116	R 6.304	.662	.743	R 7.722
November	R 5.426	.681	.759	R 6.866	R 1.919	R .986	R .934	R .328	R 6.679	.681	.754	R 8.128
December	R 5.428	.747	.799	R 6.974	R 2.060	R 1.142	R .919	R 1.180	R 7.517	.747	.795	R 9.072
Total	R 64.306	8.268	9.298	R 81.873	R 24.586	R 11.812	R 12.774	R 2.558	R 79.460	8.268	9.298	R 97.204
2014 January	R 5.591	.766	.819	R 7.176	R 2.043	R 1.036	R 1.007	R 1.386	R 7.978	.766	.812	R 9.568
February	R 5.072	.656	.702	R 6.431	R 1.790	R .918	R .872	R 1.152	R 7.090	.656	.699	R 8.455
March	R 5.748	.654	.849	R 7.251	R 1.965	R 1.072	R .893	R .400	R 7.039	.654	.840	R 8.544
April	R 5.614	.591	.857	R 7.062	R 1.937	R .984	R .954	R -.461	R 6.099	.591	.854	R 7.554
May	R 5.797	.660	.857	R 7.314	R 1.969	R 1.013	R .956	R -.620	R 6.121	.660	.856	R 7.651
June	R 5.612	.714	.853	R 7.179	R 1.818	R 1.028	R .790	R -.186	R 6.208	.714	.848	R 7.783
July	R 5.866	.754	.819	R 7.438	R 1.980	R 1.076	R .903	R -.129	R 6.630	.754	.812	R 8.213
August	R 5.982	.745	.751	R 7.478	R 1.963	R 1.085	R .878	R -.157	R 6.685	.745	.751	R 8.199
September	R 5.818	.708	.707	R 7.233	R 1.876	R .974	R .902	R -.508	R 6.199	.708	.705	R 7.627
October	5.995	.654	.760	7.409	1.887	1.018	.868	-.506	6.343	.654	.760	7.771
10-Month Total ...	57.095	6.901	7.975	71.971	19.227	10.204	9.023	.372	66.393	6.901	7.939	81.366
2013 10-Month Total ...	53.452	6.840	7.741	68.033	20.606	9.685	10.921	1.050	65.264	6.840	7.749	80.004
2012 10-Month Total ...	51.782	6.749	7.377	65.908	22.854	9.324	13.531	-1.101	64.112	6.749	7.340	78.338

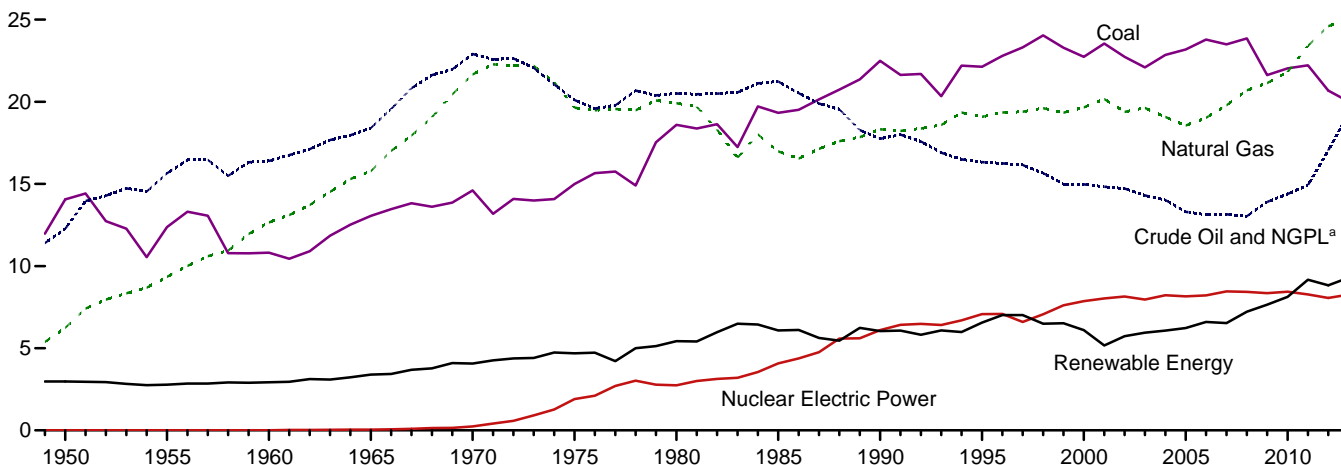
<sup>a</sup> Coal, natural gas (dry), crude oil, and natural gas plant liquids.  
<sup>b</sup> See Tables 10.1-10.2c for notes on series components and estimation; and see Note, "Renewable Energy Production and Consumption," at end of Section 10.  
<sup>c</sup> Net imports equal imports minus exports.  
<sup>d</sup> 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.  
<sup>e</sup> Coal, coal coke net imports, natural gas, and petroleum.  
<sup>f</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1949 and monthly 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.

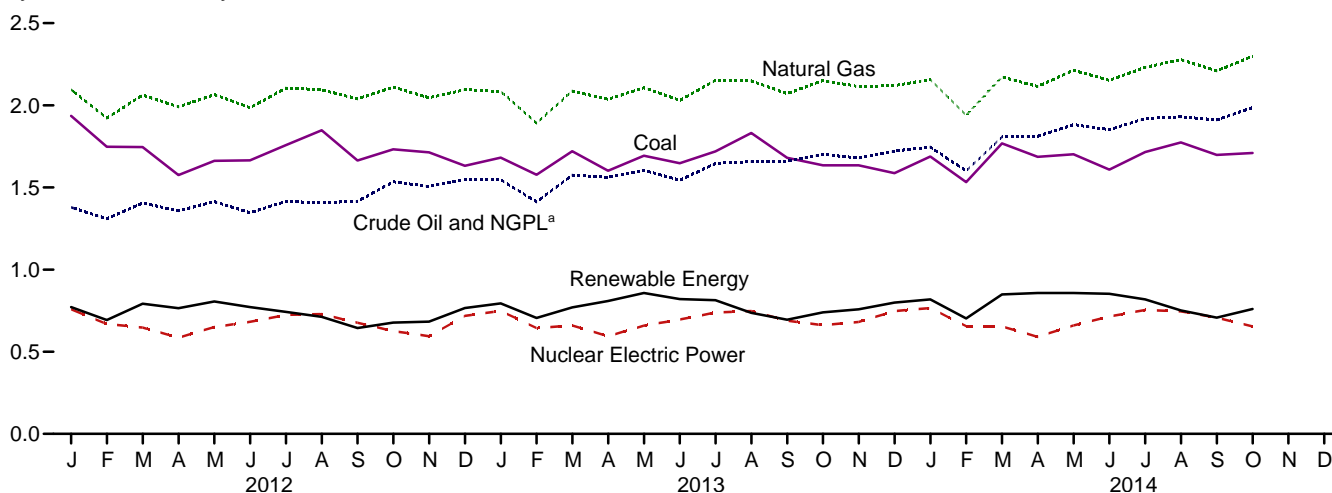
Historical revisions are due to the incorporation of revised thermal conversion factors in Tables A2 and A3.

**Figure 1.2 Primary Energy Production**  
(Quadrillion Btu)

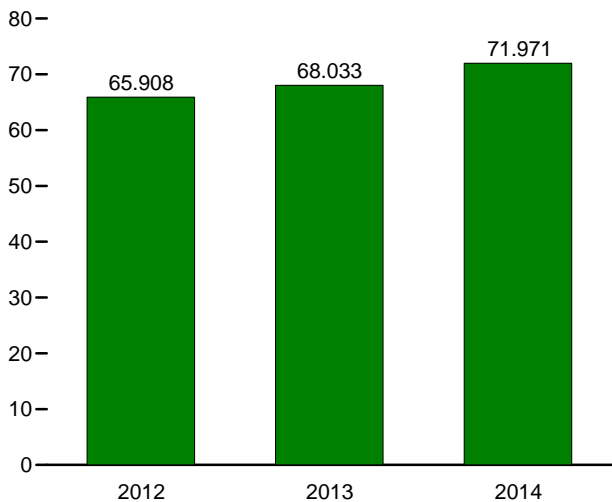
By Source, 1949–2013



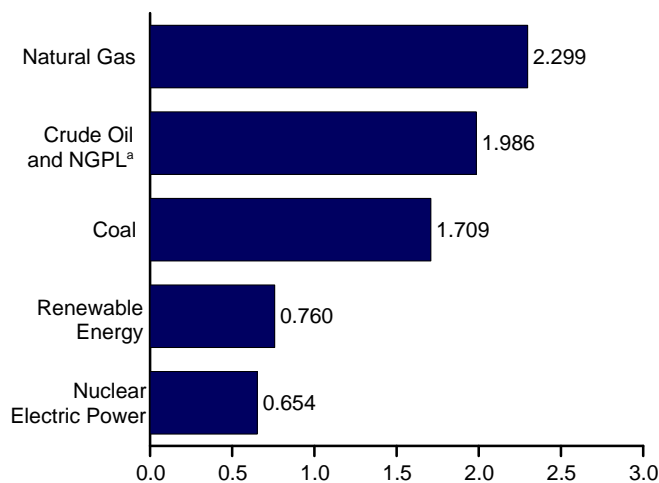
By Source, Monthly



Total, January–October



By Source, October 2014



<sup>a</sup> 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 <sup>a</sup>						Total
	Coal <sup>b</sup>	Natural Gas (Dry)	Crude Oil <sup>c</sup>	NGPL <sup>d</sup>	Total		Hydro-electric Power <sup>e</sup>	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	11.960	2.346	56.033	7.960	2.793	.173	.062	.113	2.805	5.947	69.939
2004 Total	22.852	19.074	11.550	2.466	55.942	8.223	2.688	.178	.063	.142	2.998	6.069	70.234
2005 Total	23.185	18.556	10.969	2.334	55.044	8.161	2.703	.181	.063	.178	3.104	6.229	69.434
2006 Total	23.790	19.022	10.771	2.356	55.938	8.215	2.869	.181	.068	.264	3.216	6.599	70.751
2007 Total	23.493	19.786	10.748	2.409	56.436	8.459	2.446	.186	.076	.341	3.480	6.528	71.422
2008 Total	23.851	20.703	10.613	2.419	57.587	8.426	2.511	.192	.089	.546	3.881	7.219	73.233
2009 Total	21.624	21.139	11.325	2.574	56.662	8.355	2.669	.200	.098	.721	3.967	7.655	72.672
2010 Total	22.038	21.806	11.605	2.781	58.230	8.434	2.539	.208	.126	.923	4.332	8.128	74.793
2011 Total	22.221	23.406	11.950	2.970	60.548	8.269	3.103	.212	.171	1.168	4.516	9.170	77.986
2012 January	1.935	2.095	1.106	.272	5.409	.758	.220	.017	.017	.130	.388	.772	6.939
February	1.747	1.922	1.053	.256	4.979	.669	.193	.016	.016	.105	.363	.693	6.341
March	1.745	2.062	1.132	.272	5.212	.647	.247	.018	.018	.133	.377	.792	6.651
April	1.575	1.990	1.096	.263	4.923	.585	.250	.017	.018	.121	.358	.765	6.273
May	1.662	2.065	1.140	.273	5.141	.651	.273	.018	.020	.119	.376	.806	6.597
June	1.665	1.986	1.088	.258	4.996	.683	.254	.017	.020	.114	.367	.772	6.451
July	1.757	2.105	1.149	.266	5.277	.724	.252	.018	.021	.084	.368	.743	6.744
August	1.848	2.094	1.136	.271	5.349	.729	.219	.018	.020	.081	.375	.712	6.791
September	1.664	2.039	1.144	.272	5.119	.676	.168	.018	.020	.084	.356	.644	6.439
October	1.732	2.111	1.248	.286	5.378	.626	.157	.018	.020	.120	.363	.678	6.681
November	1.714	2.046	1.226	.280	5.265	.594	.178	.018	.019	.111	.363	.683	6.543
December	1.632	2.095	1.273	.276	5.276	.719	.219	.019	.019	.138	.372	.766	6.761
<b>Total</b>	<b>20.677</b>	<b>24.610</b>	<b>13.791</b>	<b>3.246</b>	<b>62.324</b>	<b>8.062</b>	<b>2.629</b>	<b>.212</b>	<b>.227</b>	<b>1.340</b>	<b>4.419</b>	<b>8.826</b>	<b>79.212</b>
2013 January	R 1.681	2.084	1.273	R .274	R 5.312	.748	.239	.019	.022	.139	.375	.794	R 6.855
February	1.577	1.891	R 1.153	R .259	R 4.880	.644	.195	.017	.021	.132	.339	.705	R 6.229
March	R 1.720	2.086	R 1.289	R .286	R 5.382	.660	.197	.019	.025	.149	.381	.770	R 6.812
April	R 1.601	2.037	R 1.281	R .280	R 5.200	.595	.236	.018	.025	.165	.365	.808	R 6.603
May	R 1.693	2.107	R 1.310	R .294	R 5.404	.659	.272	.018	.026	.155	.386	.857	R 6.920
June	R 1.647	2.030	R 1.260	R .283	R 5.221	.696	.260	.018	.027	.131	.385	.821	R 6.738
July	R 1.719	2.152	R 1.345	R .301	R 5.518	.739	.259	.019	.027	.106	.402	.813	R 7.070
August	R 1.831	2.148	R 1.344	R .313	R 5.636	.748	.207	.019	.028	.091	.392	.737	R 7.121
September	R 1.681	2.071	1.349	R .311	R 5.411	.690	.161	.018	.027	.111	.377	.695	R 6.796
October	R 1.635	2.151	R 1.383	R .319	R 5.487	.662	.165	.019	.028	.131	.398	.740	R 6.890
November	R 1.634	2.113	R 1.373	R .306	R 5.426	.681	.169	.018	.025	.151	.396	.759	R 6.866
December	R 1.587	2.119	R 1.415	R .306	R 5.428	.747	.203	.019	.026	.134	.417	.799	R 6.974
<b>Total</b>	<b>R 20.008</b>	<b>24.991</b>	<b>R 15.776</b>	<b>R 3.532</b>	<b>R 64.306</b>	<b>8.268</b>	<b>2.561</b>	<b>.221</b>	<b>.307</b>	<b>1.595</b>	<b>4.614</b>	<b>9.298</b>	<b>R 81.873</b>
2014 January	R 1.689	E 2.157	RE 1.441	R .304	R 5.591	.766	.206	.019	.029	.171	.395	.819	R 7.176
February	R 1.532	E 1.940	RE 1.321	R .279	R 5.072	.656	.166	.017	.027	.133	.359	.702	R 6.431
March	R 1.768	E 2.173	RE 1.486	R .322	R 5.748	.654	.231	.018	.034	.169	.396	.849	R 7.251
April	R 1.687	E 2.115	RE 1.487	R .325	R 5.614	.591	.239	.018	.036	.178	.386	.857	R 7.062
May	R 1.702	E 2.213	RE 1.550	R .332	R 5.797	.660	.252	.019	.039	.148	.400	.857	R 7.314
June	R 1.609	E 2.152	RE 1.513	R .339	R 5.612	.714	.246	.018	.040	.149	.400	.853	R 7.179
July	R 1.715	E 2.231	RE 1.567	R .352	R 5.866	.754	.231	.018	.039	.115	.415	.819	R 7.438
August	R 1.774	RE 2.278	RE 1.574	R .355	R 5.982	.745	.188	.018	.040	.097	.408	.751	R 7.478
September	R 1.698	RE 2.210	RE 1.563	R .348	R 5.818	.708	.151	.018	.039	.109	.390	.707	R 7.233
October	1.709	E 2.299	E 1.627	.360	5.995	.654	.162	.018	.038	.138	.403	.760	7.409
<b>10-Month Total</b>	<b>16.882</b>	<b>E 21.767</b>	<b>E 15.129</b>	<b>3.317</b>	<b>57.095</b>	<b>6.901</b>	<b>2.071</b>	<b>.182</b>	<b>.362</b>	<b>1.409</b>	<b>3.952</b>	<b>7.975</b>	<b>71.971</b>
2013 10-Month Total	16.786	20.758	12.988	2.920	53.452	6.840	2.189	.184	.256	1.310	3.801	7.741	68.033
2012 10-Month Total	17.331	20.469	11.292	2.690	51.782	6.749	2.232	.175	.190	1.091	3.689	7.377	65.908

<sup>a</sup> 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.

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

<sup>c</sup> Includes lease condensate.

<sup>d</sup> Natural gas plant liquids.

<sup>e</sup> 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

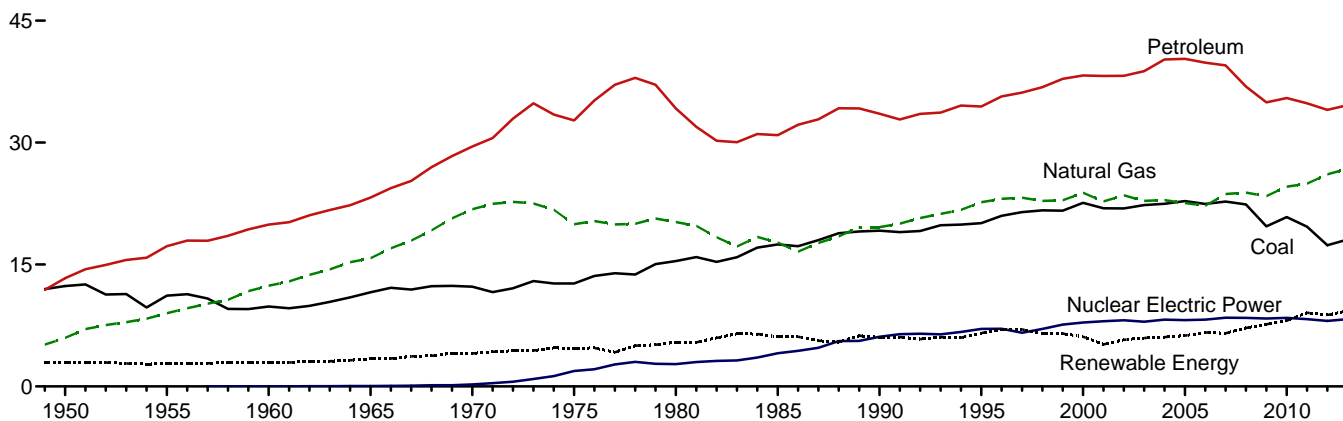
sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

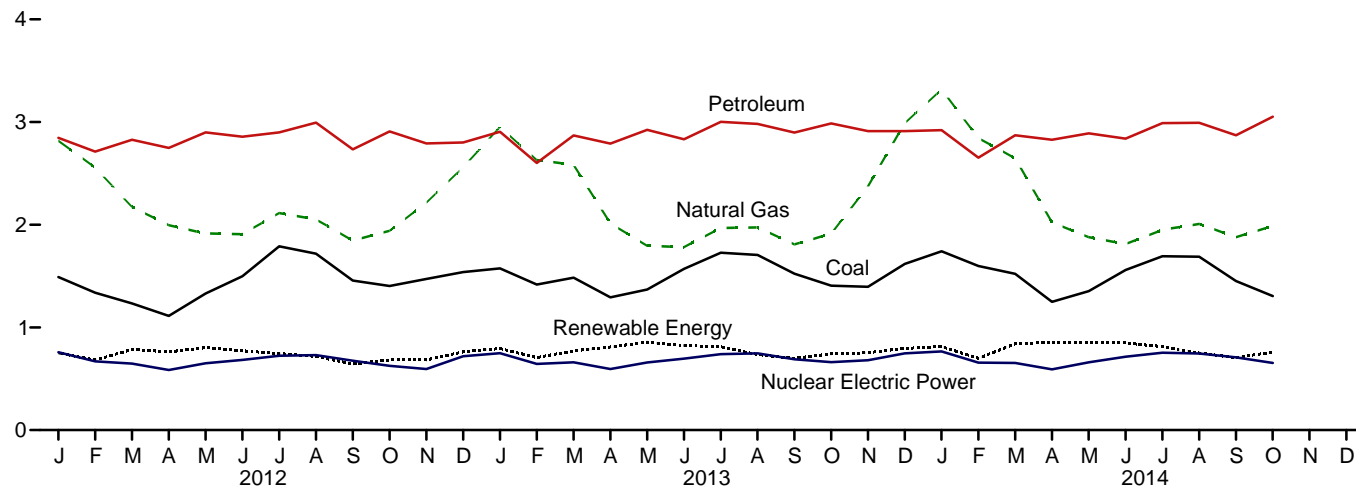
Sources: • Coal: Tables 6.1 and A5. • Natural Gas (Dry): Tables 4.1 and A4. • Crude Oil and Natural Gas Plant Liquids: Tables 3.1 and A2. • Nuclear Electric Power: Tables 7.2a and A6 ("Nuclear Plants" heat rate). • Renewable Energy: Table 10.1.

**Figure 1.3 Primary Energy Consumption**  
(Quadrillion Btu)

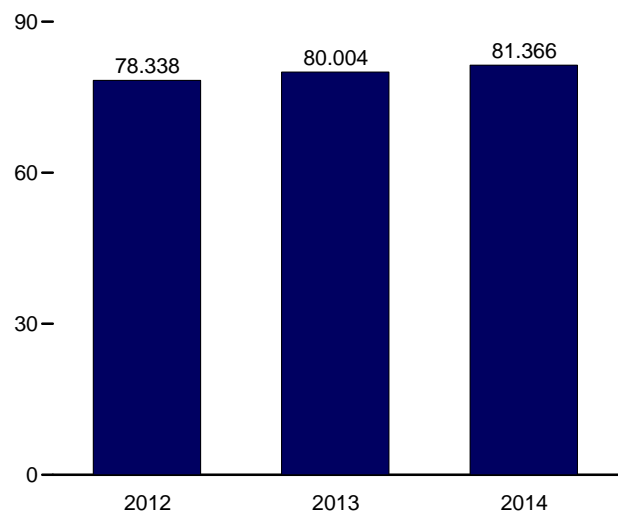
By Source,<sup>a</sup> 1949–2013



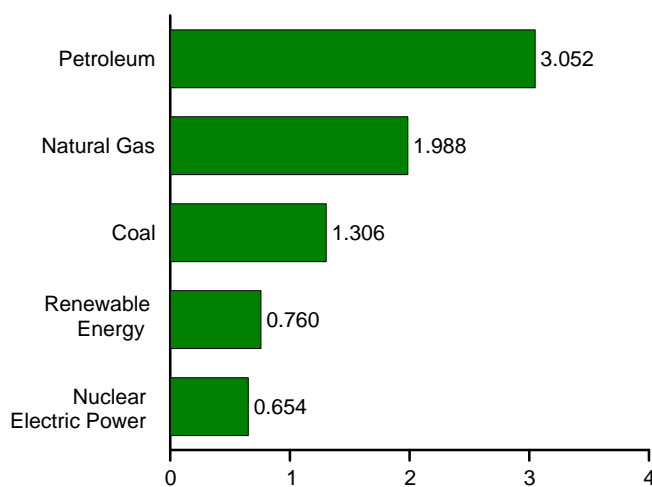
By Source,<sup>a</sup> Monthly



Total, January–October



By Source,<sup>a</sup> October 2014



<sup>a</sup> 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 <sup>a</sup>						Total <sup>f</sup>
	Coal	Natural Gas <sup>b</sup>	Petro- leum <sup>c</sup>	Total <sup>d</sup>		Hydro- electric Power <sup>e</sup>	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	R 34.441	R 77.262	7.075	3.205	.152	.069	.033	3.101	6.560	R 91.032
2000 Total	22.580	R 38.266	R 38.266	R 84.735	7.862	2.811	.164	.066	.057	3.008	6.106	R 98.819
2001 Total	21.914	R 22.773	R 38.190	R 82.906	8.029	2.242	.164	.064	.070	2.622	5.163	R 96.172
2002 Total	21.904	R 23.510	R 38.226	R 83.700	8.145	2.689	.171	.063	.105	2.701	5.729	R 97.647
2003 Total	22.321	R 22.831	R 38.790	R 83.992	7.960	2.793	.173	.062	.113	2.807	5.948	R 97.922
2004 Total	22.466	R 22.923	R 40.227	R 85.754	8.223	2.688	.178	.063	.142	3.010	6.081	R 100.096
2005 Total	22.797	R 22.565	R 40.303	R 85.709	8.161	2.703	.181	.063	.178	3.117	6.242	R 100.196
2006 Total	22.447	R 22.239	R 39.824	R 84.570	8.215	2.869	.181	.068	.264	3.267	6.649	R 99.497
2007 Total	22.749	R 23.663	R 39.491	R 85.928	8.459	2.446	.186	.076	.341	3.492	6.541	R 101.034
2008 Total	22.387	R 23.843	R 36.907	R 83.178	8.426	2.511	.192	.089	.546	3.865	7.202	R 98.919
2009 Total	19.691	R 23.416	R 34.959	R 78.042	8.355	2.669	.200	.098	.721	3.950	7.638	R 94.152
2010 Total	20.834	R 24.575	R 35.489	R 80.891	8.434	2.539	.208	.126	.923	4.285	8.081	R 97.496
2011 Total	19.658	R 24.955	R 34.824	R 79.447	8.269	3.103	.212	.171	1.168	4.420	9.074	R 96.917
<b>2012 January</b>	1.491	2.817	R 2.846	R 7.156	.758	.220	.017	.017	.130	.367	.751	R 8.676
February	1.338	2.556	R 2.712	R 6.606	.669	.193	.016	.016	.105	.351	.681	R 7.966
March	1.233	2.174	R 2.827	R 6.236	.647	.247	.018	.018	.133	.370	.785	R 7.678
April	1.112	1.995	R 2.748	R 5.861	.585	.250	.017	.018	.121	.354	.761	R 7.220
May	1.329	1.914	R 2.898	R 6.142	.651	.273	.018	.020	.119	.373	.803	R 7.610
June	1.498	1.908	R 2.856	R 6.262	.683	.254	.017	.020	.114	.367	.772	R 7.731
July	1.790	2.114	R 2.899	R 6.803	.724	.252	.018	.021	.084	.369	.744	R 8.290
August	1.718	2.052	R 2.994	R 6.764	.729	.219	.018	.020	.081	.380	.718	R 8.229
September	1.456	1.845	R 2.734	R 6.034	.676	.168	.018	.020	.084	.355	.643	R 7.366
October	1.403	1.941	R 2.908	R 6.249	.626	.157	.018	.020	.120	.368	.683	R 7.570
November	1.472	2.215	R 2.792	R 6.476	.594	.178	.018	.019	.111	.358	.684	R 7.767
December	1.539	2.559	R 2.801	R 6.898	.719	.219	.019	.019	.138	.369	.763	R 8.392
<b>Total</b>	<b>17.378</b>	<b>26.089</b>	<b>R 34.016</b>	<b>R 77.487</b>	<b>8.062</b>	<b>2.629</b>	<b>.212</b>	<b>.227</b>	<b>1.340</b>	<b>4.379</b>	<b>8.786</b>	<b>R 94.496</b>
<b>2013 January</b>	1.575	2.951	R 2.906	R 7.432	.748	.239	.019	.022	.139	.374	.793	R 8.987
February	1.418	2.630	R 2.601	R 6.650	.644	.195	.017	.021	.132	.340	.706	R 8.013
March	1.484	2.583	R 2.870	R 6.934	.660	.197	.019	.025	.149	.382	.771	R 8.379
April	1.293	2.013	R 2.789	R 6.093	.595	.236	.018	.025	.165	.367	.810	R 7.509
May	1.369	1.794	R 2.923	R 6.086	.659	.272	.018	.026	.155	.386	.857	R 7.617
June	1.570	1.782	R 2.833	R 6.182	.696	.260	.018	.027	.131	.387	.823	R 7.719
July	1.727	1.969	R 3.002	R 6.696	.739	.259	.019	.027	.106	.401	.812	R 8.266
August	1.705	1.974	R 2.981	R 6.658	.748	.207	.019	.028	.091	.391	.735	R 8.160
September	1.523	1.809	R 2.898	R 6.229	.690	.161	.018	.027	.111	.381	.699	R 7.633
October	1.406	1.913	R 2.986	R 6.304	.662	.165	.019	.028	.131	.401	.743	R 7.722
November	1.395	2.374	R 2.912	R 6.679	.681	.169	.018	.025	.151	.391	.754	R 8.128
December	1.619	2.989	R 2.911	R 7.517	.747	.203	.019	.026	.134	.413	.795	R 9.072
<b>Total</b>	<b>18.084</b>	<b>26.780</b>	<b>R 34.613</b>	<b>R 79.460</b>	<b>8.268</b>	<b>2.561</b>	<b>.221</b>	<b>.307</b>	<b>1.595</b>	<b>4.613</b>	<b>9.298</b>	<b>R 97.204</b>
<b>2014 January</b>	1.741	R 3.317	R 2.921	R 7.978	.766	.206	.019	.029	.171	.388	.812	R 9.568
February	1.597	R 2.842	R 2.652	R 7.090	.656	.166	.017	.027	.133	.356	.699	R 8.455
March	1.522	2.647	R 2.871	R 7.039	.654	.231	.018	.034	.169	.387	.840	R 8.544
April	1.249	R 2.024	R 2.828	R 6.099	.591	.239	.018	.036	.178	.383	.854	R 7.554
May	1.354	R 1.879	R 2.890	R 6.121	.660	.252	.019	.039	.148	.399	.856	R 7.651
June	1.558	1.812	R 2.839	R 6.208	.714	.246	.018	.040	.149	.395	.848	R 7.783
July	1.694	R 1.950	R 2.989	R 6.630	.754	.231	.018	.039	.115	.409	.812	R 8.213
August	1.688	R 2.008	R 2.992	R 6.685	.745	.188	.018	.040	.097	.408	.751	R 8.199
September	1.452	R 1.878	R 2.871	R 6.199	.708	.151	.018	.039	.109	.387	.705	R 7.627
October	1.306	1.988	3.052	6.343	.654	.162	.018	.038	.138	.404	.760	7.771
<b>10-Month Total</b>	<b>15.161</b>	<b>22.344</b>	<b>28.904</b>	<b>66.393</b>	<b>6.901</b>	<b>2.071</b>	<b>.182</b>	<b>.362</b>	<b>1.409</b>	<b>3.915</b>	<b>7.939</b>	<b>81.366</b>
<b>2013 10-Month Total</b>	<b>15.070</b>	<b>21.417</b>	<b>28.790</b>	<b>65.264</b>	<b>6.840</b>	<b>2.189</b>	<b>.184</b>	<b>.256</b>	<b>1.310</b>	<b>3.809</b>	<b>7.749</b>	<b>80.004</b>
<b>2012 10-Month Total</b>	<b>14.368</b>	<b>21.315</b>	<b>28.423</b>	<b>64.112</b>	<b>6.749</b>	<b>2.232</b>	<b>.175</b>	<b>.190</b>	<b>1.091</b>	<b>3.652</b>	<b>7.340</b>	<b>78.338</b>

<sup>a</sup> 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.

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

<sup>c</sup> 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."

<sup>d</sup> Includes coal coke net imports. See Tables 1.4a and 1.4b.

<sup>e</sup> Conventional hydroelectric power.

<sup>f</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

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

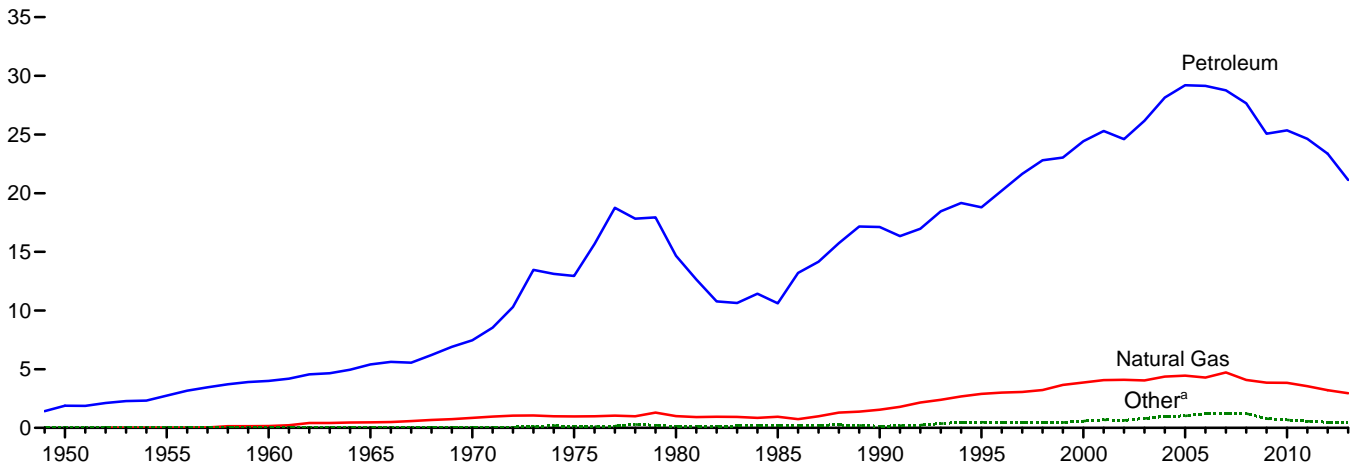
• Petroleum: Table 3.6. • Nuclear Electric Power: Tables 7.2a and A6

("Nuclear Plants" heat rate). • Renewable Energy: Table 10.1. • Net Imports of Coal Coke and Electricity: Tables 1.4a and 1.4b.

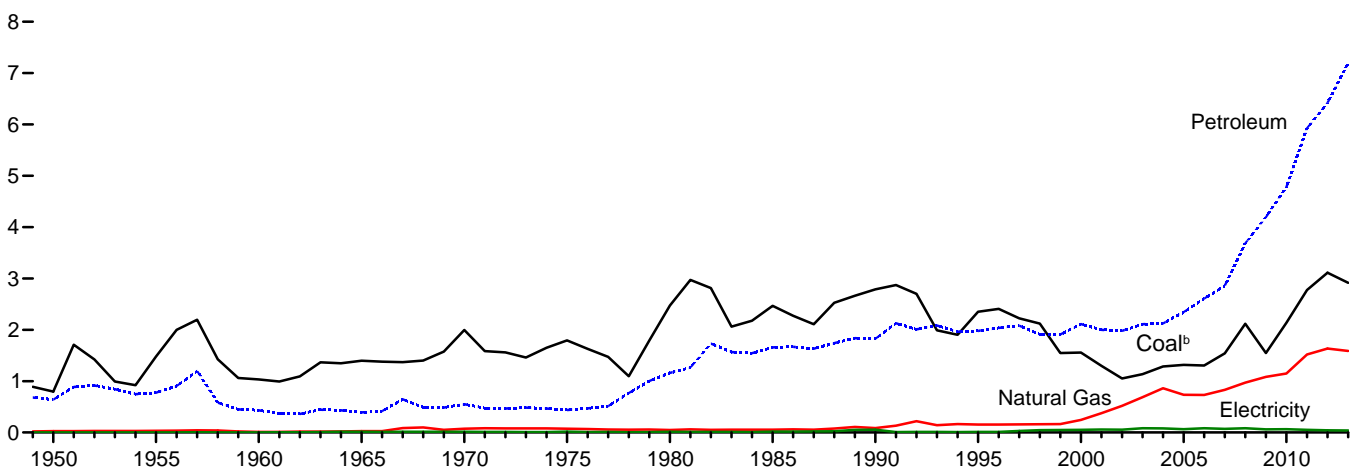
Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

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

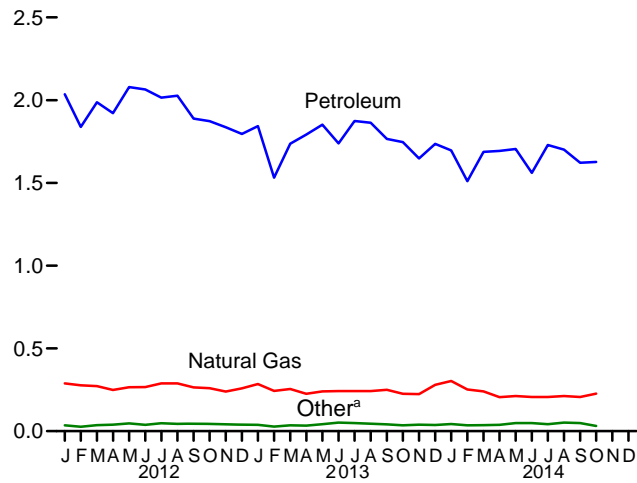
Imports by Source, 1949–2013



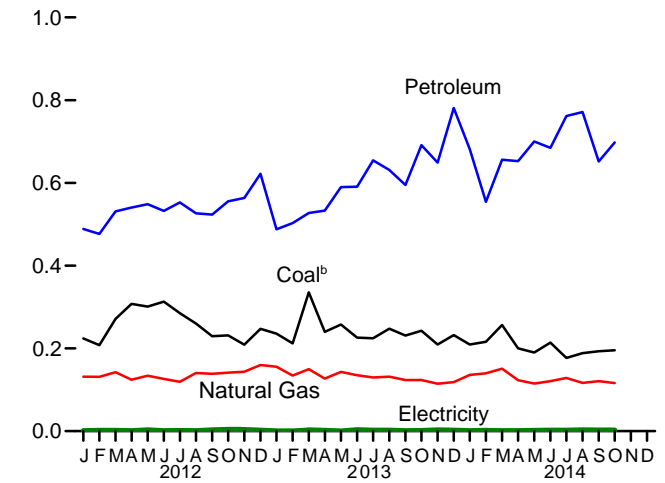
Exports by Source, 1949–2013



Imports by Source, Monthly



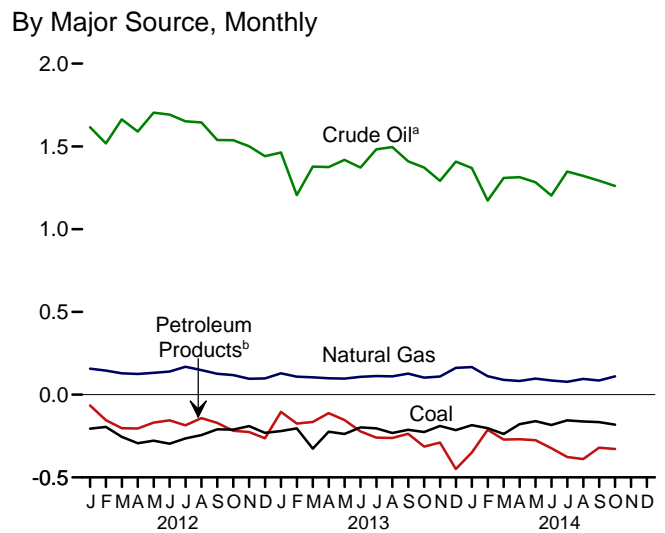
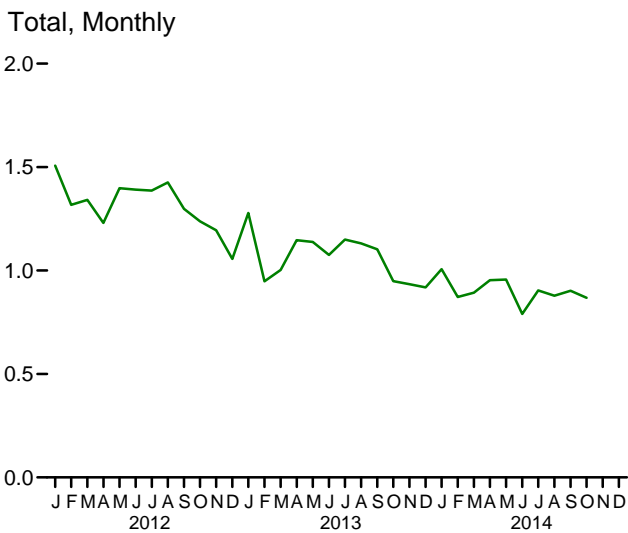
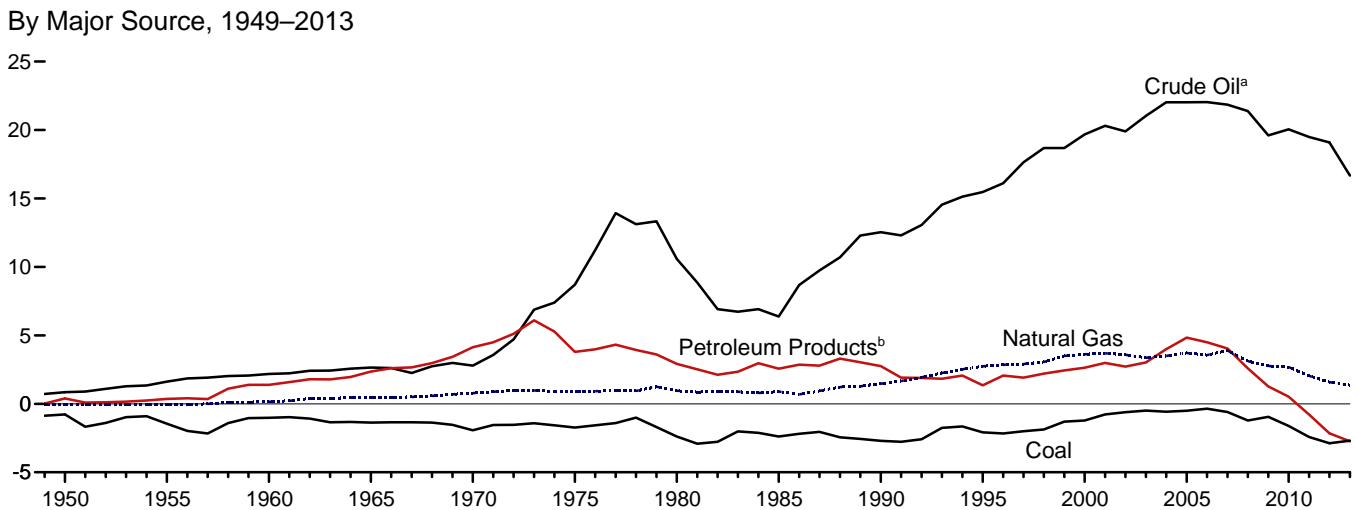
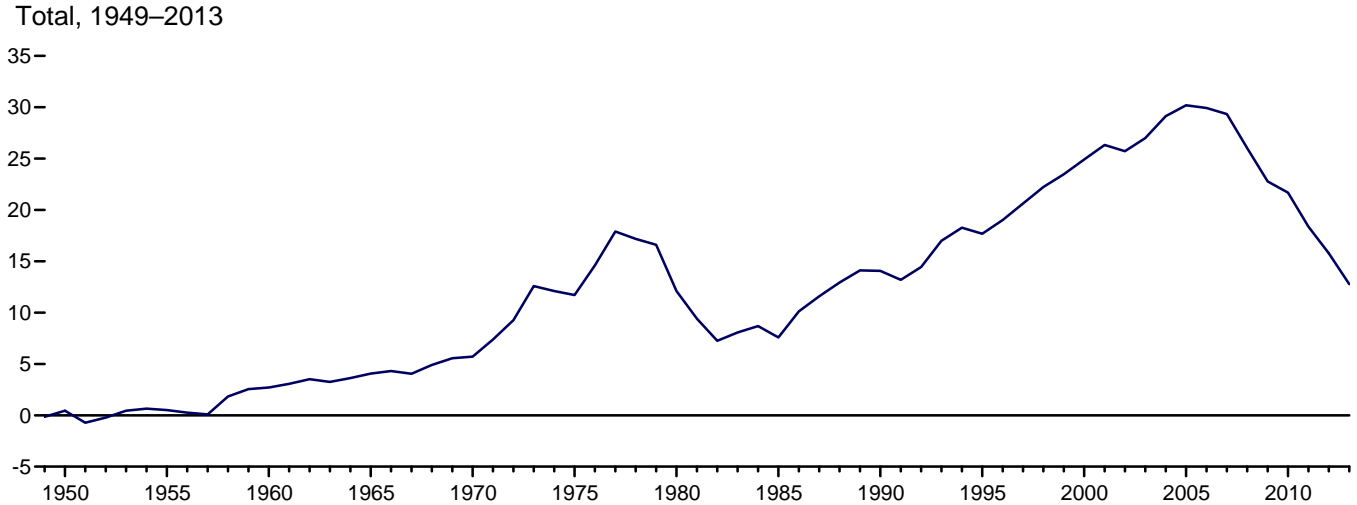
Exports by Major Source, Monthly



<sup>a</sup> Coal, coal coke, biofuels, and electricity.  
<sup>b</sup> 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)



<sup>a</sup> Crude oil and lease condensate. Includes imports into the Strategic Petroleum Reserve, which began in 1977.

<sup>b</sup> 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 <sup>c</sup>	Electricity	Total
				Crude Oil <sup>a</sup>	Petroleum Products <sup>b</sup>	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	R 3.131	R 18.800	.001	.146	R 22.180
2000 Total .....	.313	.094	3.869	19.783	R 4.641	R 24.424	(s)	.166	R 28.865
2001 Total .....	.495	.063	4.068	20.348	R 4.946	R 25.294	.002	.131	R 30.052
2002 Total .....	.422	.080	4.104	19.920	R 4.677	R 24.597	.002	.125	R 29.331
2003 Total .....	.626	.068	4.042	21.060	R 5.105	R 26.165	.002	.104	R 31.007
2004 Total .....	.682	.170	4.365	22.082	R 6.063	R 28.145	.013	.117	R 33.492
2005 Total .....	.762	.088	4.450	22.091	R 7.108	R 29.198	.012	.150	R 34.659
2006 Total .....	.906	.101	4.291	22.085	R 7.054	R 29.139	.066	.146	R 34.649
2007 Total .....	.909	.061	4.723	21.914	R 6.842	R 28.756	.055	.175	R 34.679
2008 Total .....	.855	.089	4.084	21.448	R 6.214	R 27.662	.085	.195	R 32.970
2009 Total .....	.566	.009	3.845	19.699	R 5.367	R 25.066	.027	.178	R 29.690
2010 Total .....	.484	.030	3.834	20.140	R 5.219	R 25.359	.004	.154	R 29.866
2011 Total .....	.327	.035	3.555	19.595	R 5.038	R 24.633	.019	.178	R 28.748
2012 January .....	.018	.003	.288	1.630	R .406	R 2.036	(s)	.014	R 2.360
February .....	.012	.002	.277	1.531	R .307	R 1.838	(s)	.012	2.142
March .....	.016	.004	.272	1.676	R .311	1.988	.002	.014	R 2.295
April .....	.014	.007	.249	1.597	.325	R 1.922	.001	.017	R 2.210
May .....	.023	.004	.265	1.718	.361	R 2.079	.002	.019	R 2.391
June .....	.017	.001	.266	1.700	R .364	2.065	.004	.018	R 2.370
July .....	.021	.001	.288	1.665	.351	2.016	.004	.023	R 2.353
August .....	.015	.001	.288	1.656	R .371	R 2.027	.007	.022	R 2.360
September .....	.020	.002	.264	1.550	R .338	R 1.888	.007	.017	R 2.198
October .....	.020	.001	.260	1.549	R .323	R 1.873	.007	.015	R 2.175
November .....	.018	.001	.240	1.513	.323	R 1.836	.007	.016	2.119
December .....	.017	.002	.258	1.453	R .342	R 1.795	.005	.015	R 2.092
Total .....	.212	.028	3.216	19.239	R 4.122	R 23.361	.045	.202	R 27.065
2013 January .....	.015	(s)	.285	1.482	R .361	R 1.843	.003	.017	R 2.163
February .....	.009	.001	.243	1.227	R .304	R 1.531	.001	.016	R 1.802
March .....	.009	(s)	.254	1.397	R .340	R 1.737	.006	.018	R 2.024
April .....	.016	(s)	.226	1.399	R .393	R 1.792	.003	.016	R 2.053
May .....	.020	.001	.240	1.442	R .410	R 1.852	.004	.019	R 2.136
June .....	.028	(s)	.243	1.394	R .345	R 1.739	.007	.020	R 2.037
July .....	.020	(s)	.242	1.501	R .373	R 1.874	.007	.022	R 2.166
August .....	.017	.001	.242	1.509	R .354	R 1.863	.008	.022	R 2.152
September .....	.019	(s)	.250	1.429	R .337	R 1.766	.008	.018	R 2.061
October .....	.017	(s)	.226	1.393	R .353	R 1.746	.008	.017	R 2.013
November .....	.020	(s)	.224	1.336	R .313	R 1.648	.010	.018	R 1.919
December .....	.018	(s)	.280	1.448	R .288	R 1.736	.010	.017	R 2.060
Total .....	.208	.003	2.955	16.957	R 4.170	R 21.127	.075	.217	R 24.586
2014 January .....	.025	(s)	.303	1.413	R .284	R 1.697	.001	.017	R 2.043
February .....	.014	(s)	R .252	1.212	R .299	R 1.510	.001	.014	R 1.790
March .....	.019	(s)	.240	1.353	R .334	R 1.687	.002	.017	R 1.965
April .....	.022	(s)	.206	1.361	R .332	R 1.693	.002	.015	R 1.937
May .....	.030	(s)	.212	1.335	R .370	R 1.705	.005	.017	R 1.969
June .....	.031	.001	.207	1.272	R .289	R 1.561	.002	.017	R 1.818
July .....	.022	(s)	.206	1.420	R .309	R 1.729	.003	.020	R 1.980
August .....	.026	(s)	.212	1.392	R .309	R 1.701	.003	.021	R 1.963
September .....	.027	(s)	.207	1.354	R .268	R 1.621	.002	.019	R 1.876
October .....	.014	.001	.226	1.328	.298	1.627	.003	.017	1.887
10-Month Total .....	.228	.002	2.269	13.440	3.092	16.531	.024	.172	19.227
2013 10-Month Total .....	.170	.003	2.451	14.173	3.569	17.743	.056	.183	20.606
2012 10-Month Total .....	.177	.025	2.718	16.273	3.457	19.730	.034	.171	22.854

<sup>a</sup> Crude oil and lease condensate. Includes imports into the Strategic Petroleum Reserve, which began in 1977.

<sup>b</sup> Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.

<sup>c</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: • **Coal:** Tables 6.1 and A5. • **Coal Coke:** U.S. Department of Commerce, Bureau of the Census, Monthly Report IM 145 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, A1, and A3. • **Electricity:** Tables 7.1 and A6.

Historical revisions are due to the incorporation of revised thermal conversion factors in Table A2.

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

	Exports									Net Imports <sup>a</sup>
	Coal	Coal Coke	Natural Gas	Petroleum			Biofuels <sup>d</sup>	Electricity	Total	
				Crude Oil <sup>b</sup>	Petroleum Products <sup>c</sup>	Total				
<b>1950 Total</b> .....	<b>0.786</b>	<b>0.010</b>	<b>0.027</b>	<b>0.202</b>	<b>0.440</b>	<b>0.642</b>	NA	<b>0.001</b>	<b>1.465</b>	<b>0.448</b>
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	R 1.776	R 1.976	NA	.012	R 4.496	R 17.684
2000 Total .....	1.528	.028	.245	.106	R 2.003	R 2.110	NA	.051	R 3.962	R 24.904
2001 Total .....	1.265	.033	.377	.043	R 1.956	R 1.999	(s)	.056	R 3.731	R 26.321
2002 Total .....	1.032	.020	.520	.019	R 1.963	R 1.982	(s)	.054	R 3.608	R 25.722
2003 Total .....	1.117	.018	.686	.026	R 2.083	R 2.110	.001	.082	R 4.013	R 26.994
2004 Total .....	1.253	.033	.862	.057	R 2.068	R 2.125	.001	.078	R 4.351	R 29.141
2005 Total .....	1.273	.043	.735	.067	R 2.276	R 2.344	.001	.065	R 4.462	R 30.197
2006 Total .....	1.264	.040	.730	.052	R 2.554	R 2.606	.005	.083	R 4.727	R 29.921
2007 Total .....	1.507	.036	.830	.058	R 2.803	R 2.861	.036	.069	R 5.338	R 29.341
2008 Total .....	2.071	.049	.972	.061	R 3.626	R 3.686	.089	.083	R 6.949	R 26.021
2009 Total .....	1.515	.032	1.082	.093	R 4.101	R 4.194	.035	.062	R 6.920	R 22.770
2010 Total .....	2.101	.036	1.147	.088	R 4.691	R 4.780	.047	.065	R 8.176	R 21.690
2011 Total .....	2.751	.024	1.519	.100	R 5.829	R 5.929	.108	.051	R 10.382	R 18.366
<b>2012</b> January .....	.224	.001	.132	.014	R .471	R .485	.008	.003	R .853	R 1.507
February .....	.208	.002	.131	.012	R .461	R .474	.007	.003	R .824	R 1.317
March .....	.271	.002	.142	.013	R .514	R .527	.008	.004	R .954	R 1.341
April .....	.308	.001	.124	.007	R .529	R .536	.007	.004	R .981	R 1.230
May .....	.301	.003	.134	.015	R .530	R .545	.007	.004	R .993	R 1.398
June .....	.313	.001	.126	.008	R .520	R .528	.007	.004	R .979	R 1.391
July .....	.285	.001	.119	.014	R .536	R .549	.008	.003	R .967	R 1.386
August .....	.260	.001	.141	.011	R .513	R .524	.006	.003	R .934	R 1.425
September .....	.229	.003	.139	.012	R .509	R .520	.006	.003	R .900	R 1.298
October .....	.231	.004	.141	.012	R .541	R .553	.006	.003	R .938	R 1.238
November .....	.209	.004	.144	.013	R .548	R .561	.004	.003	R .924	R 1.194
December .....	.247	.002	.160	.013	R .606	R .618	.005	.004	R 1.036	R 1.056
<b>Total</b> .....	<b>3.087</b>	<b>.024</b>	<b>1.633</b>	<b>.143</b>	<b>R 6.277</b>	<b>R 6.420</b>	<b>.078</b>	<b>.041</b>	<b>R 11.284</b>	<b>R 15.781</b>
<b>2013</b> January .....	.236	.001	.156	.020	R .465	R .484	.005	.003	R .885	R 1.278
February .....	.212	.001	.134	.021	R .479	R .500	.004	.003	R .824	R .948
March .....	.336	.003	.150	.019	R .505	R .524	.005	.003	R 1.021	R 1.003
April .....	.240	.002	.127	.024	R .505	R .529	.005	.004	R .907	R 1.146
May .....	.258	(s)	.143	.023	R .563	R .587	.006	.003	R .998	R 1.138
June .....	.226	.003	.135	.022	R .567	R .588	.006	.003	R .961	R 1.075
July .....	.225	.002	.130	.019	R .632	R .651	.005	.003	R 1.016	R 1.150
August .....	.248	.002	.131	.013	R .615	R .628	.008	.003	R 1.021	R 1.131
September .....	.231	.001	.124	.018	R .574	R .592	.007	.003	R .958	R 1.103
October .....	.242	.001	.124	.021	R .666	R .688	.006	.003	R 1.065	R .948
November .....	.209	.003	.115	.044	R .602	R .646	.010	.003	R .986	R .934
December .....	.232	.002	.118	.040	R .738	R .777	.008	.004	R 1.142	R .919
<b>Total</b> .....	<b>2.895</b>	<b>.021</b>	<b>1.587</b>	<b>.284</b>	<b>R 6.911</b>	<b>R 7.195</b>	<b>.076</b>	<b>.039</b>	<b>R 11.812</b>	<b>R 12.774</b>
<b>2014</b> January .....	.210	.001	.136	.044	R .633	R .677	.008	.004	R 1.036	R 1.007
February .....	.216	.002	.140	.039	R .511	R .550	.006	.004	R .918	R .872
March .....	.257	.001	.151	.044	R .605	R .649	.008	.007	R 1.072	R .893
April .....	.200	.001	.123	.047	R .601	R .648	.007	.005	R 1.072	R .954
May .....	.190	.002	.115	.052	R .645	R .697	.005	.003	R 1.013	R .956
June .....	.214	.002	.121	.069	R .612	R .681	.006	.004	R 1.028	R .790
July .....	.177	.002	.128	.072	R .686	R .758	.007	.004	R 1.076	R .903
August .....	.189	.003	.116	.070	R .698	R .768	.006	.003	R 1.085	R .878
September .....	.193	.003	.121	.061	R .588	R .649	.005	.003	R .974	R .902
October .....	.195	.002	.116	.068	.627	.695	.007	.003	1.018	.868
<b>10-Month Total</b> .....	<b>2.040</b>	<b>.018</b>	<b>1.268</b>	<b>.565</b>	<b>6.207</b>	<b>6.772</b>	<b>.066</b>	<b>.039</b>	<b>10.204</b>	<b>9.023</b>
<b>2013 10-Month Total</b> .....	<b>2.453</b>	<b>.016</b>	<b>1.353</b>	<b>.200</b>	<b>5.571</b>	<b>5.772</b>	<b>.059</b>	<b>.032</b>	<b>9.685</b>	<b>10.921</b>
<b>2012 10-Month Total</b> .....	<b>2.631</b>	<b>.018</b>	<b>1.330</b>	<b>.118</b>	<b>5.123</b>	<b>5.241</b>	<b>.069</b>	<b>.035</b>	<b>9.324</b>	<b>13.531</b>

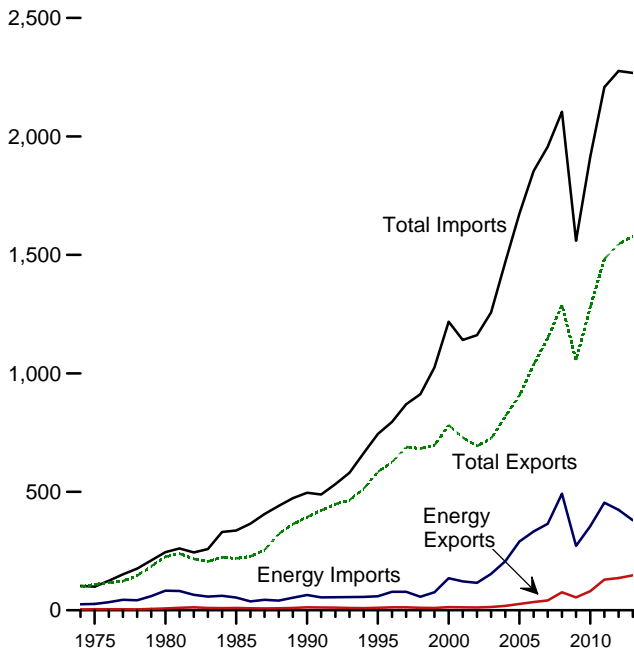
<sup>a</sup> Net imports equal imports minus exports.  
<sup>b</sup> Crude oil and lease condensate.  
<sup>c</sup> Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.  
<sup>d</sup> Through 2010, data are for biodiesel only. Beginning in 2011, 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.  
Sources: • **Coal:** Tables 6.1 and A5. • **Coal Coke:** U.S. Department of Commerce, Bureau of the Census, Monthly Report EM 545 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, A1, and A3. • **Electricity:** Tables 7.1 and A6.

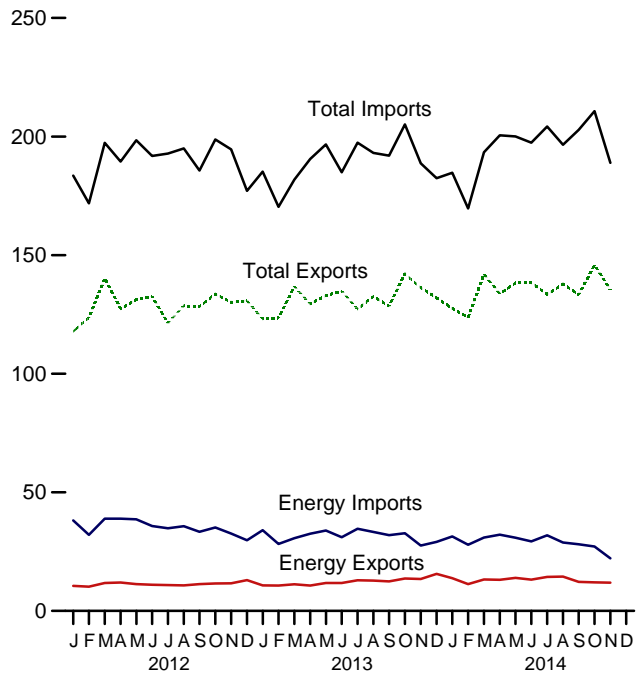
Historical revisions are due to the incorporation of revised thermal conversion factors in Table A2.

**Figure 1.5 Merchandise Trade Value**  
(Billion Dollars<sup>a</sup>)

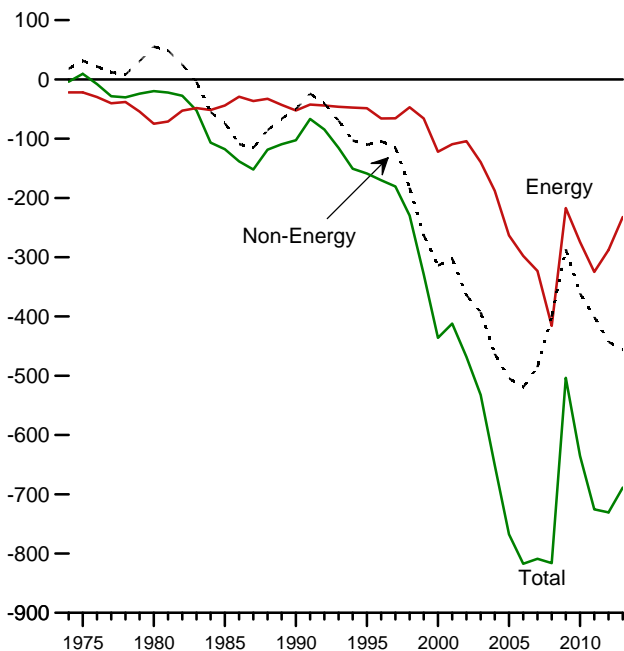
Imports and Exports, 1974–2013



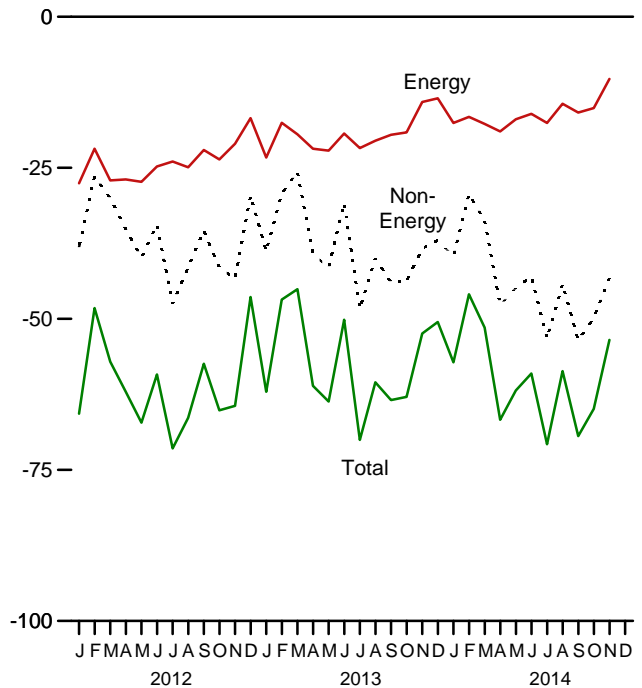
Imports and Exports, Monthly



Trade Balance, 1974–2013



Trade Balance, Monthly

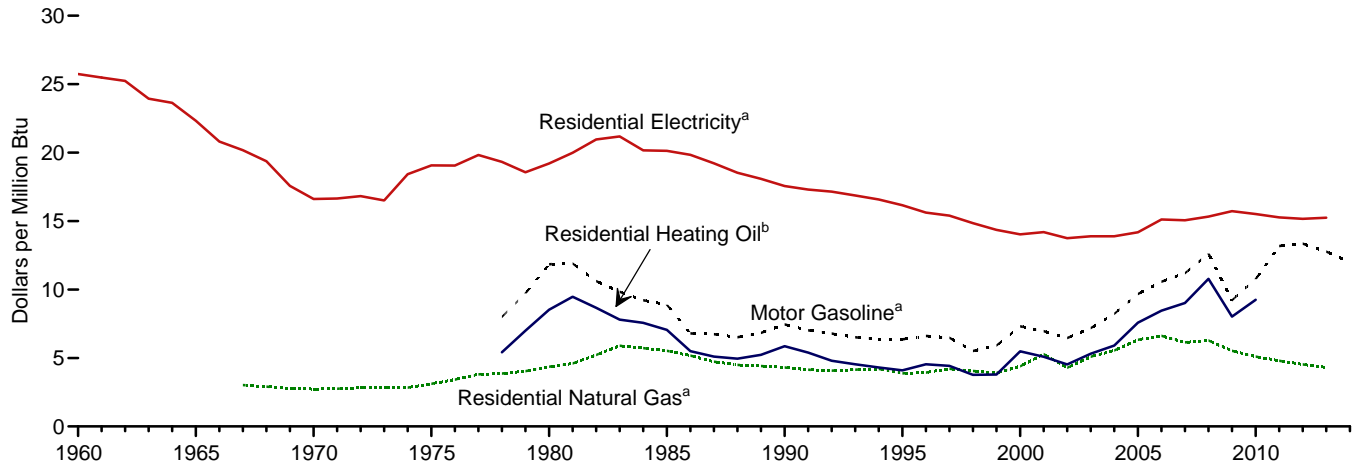


<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.  
<http://www.eia.gov/totalenergy/data/monthly/#summary>.  
Source: Table 1.5.

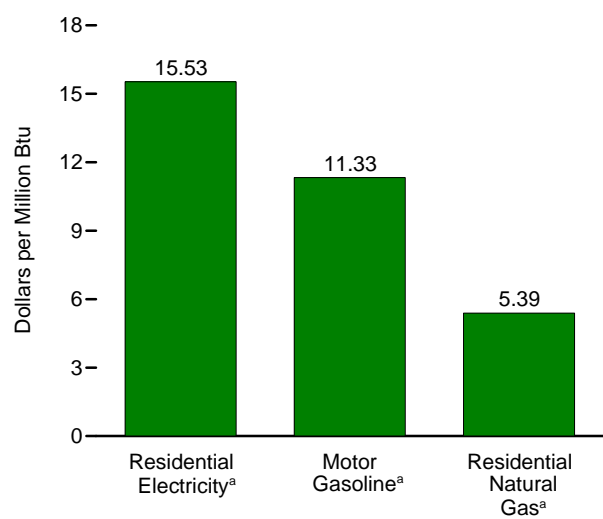


**Figure 1.6 Cost of Fuels to End Users in Real (1982–1984) Dollars**

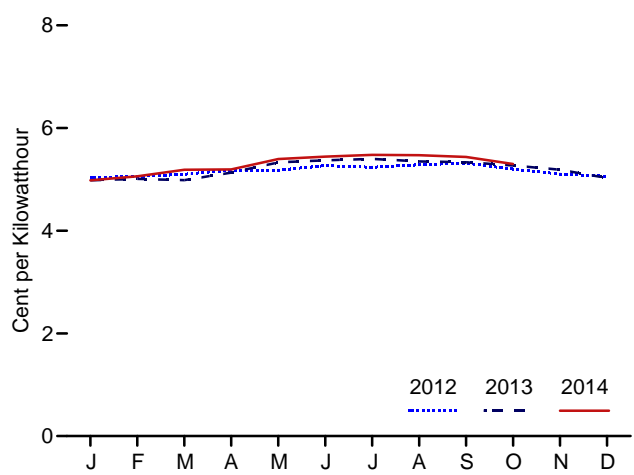
Costs, 1960–2014



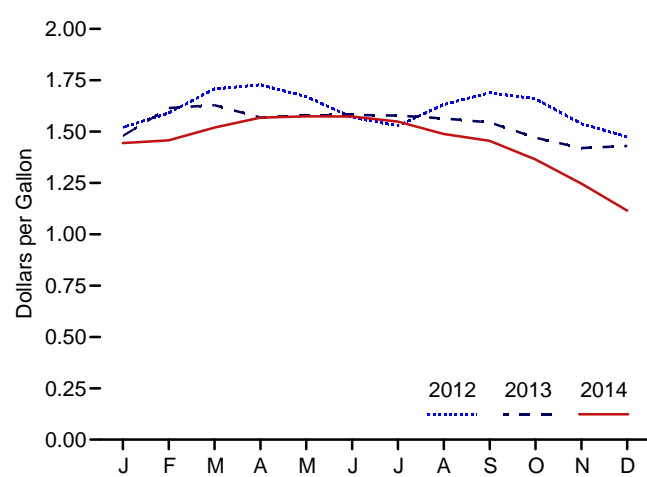
Costs, October 2014



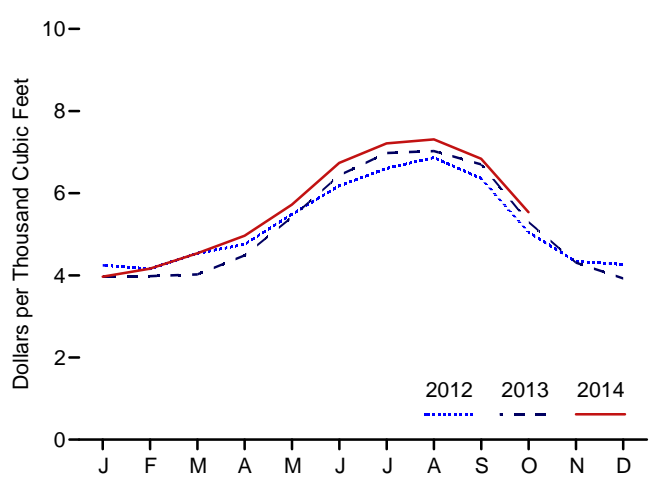
Residential Electricity,<sup>a</sup> Monthly



Motor Gasoline,<sup>a</sup> Monthly



Residential Natural Gas,<sup>a</sup> Monthly



<sup>a</sup> Includes taxes.

<sup>b</sup> Excludes taxes.

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 <sup>a</sup>	Motor Gasoline <sup>b</sup>		Residential Heating Oil <sup>c</sup>		Residential Natural Gas <sup>b</sup>		Residential Electricity <sup>b</sup>	
	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
<b>1960 Average</b> .....	29.6	NA	NA	NA	NA	NA	NA	8.8	25.74
<b>1965 Average</b> .....	31.5	NA	NA	NA	NA	NA	NA	7.6	22.33
<b>1970 Average</b> .....	38.8	NA	NA	NA	NA	2.81	2.72	5.7	16.62
<b>1975 Average</b> .....	53.8	NA	NA	NA	NA	3.18	3.12	6.5	19.07
<b>1980 Average</b> .....	82.4	1.482	11.85	1.182	8.52	4.47	4.36	6.6	19.21
<b>1985 Average</b> .....	107.6	1.112	8.89	0.979	7.06	5.69	5.52	6.87	20.13
<b>1990 Average</b> .....	130.7	0.931	7.44	0.813	5.86	4.44	4.31	5.99	17.56
<b>1995 Average</b> .....	152.4	0.791	6.36	0.569	4.10	3.98	3.87	5.51	16.15
<b>2000 Average</b> .....	172.2	0.908	R 7.31	0.761	5.49	4.51	4.39	4.79	14.02
<b>2001 Average</b> .....	177.1	0.864	R 6.96	0.706	5.09	5.44	5.28	4.84	14.20
<b>2002 Average</b> .....	179.9	0.801	6.46	0.628	4.52	4.39	4.28	4.69	13.75
<b>2003 Average</b> .....	184.0	0.890	R 7.19	0.736	5.31	5.23	5.09	4.74	13.89
<b>2004 Average</b> .....	188.9	1.018	R 8.22	0.819	5.91	5.69	5.55	4.74	13.89
<b>2005 Average</b> .....	195.3	1.197	R 9.67	1.051	7.58	6.50	6.33	4.84	14.18
<b>2006 Average</b> .....	201.6	1.307	R 10.58	1.173	8.46	6.81	6.63	5.16	15.12
<b>2007 Average</b> .....	207.342	1.374	R 11.20	1.250	9.01	6.31	6.14	5.14	15.05
<b>2008 Average</b> .....	215.303	1.541	R 12.62	1.495	10.78	6.45	6.28	5.23	15.33
<b>2009 Average</b> .....	214.537	1.119	R 9.21	1.112	8.02	5.66	5.52	5.37	15.72
<b>2010 Average</b> .....	218.056	1.301	R 10.76	1.283	9.25	5.22	5.11	5.29	15.51
<b>2011 Average</b> .....	224.939	1.590	R 13.18	NA	NA	4.90	4.80	5.21	15.27
<b>2012 January</b> .....	226.665	1.521	R 12.62	NA	NA	4.24	4.14	5.03	14.75
February .....	227.663	1.591	R 13.20	NA	NA	4.16	4.06	5.06	14.82
March .....	229.392	1.708	R 14.17	NA	NA	4.54	4.43	5.10	14.95
April .....	230.085	1.728	R 14.34	NA	NA	4.76	4.64	5.18	15.18
May .....	229.815	1.670	R 13.86	NA	NA	5.49	5.35	5.18	15.18
June .....	229.478	1.570	R 13.02	NA	NA	6.18	6.03	5.27	15.44
July .....	229.104	1.529	R 12.68	NA	NA	6.60	6.44	5.24	15.35
August .....	230.379	1.632	R 13.54	NA	NA	6.87	6.70	5.28	15.48
September .....	231.407	1.689	R 14.01	NA	NA	6.36	6.21	5.32	15.58
October .....	231.317	1.660	R 13.77	NA	NA	5.05	4.93	5.20	15.24
November .....	230.221	1.539	R 12.76	NA	NA	4.34	4.23	5.10	14.96
December .....	229.601	1.475	R 12.23	NA	NA	4.27	4.16	5.06	14.83
<b>Average</b> .....	<b>229.594</b>	<b>1.609</b>	<b>R 13.35</b>	<b>NA</b>	<b>NA</b>	<b>4.64</b>	<b>4.53</b>	<b>5.17</b>	<b>15.17</b>
<b>2013 January</b> .....	230.280	1.480	R 12.28	NA	NA	3.97	3.87	4.98	14.60
February .....	232.166	1.614	R 13.39	NA	NA	3.98	3.87	5.01	14.68
March .....	232.773	1.629	R 13.52	NA	NA	4.02	3.91	4.98	14.61
April .....	232.531	1.568	R 13.01	NA	NA	4.49	4.36	5.13	15.04
May .....	232.945	1.581	R 13.11	NA	NA	5.41	5.27	5.33	15.63
June .....	233.504	1.582	R 13.12	NA	NA	6.43	6.26	5.37	15.74
July .....	233.596	1.578	R 13.10	NA	NA	6.98	6.79	5.40	15.82
August .....	233.877	1.564	R 12.98	NA	NA	7.03	6.83	5.35	15.68
September .....	234.149	1.544	R 12.81	NA	NA	6.70	6.52	5.33	15.63
October .....	233.546	1.470	R 12.20	NA	NA	5.30	5.16	5.27	15.45
November .....	233.069	1.420	R 11.78	NA	NA	4.31	4.19	5.19	15.20
December .....	233.049	1.430	R 11.87	NA	NA	3.93	3.82	5.03	14.74
<b>Average</b> .....	<b>232.957</b>	<b>1.538</b>	<b>R 12.76</b>	<b>NA</b>	<b>NA</b>	<b>4.43</b>	<b>4.31</b>	<b>5.20</b>	<b>15.25</b>
<b>2014 January</b> .....	233.916	1.444	R 11.98	NA	NA	R 3.97	3.86	4.98	14.60
February .....	234.781	1.458	R 12.09	NA	NA	4.16	4.05	5.06	14.83
March .....	236.293	1.519	R 12.61	NA	NA	4.54	4.41	5.19	15.21
April .....	237.072	1.568	R 13.01	NA	NA	R 4.97	R 4.83	5.19	15.22
May .....	237.900	1.574	R 13.06	NA	NA	R 5.72	R 5.57	5.40	15.82
June .....	238.343	1.573	R 13.05	NA	NA	R 6.74	R 6.55	5.44	15.95
July .....	238.250	1.549	R 12.85	NA	NA	R 7.21	R 7.01	5.48	16.05
August .....	237.852	1.488	R 12.35	NA	NA	7.31	7.11	5.47	16.03
September .....	238.031	1.455	R 12.07	NA	NA	6.84	R 6.65	5.44	15.93
October .....	237.433	1.365	R 11.33	NA	NA	R 5.54	R 5.39	R 5.30	R 15.53
November .....	236.151	1.247	R 10.35	NA	NA	NA	NA	NA	NA
December .....	234.812	1.115	9.25	NA	NA	NA	NA	NA	NA
<b>Average</b> .....	<b>236.736</b>	<b>1.447</b>	<b>12.00</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

<sup>a</sup> Data are U.S. city averages for all items, and are not seasonally adjusted.

<sup>b</sup> Includes taxes.

<sup>c</sup> Excludes taxes.

R=Revised. NA=Not available.

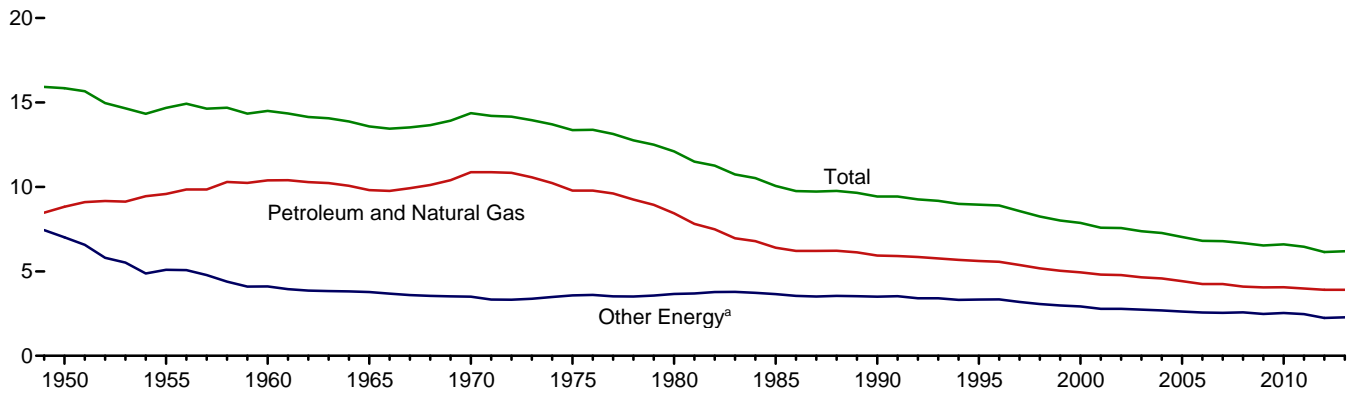
Notes: • See "Real Dollars" in Glossary. • Fuel costs are calculated by using the Urban Consumer Price Index (CPI) developed by the Bureau of Labor Statistics. • Annual averages may not equal average of months due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1960 and monthly data beginning in 1995.

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.

Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Figure 1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product, 1949–2013**  
(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**

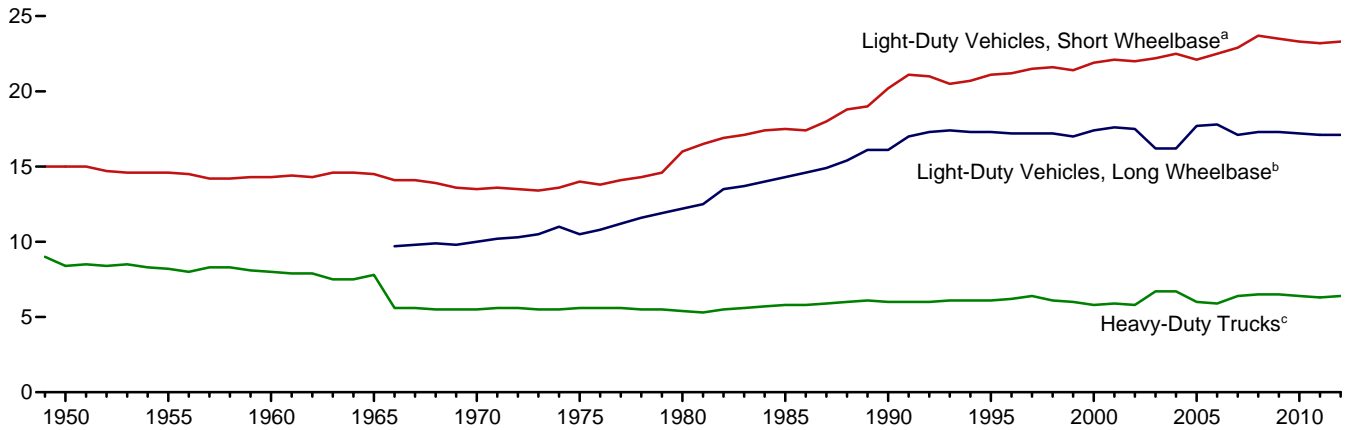
	Energy Consumption			Gross Domestic Product (GDP)	Energy Consumption per Real Dollar of GDP		
	Petroleum and Natural Gas	Other Energy <sup>a</sup>	Total		Petroleum and Natural Gas	Other Energy <sup>a</sup>	Total
	Quadrillion Btu				Billion Chained (2009) Dollars	Thousand Btu per Chained (2009) Dollar	
1950 .....	19.284	15.332	34.616	2,184.0	8.83	7.02	15.85
1955 .....	26.253	13.955	40.208	2,739.0	9.58	5.09	14.68
1960 .....	32.305	12.782	45.086	3,108.7	10.39	4.11	14.50
1965 .....	39.014	15.001	54.015	3,976.7	9.81	3.77	13.58
1970 .....	51.315	16.523	67.838	4,722.0	10.87	3.50	14.37
1975 .....	52.680	19.284	71.965	5,385.4	9.78	3.58	13.36
1980 .....	54.440	23.627	78.067	6,450.4	8.44	3.66	12.10
1985 .....	48.628	27.764	76.392	7,593.8	6.40	3.66	10.06
1990 .....	53.155	31.330	84.485	8,955.0	5.94	3.50	9.43
1995 .....	R 57.112	33.920	R 91.032	10,174.8	5.61	3.33	8.95
2000 .....	R 62.090	36.729	R 98.819	12,559.7	4.94	2.92	7.87
2001 .....	R 60.962	35.210	R 96.172	12,682.2	4.81	2.78	7.58
2002 .....	R 61.736	35.911	R 97.647	12,908.8	4.78	2.78	7.56
2003 .....	R 61.620	36.301	R 97.922	13,271.1	4.64	2.74	7.38
2004 .....	R 63.150	36.946	R 100.096	13,773.5	R 4.58	2.68	7.27
2005 .....	R 62.868	37.328	R 100.196	14,234.2	4.42	2.62	R 7.04
2006 .....	R 62.062	37.435	R 99.497	14,613.8	R 4.25	2.56	R 6.81
2007 .....	R 63.154	37.881	R 101.034	14,873.7	R 4.25	2.55	R 6.79
2008 .....	R 60.750	38.169	R 98.919	14,830.4	R 4.10	2.57	R 6.67
2009 .....	R 58.375	35.777	R 94.152	14,418.7	R 4.05	2.48	R 6.53
2010 .....	R 60.064	37.432	R 97.496	14,783.8	R 4.06	2.53	R 6.59
2011 .....	R 59.778	37.139	R 96.917	15,020.6	R 3.98	2.47	R 6.45
2012 .....	R 60.105	34.392	R 94.496	15,369.2	R 3.91	2.24	R 6.15
2013 .....	R 61.393	35.811	R 97.204	15,710.3	R 3.91	2.28	R 6.19

<sup>a</sup> Coal, coal coke net imports, nuclear electric power, renewable energy, and electricity net imports.  
R=Revised.  
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> (Excel and CSV files) for all available annual data beginning in 1949.  
Sources: • **Energy Consumption:** Table 1.3. • **Gross Domestic Product:** U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts (December 23, 2014), Table 1.1.6.

Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Figure 1.8 Motor Vehicle Fuel Economy, 1949–2012**  
(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 <sup>a</sup>			Light-Duty Vehicles, Long Wheelbase <sup>b</sup>			Heavy-Duty Trucks <sup>c</sup>			All Motor Vehicles <sup>d</sup>		
	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	( <sup>e</sup> )	( <sup>e</sup> )	( <sup>e</sup> )	10,316	1,229	8.4	9,321	725	12.8
1955 .....	9,447	645	14.6	( <sup>e</sup> )	( <sup>e</sup> )	( <sup>e</sup> )	10,576	1,293	8.2	9,661	761	12.7
1960 .....	9,518	668	14.3	( <sup>e</sup> )	( <sup>e</sup> )	( <sup>e</sup> )	10,693	1,333	8.0	9,732	784	12.4
1965 .....	9,603	661	14.5	( <sup>e</sup> )	( <sup>e</sup> )	( <sup>e</sup> )	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 .....	<sup>a</sup> 10,710	<sup>a</sup> 468	<sup>a</sup> 22.9	<sup>b</sup> 14,970	<sup>b</sup> 877	<sup>b</sup> 17.1	<sup>c</sup> 28,290	<sup>c</sup> 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 .....	11,150	481	23.2	12,007	702	17.1	26,054	4,128	6.3	11,652	665	17.5
2012 <sup>P</sup> .....	11,265	483	23.3	11,882	694	17.1	25,172	3,960	6.4	11,705	664	17.6

<sup>a</sup> 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.

<sup>b</sup> 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.

<sup>c</sup> 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.

<sup>d</sup> Includes buses and motorcycles, which are not separately displayed.

<sup>e</sup> Included in "Heavy-Duty Trucks."

P=Preliminary.

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

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1949.

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.

**Table 1.9 Heating Degree-Days by Census Division**

Census Divisions	December					Cumulative July through December				
	Normal <sup>a</sup>	2013	2014	Percent Change		Normal <sup>a</sup>	2013	2014	Percent Change	
				Normal to 2014	2013 to 2014				Normal to 2014	2013 to 2014
<b>New England</b> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont .....	1,078	1,099	934	-13	-15	2,462	2,485	2,258	-8	-9
<b>Middle Atlantic</b> New Jersey, New York, Pennsylvania .....	998	986	891	-11	-10	2,191	2,163	2,040	-7	-6
<b>East North Central</b> Illinois, Indiana, Michigan, Ohio, Wisconsin .....	1,135	1,211	1,000	-12	-17	2,472	2,612	2,535	3	-3
<b>West North Central</b> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota .....	1,248	1,394	1,092	-12	-22	2,695	2,840	2,676	-1	-6
<b>South Atlantic</b> Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia .....	555	465	474	-15	2	1,083	1,023	1,055	-3	3
<b>East South Central</b> Alabama, Kentucky, Mississippi, Tennessee .....	715	693	613	-14	-12	1,410	1,443	1,431	1	-1
<b>West South Central</b> Arkansas, Louisiana, Oklahoma, Texas .....	520	597	424	-18	-29	905	1,047	875	-3	-16
<b>Mountain</b> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming .....	928	963	819	-12	-15	2,147	1,998	1,757	-18	-12
<b>Pacific<sup>b</sup></b> California, Oregon, Washington .....	563	555	468	-17	-16	1,253	1,101	884	-29	-20
<b>U.S. Average<sup>b</sup></b> .....	<b>817</b>	<b>830</b>	<b>708</b>	<b>-13</b>	<b>-15</b>	<b>1,739</b>	<b>1,743</b>	<b>1,627</b>	<b>-6</b>	<b>-7</b>

<sup>a</sup> "Normal" is based on calculations of data from 1971 through 2000.

<sup>b</sup> Excludes Alaska and Hawaii.

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	December					Cumulative January through December				
	Normal <sup>a</sup>	2013	2014	Percent Change		Normal <sup>a</sup>	2013	2014	Percent Change	
				Normal to 2014	2013 to 2014				Normal to 2014	2013 to 2014
<b>New England</b> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont .....	0	0	0	NM	NM	417	616	442	6	-28
<b>Middle Atlantic</b> New Jersey, New York, Pennsylvania .....	0	0	0	NM	NM	656	806	637	-3	-21
<b>East North Central</b> Illinois, Indiana, Michigan, Ohio, Wisconsin .....	0	0	0	NM	NM	709	749	640	-10	-15
<b>West North Central</b> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota .....	0	0	0	NM	NM	927	974	876	-6	-10
<b>South Atlantic</b> Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia .....	33	53	35	NM	NM	1,964	2,084	2,070	5	-1
<b>East South Central</b> Alabama, Kentucky, Mississippi, Tennessee .....	3	4	0	NM	NM	1,547	1,584	1,596	3	1
<b>West South Central</b> Arkansas, Louisiana, Oklahoma, Texas .....	10	11	14	NM	NM	2,449	2,656	2,529	3	-5
<b>Mountain</b> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming .....	0	0	0	NM	NM	1,243	1,502	1,394	12	-7
<b>Pacific<sup>b</sup></b> California, Oregon, Washington .....	1	0	0	NM	NM	704	877	1,021	45	16
<b>U.S. Average<sup>b</sup></b> .....	<b>7</b>	<b>11</b>	<b>8</b>	<b>NM</b>	<b>NM</b>	<b>1,216</b>	<b>1,347</b>	<b>1,289</b>	<b>6</b>	<b>-4</b>

<sup>a</sup> "Normal" is based on calculations of data from 1971 through 2000.

<sup>b</sup> 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. 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: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.  
2011–2013: “U.S. International Trade in Goods and Services,” 2013 Annual Revisions.  
2014: “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: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.  
2011–2013: “U.S. International Trade in Goods and Services,” 2013 Annual Revisions.  
2014: “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: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.  
2011–2013: “U.S. International Trade in Goods and Services,” 2013 Annual Revisions.  
2014: “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

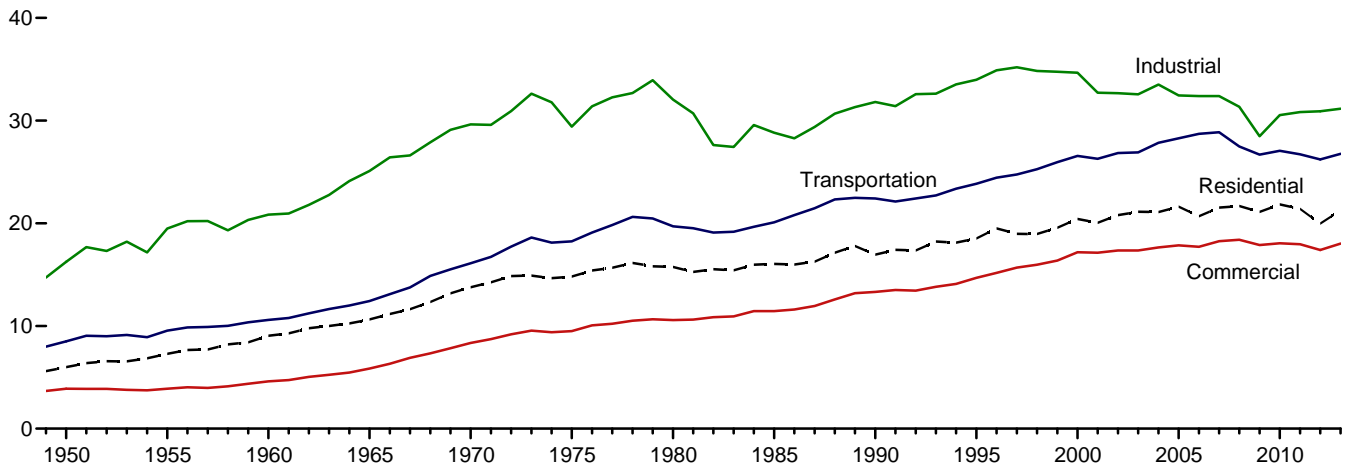
1974–1987: U.S. merchandise trade press releases and database printouts for adjustments.  
1988: “Report on U.S. Merchandise Trade, 1988 Final Revisions,” August 18, 1989.  
1989: “Report on U.S. Merchandise Trade, 1989 Revisions,” July 10, 1990.  
1990: “U.S. Merchandise Trade, 1990 Final Report,” May 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: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.  
2011–2013: “U.S. International Trade in Goods and Services,” 2013 Annual Revisions.  
2014: “U.S. International Trade in Goods and Services,” FT-900, monthly.

## **2. Energy Consumption by Sector**

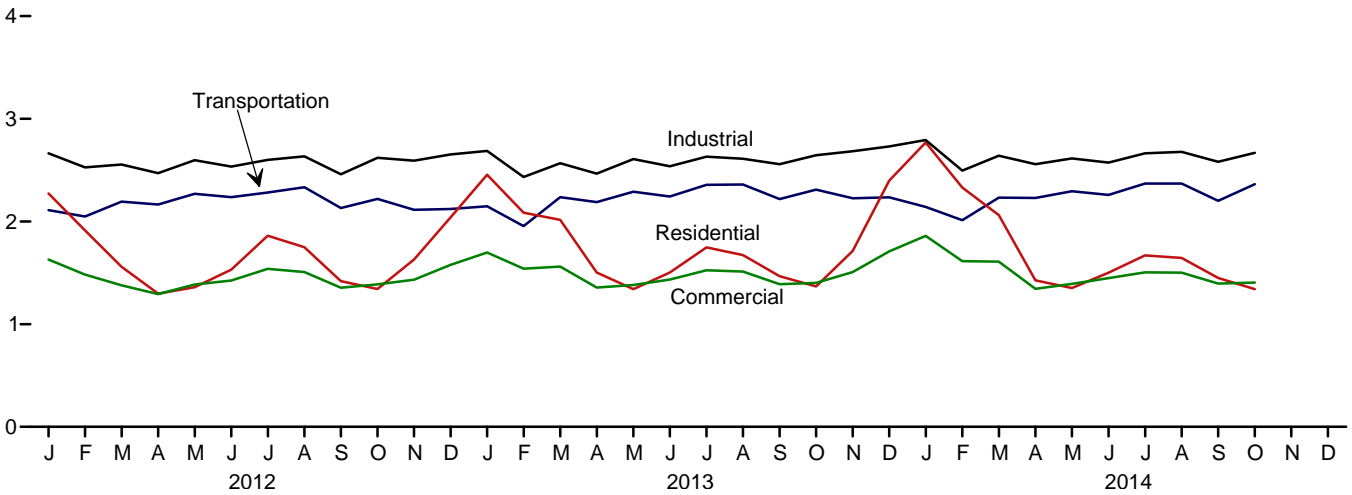
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**Figure 2.1 Energy Consumption by Sector**  
(Quadrillion Btu)

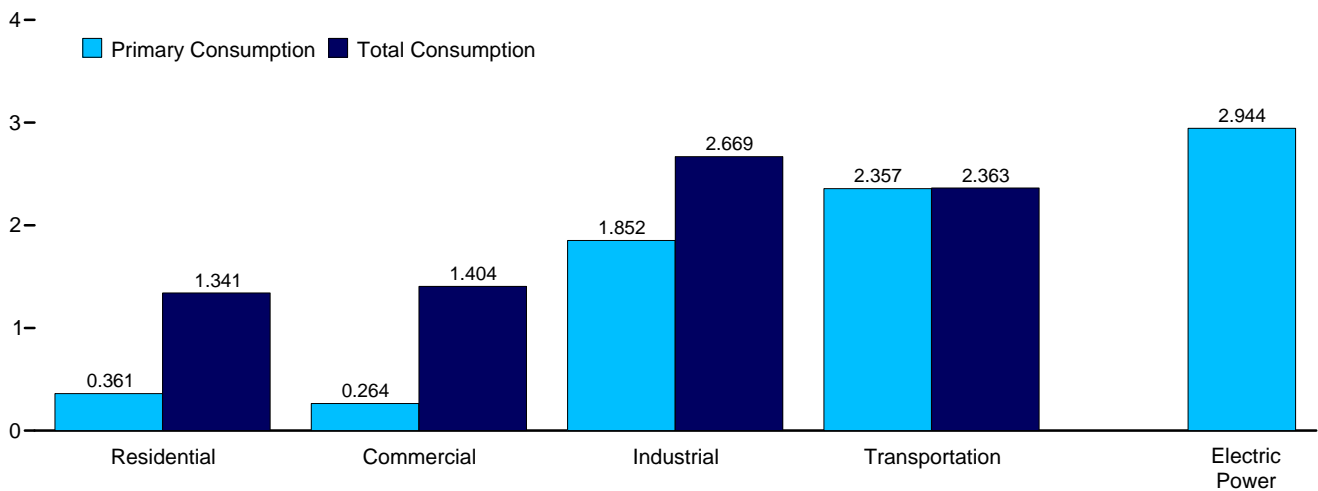
Total Consumption by End-Use Sector, 1949–2013



Total Consumption by End-Use Sector, Monthly



By Sector, October 2014



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 <sup>c,d</sup>	Balancing Item <sup>g</sup>	Primary Total <sup>h</sup>
	Residential		Commercial <sup>a</sup>		Industrial <sup>b</sup>		Transportation				
	Primary <sup>e</sup>	Total <sup>f</sup>	Primary <sup>e</sup>	Total <sup>f</sup>	Primary <sup>e</sup>	Total <sup>f</sup>	Primary <sup>e</sup>	Total <sup>f</sup>	Primary <sup>e</sup>		
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	30,495	-9	84,485
1995 Total	6,936	18,518	4,100	14,690	22,718	33,970	23,796	23,851	33,479	3	91,032
2000 Total	7,158	20,424	4,278	17,175	22,823	34,662	26,495	26,555	38,062	2	98,819
2001 Total	6,867	20,041	4,084	17,136	21,793	32,719	26,219	26,282	37,215	-6	96,172
2002 Total	6,911	20,790	4,131	17,345	21,798	32,661	26,785	26,846	38,016	5	97,647
2003 Total	6,237	21,124	4,237	17,345	21,534	32,554	26,826	26,900	38,028	-1	97,922
2004 Total	6,992	21,087	4,231	17,654	22,413	33,517	27,764	27,843	38,701	-6	100,096
2005 Total	6,908	21,620	4,050	17,852	21,413	32,444	28,199	28,280	39,626	(s)	100,196
2006 Total	6,165	20,681	3,745	17,705	21,533	32,395	28,638	28,717	39,417	(s)	99,497
2007 Total	6,603	21,534	3,919	18,249	21,370	32,392	28,772	28,859	40,371	-1	101,034
2008 Total	6,911	21,686	4,094	18,399	20,540	31,347	27,404	27,487	39,969	1	98,919
2009 Total	6,662	21,103	4,048	17,883	18,769	28,479	26,605	26,687	38,069	(s)	94,152
2010 Total	6,590	21,845	4,011	18,048	20,291	30,536	26,978	27,059	39,619	7	97,496
2011 Total	6,495	21,404	4,050	17,966	20,440	30,827	26,632	26,712	39,293	8	96,917
2012 January	974	2,272	543	1,629	1,847	2,664	2,104	2,111	3,209	(s)	8,676
February	819	1,912	469	1,482	1,734	2,526	2,042	2,048	2,905	-3	7,966
March	548	1,559	335	1,378	1,727	2,554	2,187	2,193	2,888	-6	7,678
April	402	1,297	267	1,293	1,649	2,471	2,158	2,164	2,749	-6	7,220
May	288	1,360	208	1,385	1,697	2,597	2,264	2,270	3,156	-2	7,610
June	243	1,531	188	1,425	1,659	2,535	2,231	2,237	3,407	3	7,731
July	228	1,861	181	1,539	1,678	2,599	2,276	2,282	3,919	8	8,290
August	236	1,749	198	1,508	1,733	2,634	2,328	2,334	3,730	5	8,229
September	238	1,418	198	1,356	1,644	2,459	2,125	2,131	3,159	3	7,366
October	365	1,343	271	1,388	1,780	2,620	2,213	2,219	2,941	(s)	7,570
November	618	1,629	375	1,433	1,771	2,592	2,108	2,113	2,895	(s)	7,767
December	822	2,040	466	1,577	1,817	2,653	2,115	2,121	3,173	(s)	8,392
Total	5,779	19,965	3,700	17,396	20,735	30,908	26,149	26,224	38,131	2	94,496
2013 January	1,090	2,454	582	1,697	1,875	2,687	2,142	2,149	3,297	-1	8,987
February	946	2,086	523	1,540	1,681	2,433	1,948	1,954	2,915	-1	8,013
March	855	2,016	482	1,560	1,757	2,568	2,231	2,237	3,057	-2	8,379
April	527	1,502	319	1,357	1,671	2,466	2,182	2,188	2,814	-4	7,509
May	332	1,341	224	1,381	1,736	2,608	2,283	2,290	3,044	-3	7,617
June	252	1,503	183	1,434	1,672	2,537	2,236	2,243	3,374	2	7,719
July	242	1,747	184	1,525	1,753	2,631	2,351	2,357	3,730	5	8,266
August	243	1,673	191	1,513	1,731	2,610	2,354	2,360	3,638	4	8,160
September	255	1,468	197	1,388	1,754	2,558	2,212	2,218	3,215	1	7,633
October	363	1,367	260	1,402	1,826	2,645	2,305	2,311	2,971	-2	7,722
November	676	1,713	411	1,508	1,861	2,684	2,219	2,225	2,963	-2	8,128
December	1,032	2,397	551	1,708	1,921	2,731	2,228	2,235	3,339	1	9,072
Total	6,812	21,266	4,107	18,014	21,238	31,158	26,690	26,768	38,359	-1	97,204
2014 January	1,230	2,769	659	1,859	1,978	2,794	2,135	2,142	3,563	4	9,568
February	1,031	2,331	571	1,614	1,767	2,496	2,006	2,013	3,077	2	8,455
March	875	2,063	497	1,609	1,827	2,640	2,226	2,232	3,118	(s)	8,544
April	486	1,427	299	1,344	1,765	2,558	2,223	2,229	2,785	-3	7,554
May	341	1,352	230	1,392	1,743	2,613	2,288	2,295	3,049	-2	7,651
June	257	1,501	192	1,448	1,703	2,574	2,252	2,258	3,378	2	7,783
July	245	1,670	186	1,505	1,783	2,663	2,362	2,369	3,631	5	8,213
August	241	1,645	189	1,502	1,790	2,679	2,363	2,370	3,612	4	8,199
September	265	1,449	206	1,395	1,776	2,581	2,194	2,200	3,185	1	7,627
October	361	1,341	264	1,404	1,852	2,669	2,357	2,363	2,944	-5	7,771
10-Month Total	5,333	17,548	3,293	15,073	17,985	26,265	22,404	22,472	32,342	8	81,366
2013 10-Month Total	5,106	17,157	3,146	14,797	17,456	25,743	22,242	22,307	32,055	(s)	80,004
2012 10-Month Total	4,340	16,302	2,859	14,384	17,147	25,660	21,927	21,990	32,062	2	78,338

<sup>a</sup> Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

<sup>b</sup> Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

<sup>c</sup> 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.

<sup>d</sup> Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.

<sup>e</sup> See "Primary Energy Consumption" in Glossary.

<sup>f</sup> 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.

<sup>g</sup> 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.

<sup>h</sup> 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.

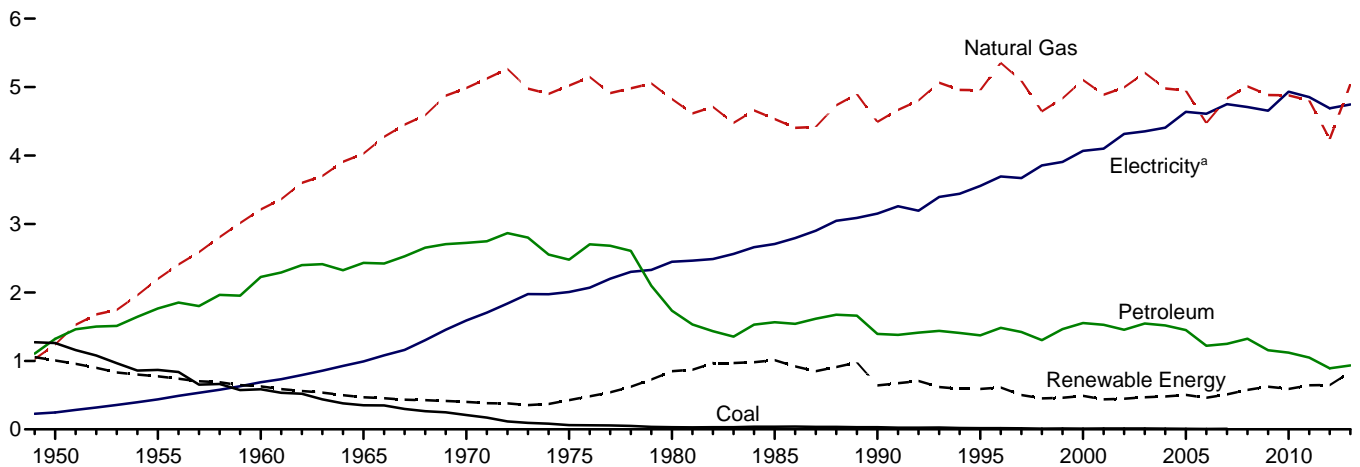
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: Tables 1.3 and 2.2-2.6.

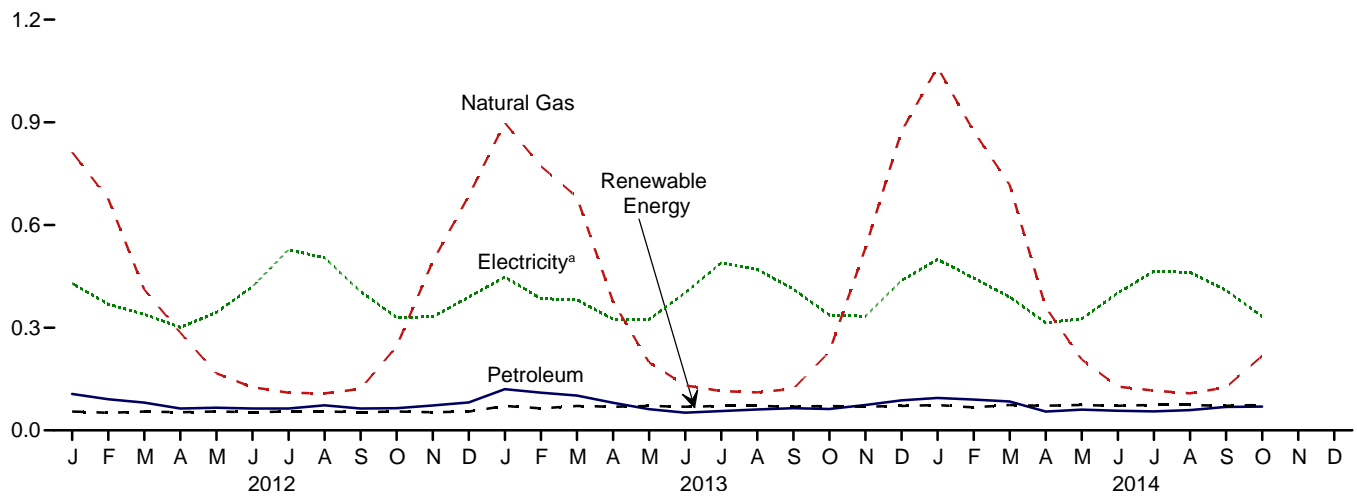
Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Figure 2.2 Residential Sector Energy Consumption**  
(Quadrillion Btu)

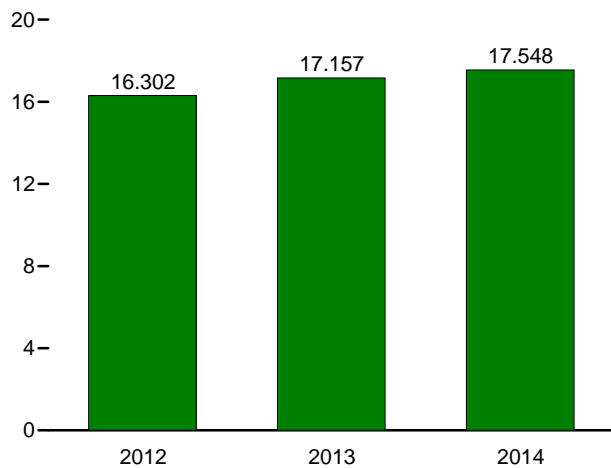
By Major Source, 1949–2013



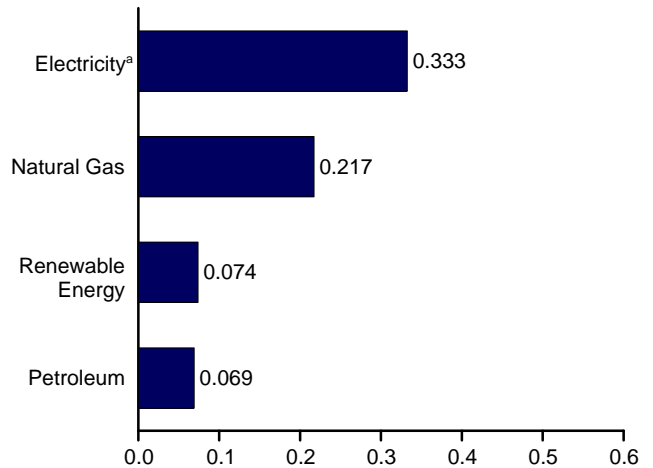
By Major Source, Monthly



Total, January–October



By Major Source, October 2014



<sup>a</sup> 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 <sup>a</sup>									Electricity Retail Sales <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total
	Fossil Fuels				Renewable Energy <sup>b</sup>				Total Primary			
	Coal	Natural Gas <sup>c</sup>	Petro- leum	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	R 1,373	6,345	7	64	520	591	6,936	3,557	8,026	R 18,518
2000 Total .....	11	5,105	R 1,553	6,669	9	61	420	489	R 7,158	4,069	9,197	R 20,424
2001 Total .....	12	4,889	R 1,528	6,429	9	59	370	438	R 6,867	4,100	9,074	R 20,041
2002 Total .....	12	4,995	R 1,456	6,463	10	57	380	448	R 6,911	4,317	9,562	R 20,790
2003 Total .....	12	5,209	R 1,546	6,768	13	57	400	470	R 7,237	4,353	9,534	R 21,124
2004 Total .....	11	4,981	R 1,519	6,511	14	57	410	481	R 6,992	4,408	R 9,687	R 21,087
2005 Total .....	8	4,946	R 1,450	6,405	16	58	430	504	R 6,908	4,638	R 10,074	R 21,620
2006 Total .....	6	4,476	R 1,221	5,704	18	63	380	462	R 6,165	4,611	R 9,905	R 20,681
2007 Total .....	8	4,835	R 1,249	6,092	22	70	420	512	R 6,603	4,750	R 10,180	R 21,534
2008 Total .....	NA	5,010	R 1,324	6,334	26	80	470	577	R 6,911	4,708	R 10,667	R 21,686
2009 Total .....	NA	4,883	R 1,157	6,040	33	89	500	622	R 6,662	4,656	R 9,786	R 21,103
2010 Total .....	NA	4,878	R 1,121	5,999	37	114	440	591	R 6,590	4,933	R 10,323	R 21,845
2011 Total .....	NA	4,805	R 1,048	5,852	40	153	450	643	R 6,495	4,855	R 10,054	R 21,404
<b>2012</b> January .....	NA	813	R 106	R 919	3	16	36	55	974	430	R 869	R 2,272
February .....	NA	677	R 91	R 768	3	15	33	51	R 819	368	R 724	R 1,912
March .....	NA	412	81	R 493	3	16	36	55	548	339	672	R 1,559
April .....	NA	285	64	349	3	15	34	53	402	301	594	1,297
May .....	NA	167	66	233	3	16	36	55	288	344	728	1,360
June .....	NA	126	64	190	3	15	34	53	243	419	869	1,531
July .....	NA	110	64	174	3	16	36	55	R 228	527	1,106	R 1,861
August .....	NA	108	R 73	181	3	16	36	55	236	505	1,008	1,749
September .....	NA	121	64	185	3	15	34	53	238	405	775	R 1,418
October .....	NA	245	65	R 310	3	16	36	55	365	330	648	1,343
November .....	NA	493	73	R 565	3	15	34	53	R 618	331	680	R 1,629
December .....	NA	686	R 81	767	3	16	36	55	822	390	829	R 2,040
<b>Total</b> .....	NA	4,242	R 892	R 5,134	40	186	420	646	R 5,779	4,690	R 9,496	R 19,965
<b>2013</b> January .....	NA	899	121	R 1,019	3	19	49	71	R 1,090	448	916	R 2,454
February .....	NA	772	R 110	R 882	3	17	44	64	R 946	385	755	R 2,086
March .....	NA	682	102	R 783	3	19	49	71	855	381	780	2,016
April .....	NA	377	81	458	3	18	48	69	527	325	R 650	R 1,502
May .....	NA	199	62	261	3	19	49	71	332	324	685	1,341
June .....	NA	131	52	183	3	18	48	69	252	402	R 849	1,503
July .....	NA	115	R 56	171	3	19	49	71	R 242	489	R 1,015	R 1,747
August .....	NA	111	61	172	3	19	49	71	R 243	470	960	R 1,673
September .....	NA	121	65	186	3	18	48	69	255	413	800	1,468
October .....	NA	229	R 62	R 291	3	19	49	71	363	337	668	1,367
November .....	NA	533	74	607	3	18	48	69	676	334	704	R 1,713
December .....	NA	873	88	961	3	19	49	71	R 1,032	438	927	2,397
<b>Total</b> .....	NA	5,040	R 933	R 5,974	40	219	580	839	R 6,812	4,746	R 9,707	R 21,266
<b>2014</b> January .....	NA	R 1,061	95	R 1,156	3	21	49	74	R 1,230	500	R 1,039	R 2,769
February .....	NA	874	90	R 964	3	19	44	67	R 1,031	445	854	2,331
March .....	NA	717	R 84	R 801	3	21	49	74	R 875	390	798	R 2,063
April .....	NA	R 359	55	R 414	3	21	48	72	R 486	315	R 626	R 1,427
May .....	NA	R 207	61	R 267	3	21	49	74	R 341	326	685	R 1,352
June .....	NA	128	57	R 185	3	21	48	72	257	401	843	R 1,501
July .....	NA	116	R 55	R 171	3	21	49	74	R 245	465	960	R 1,670
August .....	NA	108	59	167	3	21	49	74	241	461	R 942	1,645
September .....	NA	125	R 68	194	3	21	48	72	R 265	410	774	R 1,449
October .....	NA	217	69	287	3	21	49	74	361	333	647	1,341
<b>10-Month Total</b> ...	NA	3,913	694	4,607	33	210	483	726	5,333	4,045	8,170	17,548
<b>2013 10-Month Total</b> ...	NA	3,636	771	4,407	33	182	483	698	5,106	3,975	8,077	17,157
<b>2012 10-Month Total</b> ...	NA	3,064	738	3,802	33	155	350	538	4,340	3,969	7,993	16,302

<sup>a</sup> See "Primary Energy Consumption" in Glossary.

<sup>b</sup> See Table 10.2a for notes on series components.

<sup>c</sup> Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

<sup>d</sup> Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

<sup>e</sup> 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.

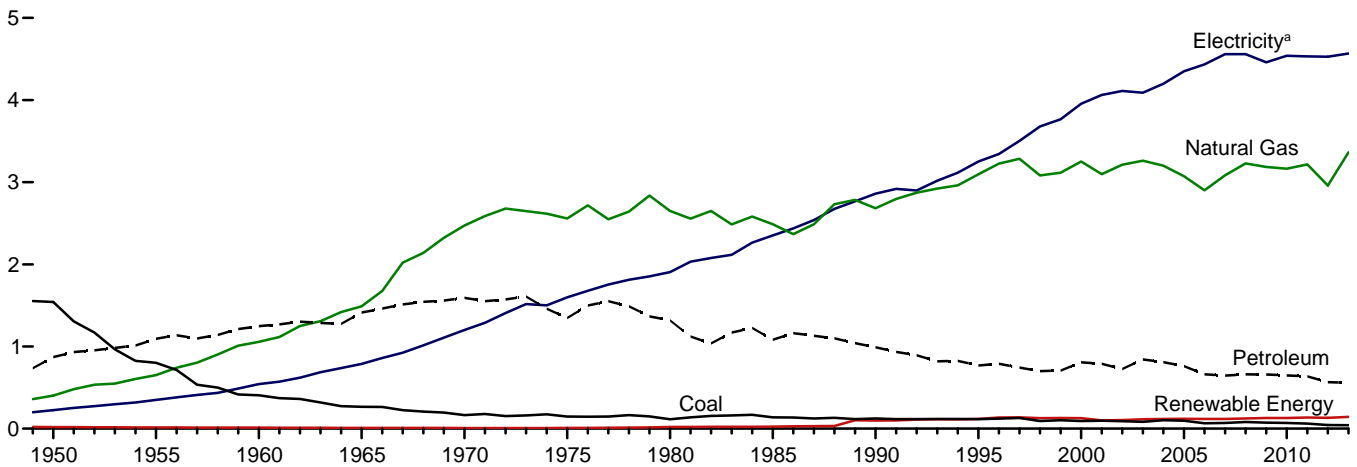
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

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

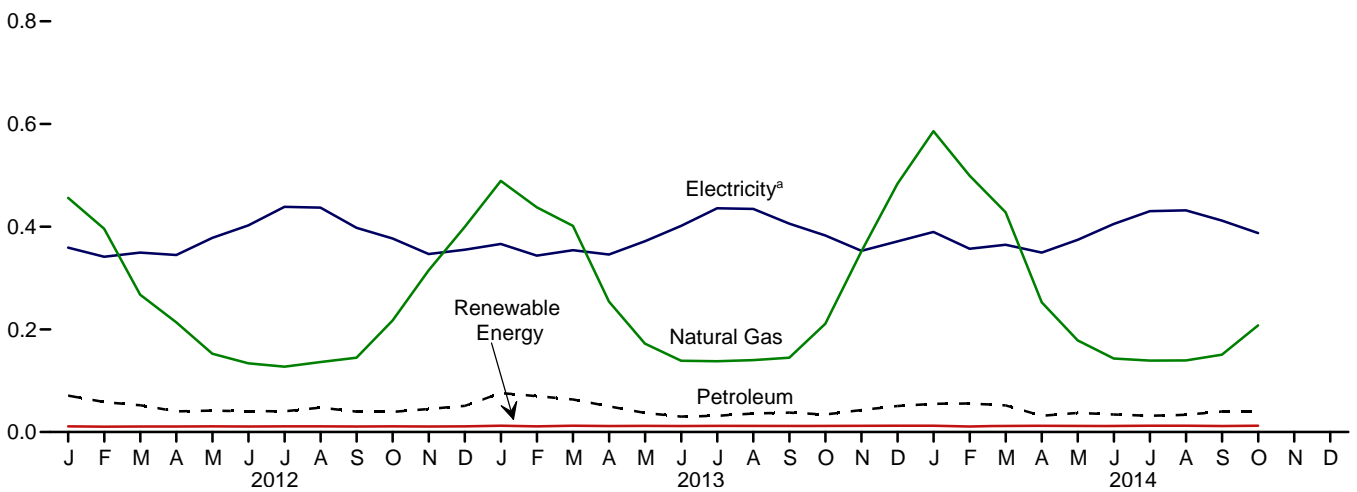
Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Figure 2.3 Commercial Sector Energy Consumption**  
(Quadrillion Btu)

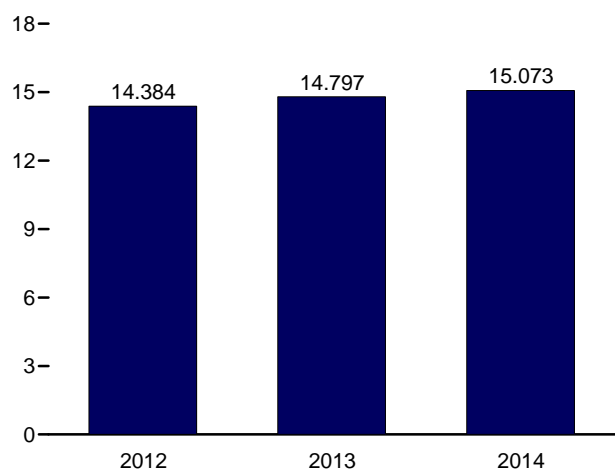
By Major Source, 1949–2013



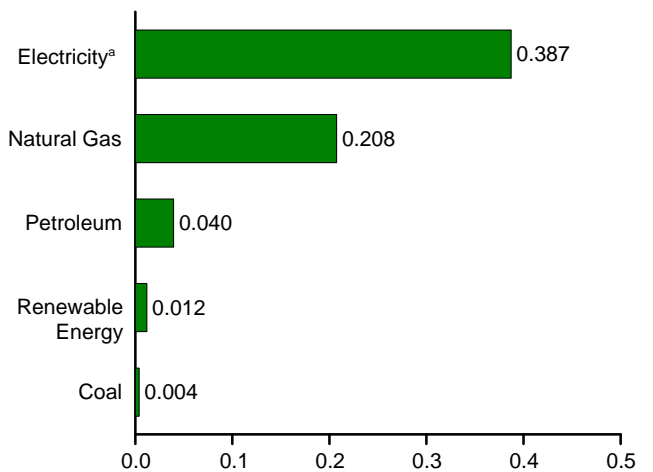
By Major Source, Monthly



Total, January–October



By Major Source, October 2014



<sup>a</sup> 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 <sup>a</sup>										Electricity Retail Sales <sup>f</sup>	Electrical System Energy Losses <sup>g</sup>	Total	
	Fossil Fuels				Renewable Energy <sup>b</sup>									
	Coal	Natural Gas <sup>c</sup>	Petroleum <sup>d</sup>	Total	Hydroelectric Power <sup>e</sup>	Geothermal	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	4,657	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	4,100	3,252	7,337	14,690
2000 Total	92	3,252	806	4,150	1	8	-	-	119	128	4,278	3,956	8,942	17,175
2001 Total	97	3,097	789	3,983	1	8	-	-	92	101	4,084	4,062	8,990	17,136
2002 Total	90	3,212	725	4,027	(s)	9	-	-	95	104	4,131	4,110	9,104	17,345
2003 Total	82	3,261	841	4,184	1	11	-	-	101	113	4,297	4,090	8,958	17,345
2004 Total	103	3,201	809	4,113	1	12	-	-	105	118	4,231	4,198	9,225	17,654
2005 Total	97	3,073	761	3,931	1	14	-	-	105	120	4,050	4,351	9,451	17,852
2006 Total	65	2,902	661	3,627	1	14	-	-	103	118	3,745	4,435	9,525	17,705
2007 Total	70	3,085	646	3,801	1	14	-	-	103	118	3,919	4,560	9,771	18,249
2008 Total	81	3,228	660	3,970	1	15	(s)	-	109	125	4,094	4,558	9,746	18,399
2009 Total	73	3,187	659	3,919	1	17	(s)	(s)	112	129	4,048	4,460	9,375	17,883
2010 Total	70	3,165	647	3,881	1	19	(s)	(s)	111	130	4,011	4,539	9,498	18,048
2011 Total	62	3,216	636	3,914	(s)	20	1	(s)	115	136	4,050	4,531	9,385	17,966
2012 January	5	456	71	532	(s)	2	(s)	(s)	9	11	543	359	727	1,629
February	5	396	58	459	(s)	2	(s)	(s)	9	10	469	341	671	1,482
March	4	267	52	324	(s)	2	(s)	(s)	9	11	335	350	693	1,378
April	3	214	40	257	(s)	2	(s)	(s)	9	11	267	345	681	1,293
May	3	152	41	197	(s)	2	(s)	(s)	9	11	208	378	799	1,385
June	3	134	41	178	(s)	2	(s)	(s)	9	11	188	403	834	1,425
July	3	127	40	170	(s)	2	(s)	(s)	9	11	181	439	919	1,539
August	3	136	47	187	(s)	2	(s)	(s)	9	11	198	437	873	1,508
September	3	145	40	187	(s)	2	(s)	(s)	9	11	198	398	760	1,356
October	3	217	39	260	(s)	2	(s)	(s)	9	11	271	377	741	1,388
November	4	315	45	364	(s)	2	(s)	(s)	9	11	375	347	711	1,433
December	5	400	51	455	(s)	2	(s)	(s)	9	11	466	355	756	1,577
<b>Total</b>	<b>44</b>	<b>2,960</b>	<b>566</b>	<b>3,569</b>	<b>(s)</b>	<b>20</b>	<b>1</b>	<b>1</b>	<b>109</b>	<b>131</b>	<b>3,700</b>	<b>4,528</b>	<b>9,168</b>	<b>17,396</b>
2013 January	5	489	76	570	(s)	2	(s)	(s)	10	12	582	366	749	1,697
February	5	438	70	512	(s)	2	(s)	(s)	9	11	523	344	673	1,540
March	5	401	63	469	(s)	2	(s)	(s)	10	12	482	354	724	1,560
April	3	254	50	307	(s)	2	(s)	(s)	10	12	319	346	692	1,357
May	3	172	37	212	(s)	2	(s)	(s)	10	12	224	372	785	1,381
June	3	139	30	172	(s)	2	(s)	(s)	10	12	183	401	849	1,434
July	3	138	32	172	(s)	2	(s)	(s)	10	12	184	436	904	1,525
August	3	140	36	179	(s)	2	(s)	(s)	10	12	191	435	888	1,513
September	2	145	38	185	(s)	2	(s)	(s)	10	12	197	406	786	1,388
October	3	211	34	248	(s)	2	(s)	(s)	10	12	260	383	759	1,402
November	4	352	43	399	(s)	2	(s)	(s)	10	12	411	353	744	1,508
December	4	484	51	538	(s)	2	(s)	(s)	10	12	551	371	786	1,708
<b>Total</b>	<b>41</b>	<b>3,363</b>	<b>559</b>	<b>3,964</b>	<b>(s)</b>	<b>20</b>	<b>3</b>	<b>1</b>	<b>119</b>	<b>143</b>	<b>4,107</b>	<b>4,567</b>	<b>9,340</b>	<b>18,014</b>
2014 January	5	586	55	646	(s)	2	(s)	(s)	10	12	659	390	811	1,859
February	5	500	56	560	(s)	2	(s)	(s)	9	11	571	357	685	1,614
March	5	428	52	485	(s)	2	(s)	(s)	10	12	497	365	747	1,609
April	3	252	32	287	(s)	2	(s)	(s)	10	12	299	349	696	1,344
May	3	179	37	218	(s)	2	(s)	(s)	10	12	230	374	787	1,392
June	2	143	34	180	(s)	2	(s)	(s)	10	12	192	405	851	1,448
July	3	139	32	174	(s)	2	(s)	(s)	10	12	186	430	888	1,505
August	3	140	34	176	(s)	2	(s)	(s)	10	12	189	432	882	1,502
September	3	151	40	194	(s)	2	(s)	(s)	10	12	206	412	778	1,395
October	4	208	40	252	(s)	2	(s)	(s)	10	12	264	387	753	1,404
<b>10-Month Total</b>	<b>37</b>	<b>2,725</b>	<b>410</b>	<b>3,173</b>	<b>(s)</b>	<b>16</b>	<b>4</b>	<b>1</b>	<b>99</b>	<b>120</b>	<b>3,293</b>	<b>3,902</b>	<b>7,878</b>	<b>15,073</b>
2013 10-Month Total	33	2,528	466	3,027	(s)	16	3	(s)	99	119	3,146	3,842	7,809	14,797
2012 10-Month Total	35	2,245	470	2,750	(s)	16	1	(s)	91	109	2,859	3,826	7,699	14,384

<sup>a</sup> See "Primary Energy Consumption" in Glossary.  
<sup>b</sup> See Table 10.2a for notes on series components and estimation.  
<sup>c</sup> Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.  
<sup>d</sup> Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."  
<sup>e</sup> Conventional hydroelectric power.  
<sup>f</sup> Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.  
<sup>g</sup> 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.

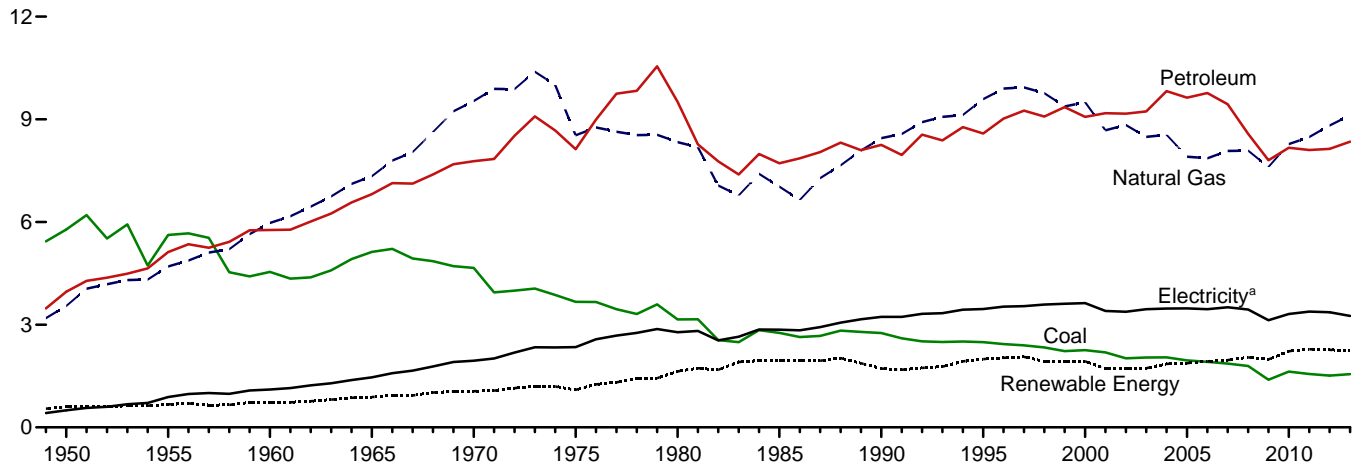
Notes: • Data are estimates, except for coal totals beginning in 2008; hydroelectric power; solar/PV; wind; and electricity retail sales beginning in 1979.  
• The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.  
Sources: Tables 2.6, 3.8a, 4.3, 6.2, 7.6, 10.2a, A4, A5, and A6.

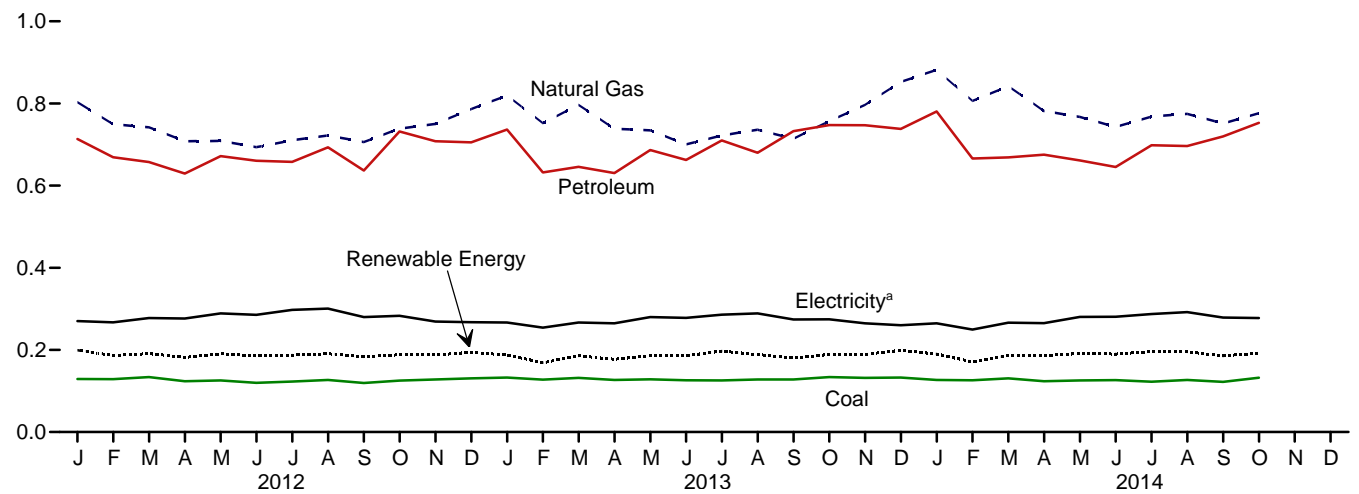
Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Figure 2.4 Industrial Sector Energy Consumption**  
(Quadrillion Btu)

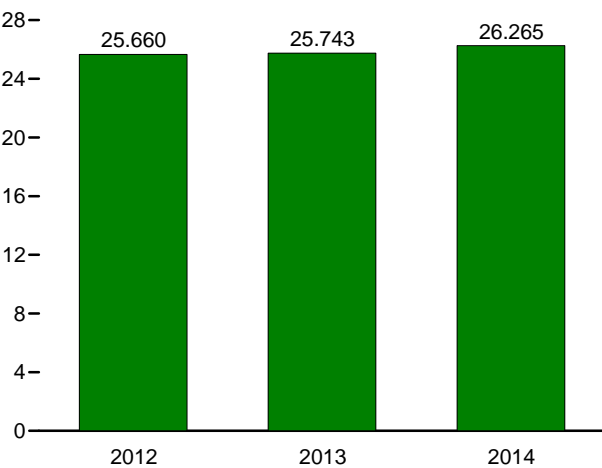
By Major Source, 1949–2013



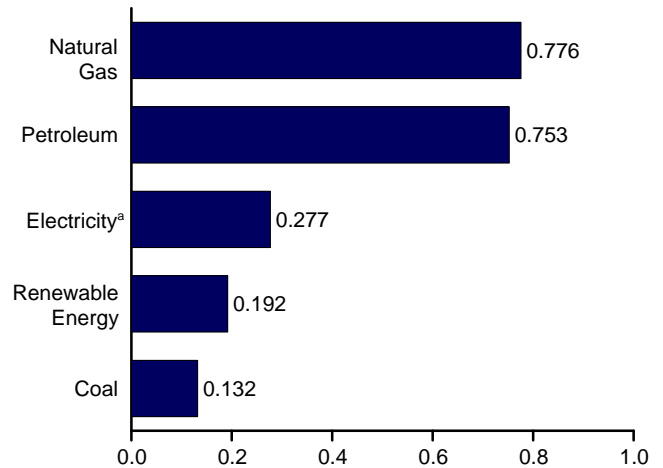
By Major Source, Monthly



Total, January–October



By Major Source, October 2014

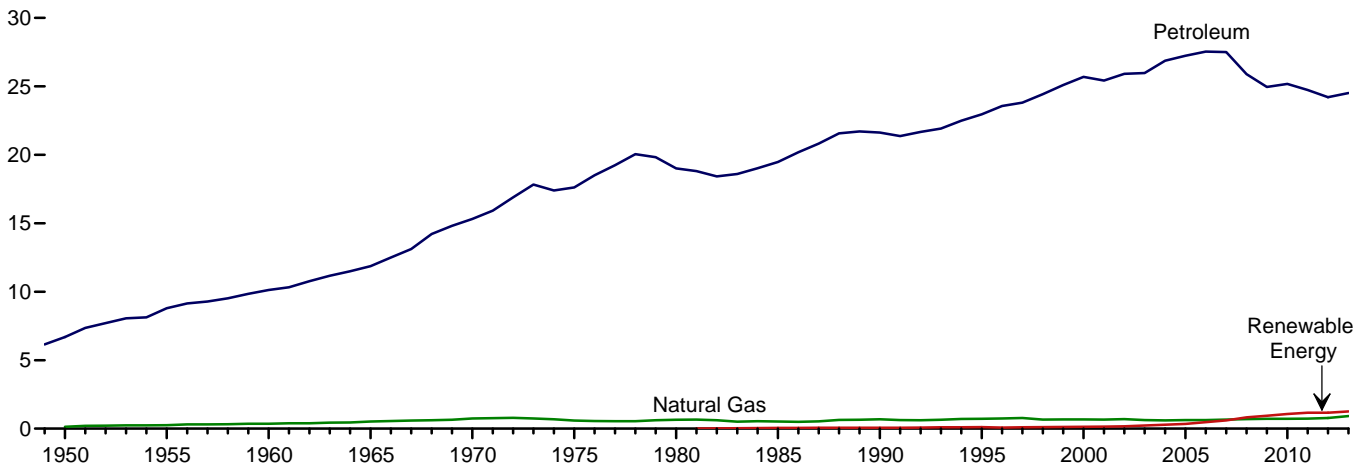


<sup>a</sup> Electricity retail sales.  
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.  
Source: Table 2.4.

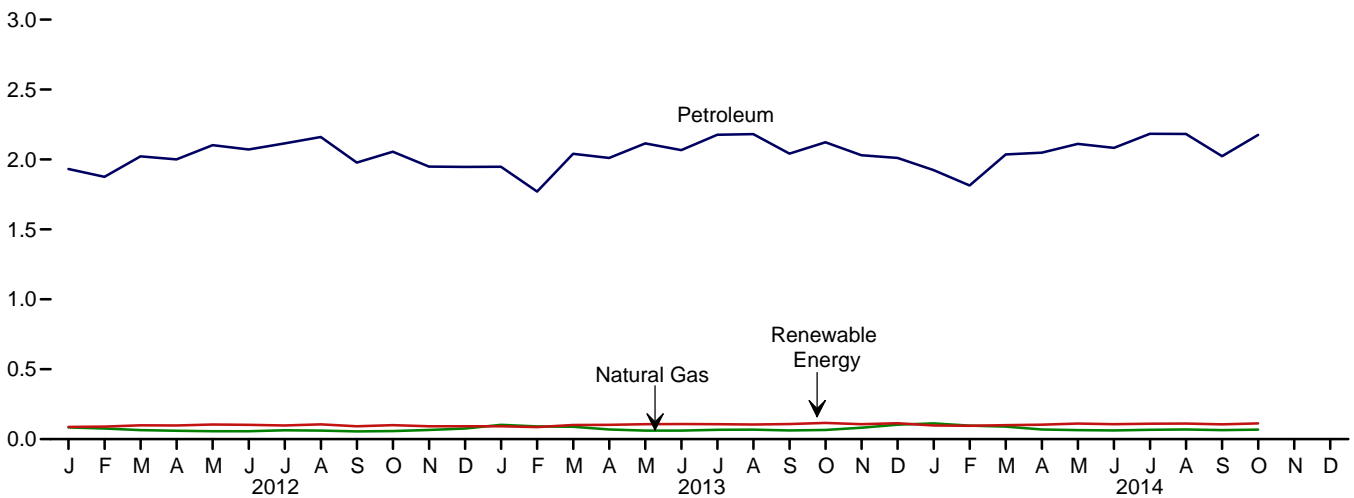


**Figure 2.5 Transportation Sector Energy Consumption**  
(Quadrillion Btu)

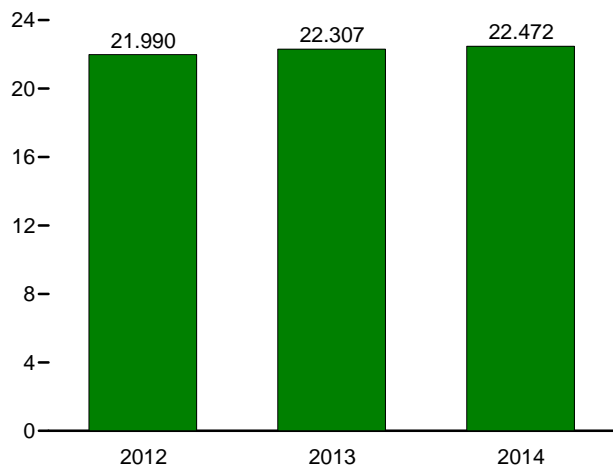
By Major Source, 1949–2013



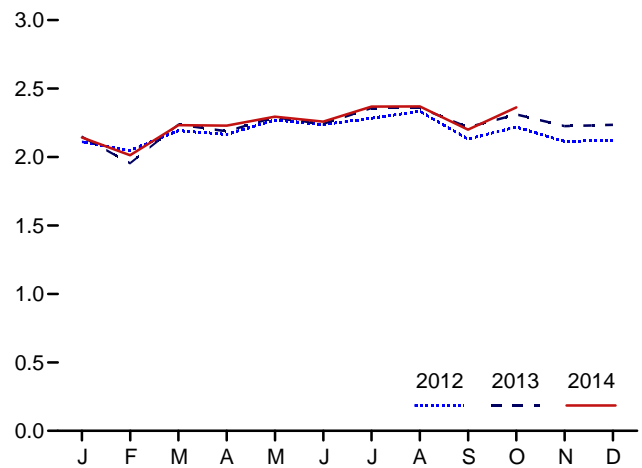
By Major Source, Monthly



Total, January–October



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 <sup>a</sup>						Electricity Retail Sales <sup>e</sup>	Electrical System Energy Losses <sup>f</sup>	Total
	Fossil Fuels				Renewable Energy <sup>b</sup>	Total Primary			
	Coal	Natural Gas <sup>c</sup>	Petroleum <sup>d</sup>	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	R 22,959	R 23,683	112	R 23,796	17	38	R 23,851
2000 Total .....	(g)	672	R 25,689	R 26,361	135	R 26,495	18	42	R 26,555
2001 Total .....	(g)	658	R 25,419	R 26,077	142	R 26,219	20	43	R 26,282
2002 Total .....	(g)	699	R 25,917	R 26,616	170	R 26,785	19	42	R 26,846
2003 Total .....	(g)	627	R 25,969	R 26,596	230	R 26,826	23	51	R 26,900
2004 Total .....	(g)	602	R 26,872	R 27,474	290	R 27,764	25	54	R 27,843
2005 Total .....	(g)	624	R 27,236	R 27,860	339	R 28,199	26	56	R 28,280
2006 Total .....	(g)	625	R 27,538	R 28,163	475	R 28,638	25	54	R 28,717
2007 Total .....	(g)	663	R 27,506	R 28,170	602	R 28,772	28	60	R 28,859
2008 Total .....	(g)	692	R 25,888	R 26,580	825	R 27,404	26	56	R 27,487
2009 Total .....	(g)	715	R 24,955	R 25,670	935	R 26,605	27	56	R 26,687
2010 Total .....	(g)	719	R 25,184	R 25,903	1,075	R 26,978	26	55	R 27,059
2011 Total .....	(g)	734	R 24,740	R 25,474	1,158	R 26,632	26	54	R 26,712
2012 January .....	(g)	84	R 1,932	R 2,017	87	R 2,104	2	4	R 2,111
February .....	(g)	77	R 1,876	R 1,952	89	R 2,042	2	4	R 2,048
March .....	(g)	65	R 2,023	R 2,088	99	R 2,187	2	4	R 2,193
April .....	(g)	60	R 2,001	R 2,060	98	R 2,158	2	4	R 2,164
May .....	(g)	57	R 2,102	R 2,159	104	R 2,264	2	4	R 2,270
June .....	(g)	57	R 2,071	R 2,128	102	R 2,231	2	4	R 2,237
July .....	(g)	63	R 2,114	R 2,178	98	R 2,276	2	R 4	R 2,282
August .....	(g)	61	R 2,160	R 2,222	106	R 2,328	2	4	R 2,334
September .....	(g)	55	R 1,978	R 2,033	92	R 2,125	2	4	R 2,131
October .....	(g)	58	R 2,056	R 2,114	100	R 2,213	2	4	R 2,219
November .....	(g)	66	R 1,950	R 2,016	92	R 2,108	2	4	R 2,113
December .....	(g)	77	R 1,946	R 2,023	92	R 2,115	2	4	R 2,121
Total .....	(g)	780	R 24,210	R 24,989	1,159	R 26,149	25	51	R 26,224
2013 January .....	(g)	102	R 1,948	R 2,050	92	R 2,142	2	5	R 2,149
February .....	(g)	91	R 1,771	R 1,862	86	R 1,948	2	4	R 1,954
March .....	(g)	89	R 2,041	R 2,130	101	R 2,231	2	4	R 2,237
April .....	(g)	69	R 2,011	R 2,080	102	R 2,182	2	4	R 2,188
May .....	(g)	61	R 2,116	R 2,177	107	R 2,283	2	4	R 2,290
June .....	(g)	61	R 2,067	R 2,128	108	R 2,236	2	5	R 2,243
July .....	(g)	67	R 2,177	R 2,244	107	R 2,351	2	5	R 2,357
August .....	(g)	68	R 2,181	R 2,249	105	R 2,354	2	4	R 2,360
September .....	(g)	62	R 2,042	R 2,104	108	R 2,212	2	4	R 2,218
October .....	(g)	65	R 2,123	R 2,189	116	R 2,305	2	4	R 2,311
November .....	(g)	82	R 2,031	R 2,112	107	R 2,219	2	4	R 2,225
December .....	(g)	103	R 2,011	R 2,114	114	R 2,228	2	5	R 2,235
Total .....	(g)	920	R 24,518	R 25,438	1,252	R 26,690	26	53	R 26,768
2014 January .....	(g)	113	R 1,924	R 2,036	98	R 2,135	2	5	R 2,142
February .....	(g)	97	R 1,814	R 1,910	95	R 2,006	2	5	R 2,013
March .....	(g)	90	R 2,036	R 2,126	100	R 2,226	2	5	R 2,232
April .....	(g)	70	R 2,049	R 2,119	104	R 2,223	2	4	R 2,229
May .....	(g)	65	R 2,112	R 2,177	111	R 2,288	2	5	R 2,295
June .....	(g)	63	R 2,083	R 2,145	106	R 2,252	2	4	R 2,258
July .....	(g)	67	R 2,184	R 2,251	111	R 2,362	2	5	R 2,369
August .....	(g)	69	R 2,183	R 2,252	111	R 2,363	2	4	R 2,370
September .....	(g)	65	R 2,024	R 2,089	106	R 2,194	2	4	R 2,200
October .....	(g)	69	2,175	2,244	113	2,357	2	4	2,363
10-Month Total ...	(g)	767	20,582	21,349	1,055	22,404	22	45	22,472
2013 10-Month Total ...	(g)	736	20,476	21,211	1,031	22,242	21	44	22,307
2012 10-Month Total ...	(g)	637	20,314	20,951	976	21,927	21	42	21,990

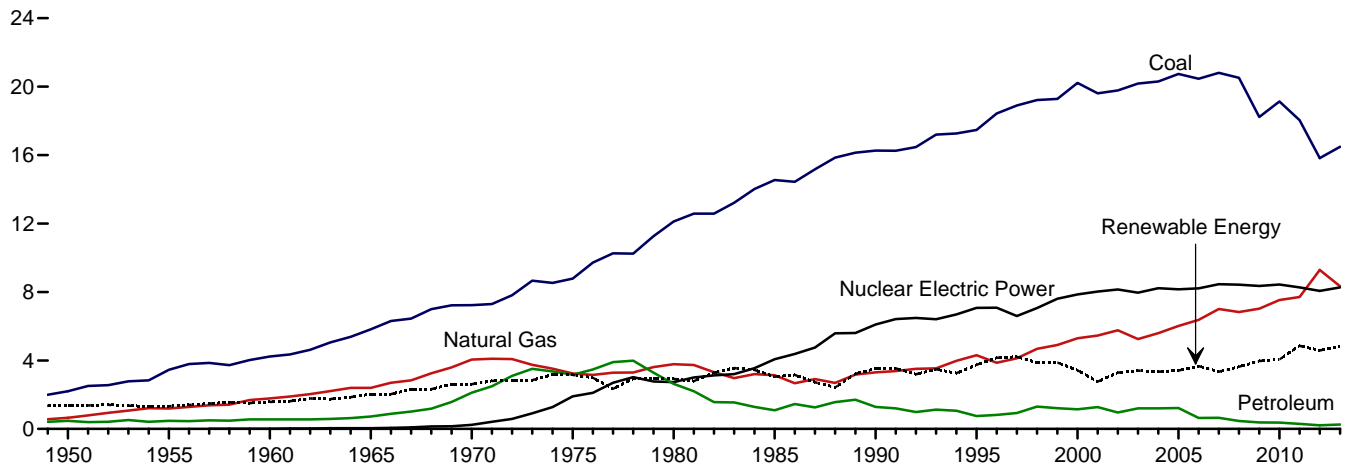
<sup>a</sup> See "Primary Energy Consumption" in Glossary.  
<sup>b</sup> See Table 10.2b for notes on series components.  
<sup>c</sup> Natural gas only; does not include supplemental gaseous fuels—see Note 3, "Supplemental Gaseous Fuels," at end of Section 4. Data are for natural gas consumed in the operation of pipelines (primarily in compressors) and small amounts consumed as vehicle fuel—see Table 4.3.  
<sup>d</sup> Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."  
<sup>e</sup> Electricity retail sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.  
<sup>f</sup> 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.  
<sup>g</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.  
Sources: Tables 2.6, 3.8c, 4.3, 6.2, 7.6, 10.2b, A4, A5, and A6.

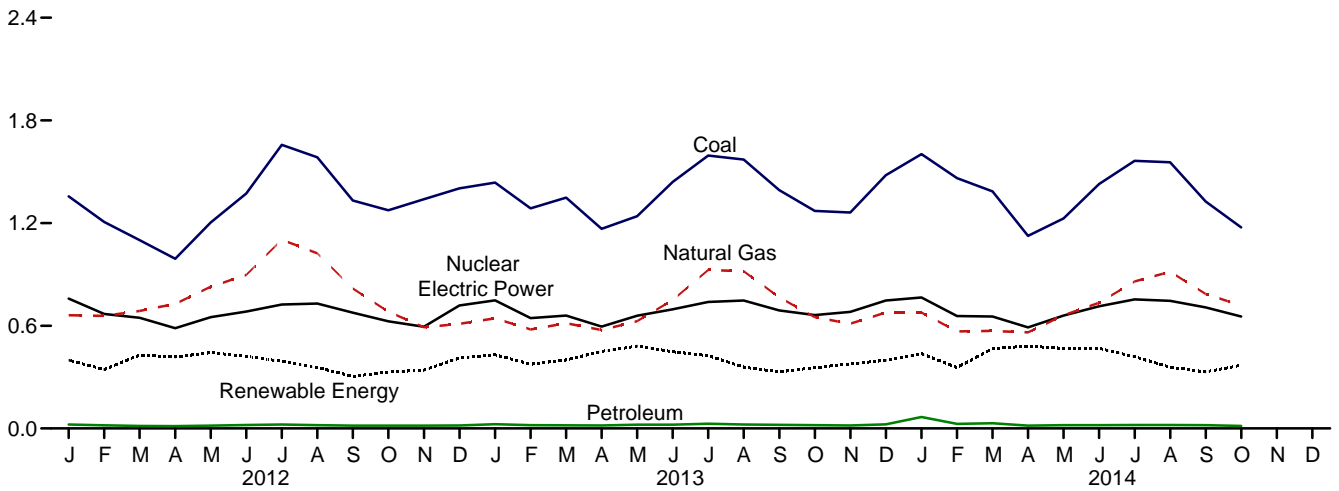
Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Figure 2.6 Electric Power Sector Energy Consumption**  
(Quadrillion Btu)

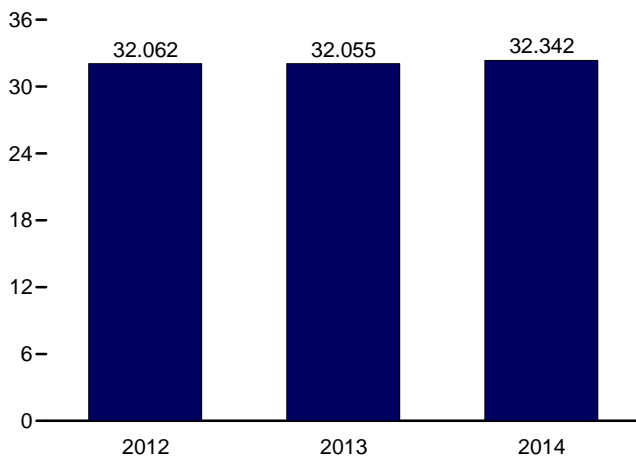
By Major Source, 1949–2013



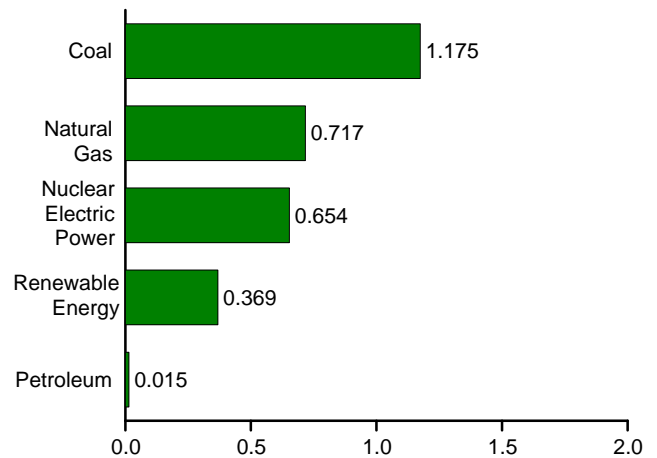
By Major Source, Monthly



Total, January–October



By Major Source, October 2014



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 <sup>a</sup>												Electricity Net Imports <sup>e</sup>	Total Primary
	Fossil Fuels				Nuclear Electric Power	Renewable Energy <sup>b</sup>								
	Coal	Natural Gas <sup>c</sup>	Petroleum	Total		Hydroelectric Power <sup>d</sup>	Geothermal	Solar/PV	Wind	Bio-mass	Total			
<b>1950 Total</b> .....	2,199	651	472	3,322	0	1,346	NA	NA	NA	5	1,351	6	4,679	
<b>1955 Total</b> .....	3,458	1,194	471	5,123	0	1,322	NA	NA	NA	3	1,325	14	6,461	
<b>1960 Total</b> .....	4,228	1,785	553	6,565	6	1,569	(s)	NA	NA	2	1,571	15	8,158	
<b>1965 Total</b> .....	5,821	2,395	722	8,938	43	2,026	2	NA	NA	3	2,031	(s)	11,012	
<b>1970 Total</b> .....	7,227	4,054	2,117	13,399	239	2,600	6	NA	NA	4	2,609	7	16,253	
<b>1975 Total</b> .....	8,786	3,240	3,166	15,191	1,900	3,122	34	NA	NA	2	3,158	21	20,270	
<b>1980 Total</b> .....	12,123	3,778	2,634	18,534	2,739	2,867	53	NA	NA	4	2,925	71	24,269	
<b>1985 Total</b> .....	14,542	3,135	1,090	18,767	4,076	2,937	97	(s)	(s)	14	3,049	140	26,032	
<b>1990 Total<sup>f</sup></b> .....	16,261	3,309	1,289	20,859	6,104	3,014	161	4	29	317	3,524	8	30,495	
<b>1995 Total</b> .....	17,466	4,302	755	22,523	7,075	3,149	138	5	33	422	3,747	134	33,479	
<b>2000 Total</b> .....	20,220	5,293	1,144	26,658	7,862	2,768	144	5	57	453	3,427	115	38,062	
<b>2001 Total</b> .....	19,614	5,458	R 1,276	26,348	8,029	2,209	142	6	70	337	2,763	75	37,215	
<b>2002 Total</b> .....	19,783	5,767	R 961	26,511	8,145	2,650	147	6	105	380	3,288	72	38,016	
<b>2003 Total</b> .....	20,185	5,246	R 1,205	26,636	7,960	2,749	146	5	113	397	3,411	22	38,028	
<b>2004 Total</b> .....	20,305	5,595	R 1,201	R 27,101	8,223	2,655	148	6	142	388	3,339	39	R 38,701	
<b>2005 Total</b> .....	20,737	6,015	R 1,222	R 27,974	8,161	2,670	147	6	178	406	3,406	85	R 39,626	
<b>2006 Total</b> .....	20,462	6,375	R 637	R 27,474	8,215	2,839	145	5	264	412	3,665	63	R 39,417	
<b>2007 Total</b> .....	20,808	7,005	R 648	R 28,461	8,459	2,430	145	6	341	423	3,345	107	R 40,371	
<b>2008 Total</b> .....	20,513	6,829	R 459	R 27,801	8,426	2,494	146	9	546	435	3,630	112	R 39,969	
<b>2009 Total</b> .....	18,225	7,022	R 382	R 25,630	8,355	2,650	146	9	721	441	3,967	116	R 38,069	
<b>2010 Total</b> .....	19,133	7,528	R 370	R 27,031	8,434	2,521	148	12	923	459	4,064	89	R 39,619	
<b>2011 Total</b> .....	18,035	7,712	R 295	R 26,042	8,269	3,085	149	17	1,167	437	4,855	127	R 39,293	
<b>2012</b>														
January .....	1,356	662	R 23	2,041	758	217	12	1	130	39	398	11	3,209	
February .....	1,207	657	R 18	1,882	669	191	11	1	105	36	344	9	2,905	
March .....	1,100	687	R 14	1,802	647	244	12	2	133	37	429	10	2,888	
April .....	991	728	R 14	1,733	585	248	12	3	121	33	417	13	2,749	
May .....	1,204	828	R 17	2,048	651	271	12	4	119	36	442	15	3,156	
June .....	1,373	897	R 20	2,290	683	252	12	5	114	38	421	14	R 3,407	
July .....	1,658	1,102	R 23	2,783	724	251	13	5	84	40	392	19	3,919	
August .....	1,585	1,023	R 19	2,627	729	218	12	4	81	40	355	19	R 3,730	
September .....	1,331	818	R 16	2,166	676	166	12	4	84	38	304	14	R 3,159	
October .....	1,275	682	R 16	1,973	626	155	13	4	120	38	330	12	2,941	
November .....	1,340	591	R 16	R 1,947	594	176	13	3	111	38	341	13	R 2,895	
December .....	1,403	611	R 17	2,031	719	217	13	3	138	40	412	11	3,173	
<b>Total</b> .....	<b>15,821</b>	<b>9,287</b>	<b>R 214</b>	<b>R 25,322</b>	<b>8,062</b>	<b>2,606</b>	<b>148</b>	<b>40</b>	<b>1,339</b>	<b>453</b>	<b>4,586</b>	<b>161</b>	<b>R 38,131</b>	
<b>2013</b>														
January .....	1,437	643	R 25	R 2,105	748	236	14	3	139	38	430	14	R 3,297	
February .....	1,286	578	R 19	1,883	644	192	12	4	132	34	375	13	R 2,915	
March .....	1,349	615	R 18	R 1,982	660	194	14	6	149	39	401	14	R 3,057	
April .....	1,167	574	R 18	R 1,758	595	233	13	7	164	33	450	12	R 2,814	
May .....	1,240	626	R 22	R 1,888	659	269	13	8	155	38	481	16	3,044	
June .....	1,440	750	R 22	R 2,212	696	257	13	9	131	39	449	17	3,374	
July .....	1,594	926	R 28	2,548	739	256	13	8	106	41	425	18	R 3,730	
August .....	1,571	918	R 23	R 2,512	748	204	13	9	91	41	359	19	R 3,638	
September .....	1,393	766	R 21	R 2,179	690	159	13	9	111	39	331	15	3,215	
October .....	1,271	650	R 19	1,941	662	163	14	9	130	39	355	13	R 2,971	
November .....	1,262	612	R 17	R 1,891	681	167	12	7	151	40	377	15	R 2,963	
December .....	1,480	677	R 23	2,181	747	200	14	7	134	44	398	13	R 3,339	
<b>Total</b> .....	<b>16,489</b>	<b>8,338</b>	<b>R 255</b>	<b>R 25,081</b>	<b>8,268</b>	<b>2,529</b>	<b>157</b>	<b>85</b>	<b>1,595</b>	<b>465</b>	<b>4,831</b>	<b>179</b>	<b>R 38,359</b>	
<b>2014</b>														
January .....	1,603	677	R 67	R 2,347	766	202	13	7	171	43	437	13	R 3,563	
February .....	1,463	567	R 27	R 2,056	656	163	12	8	133	39	355	9	R 3,077	
March .....	1,386	570	R 31	1,987	654	229	13	13	169	44	467	11	R 3,118	
April .....	1,126	561	R 17	1,703	591	237	13	15	178	38	481	10	R 2,785	
May .....	1,227	661	R 19	R 1,908	660	250	13	17	148	40	468	14	R 3,049	
June .....	1,428	735	R 20	R 2,182	714	244	13	19	149	43	468	13	R 3,378	
July .....	1,563	859	R 20	R 2,441	754	229	13	17	115	45	419	16	3,631	
August .....	1,555	915	R 20	2,491	745	186	13	18	97	44	358	18	R 3,612	
September .....	1,326	786	R 19	2,131	708	149	13	18	109	41	330	16	R 3,185	
October .....	1,175	717	R 15	1,907	654	160	13	16	138	42	369	14	2,944	
<b>10-Month Total</b> .....	<b>13,852</b>	<b>7,048</b>	<b>254</b>	<b>21,154</b>	<b>6,901</b>	<b>2,050</b>	<b>129</b>	<b>148</b>	<b>1,408</b>	<b>419</b>	<b>4,154</b>	<b>133</b>	<b>32,342</b>	
<b>2013 10-Month Total</b> .....	<b>13,747</b>	<b>7,048</b>	<b>214</b>	<b>21,008</b>	<b>6,840</b>	<b>2,162</b>	<b>131</b>	<b>71</b>	<b>1,309</b>	<b>381</b>	<b>4,055</b>	<b>151</b>	<b>32,055</b>	
<b>2012 10-Month Total</b> .....	<b>13,079</b>	<b>8,084</b>	<b>181</b>	<b>21,343</b>	<b>6,749</b>	<b>2,213</b>	<b>122</b>	<b>33</b>	<b>1,090</b>	<b>375</b>	<b>3,834</b>	<b>137</b>	<b>32,062</b>	

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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: Tables 3.8c, 4.3, 6.2, 7.1, 7.2b, 10.2c, A4, A5, and A6.

Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

## 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*.

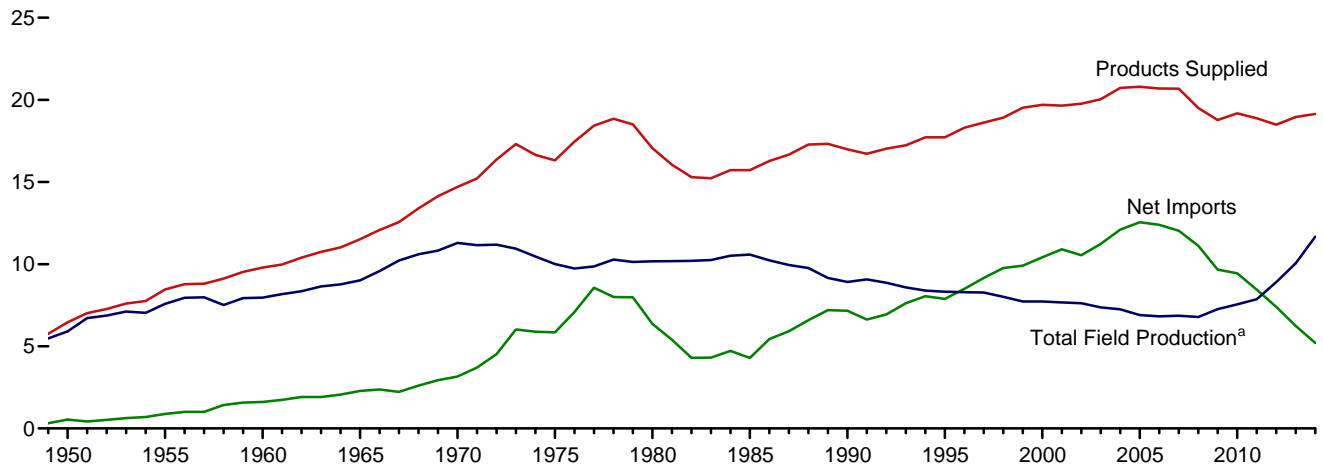
Users of EIA's energy consumption statistics should be aware of a second group of energy-related surveys, typically called "consumption surveys." Consumption surveys gather information on the types of energy consumed by end users of energy, along with the characteristics of those end users that can be 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**

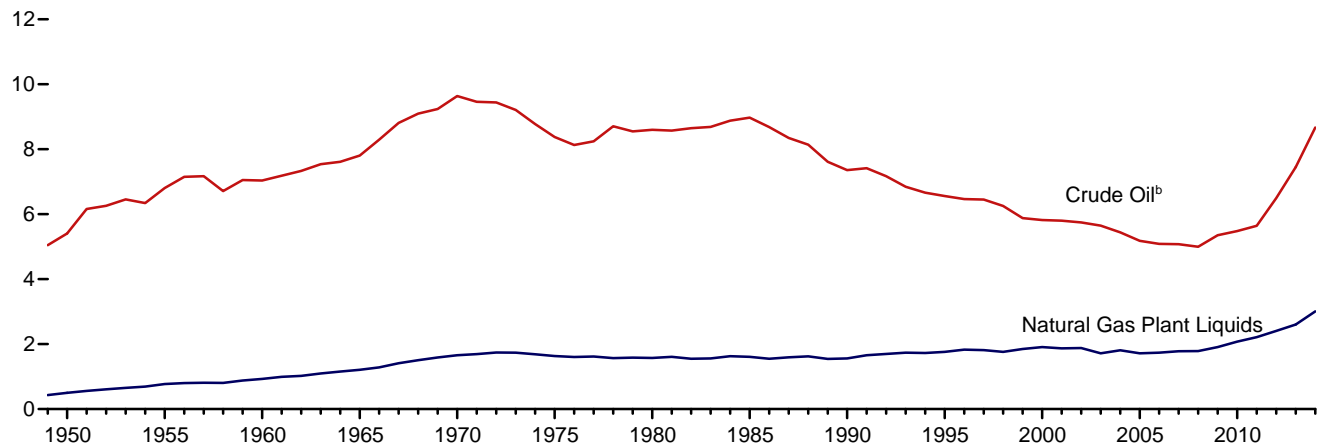
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**Figure 3.1 Petroleum Overview**  
(Million Barrels per Day)

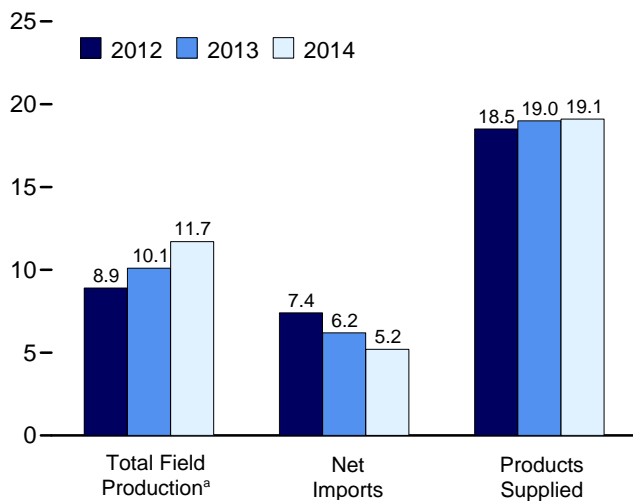
Overview, 1949–2014



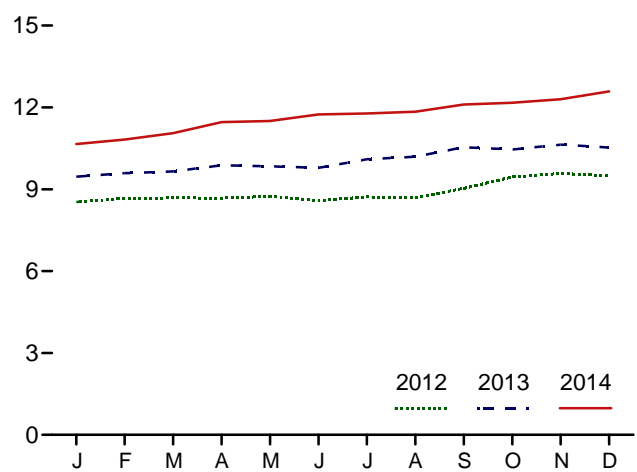
Crude Oil and Natural Gas Plant Liquids Field Production, 1949–2014



Overview, January–December



Total Field Production,<sup>a</sup> Monthly



<sup>a</sup> Crude oil, including lease condensate, and natural gas plant liquids field production.

<sup>b</sup> 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 <sup>a</sup>					Renewable Fuels and Oxygenates <sup>f</sup>	Processing Gain <sup>g</sup>	Trade			Stock Change <sup>l</sup>	Adjustments <sup>c,k</sup>	Petroleum Products Supplied
	Crude Oil <sup>b,c</sup>			NGPL <sup>e</sup>	Total <sup>c</sup>			Im-ports <sup>h</sup>	Ex-ports	Net Imports <sup>i</sup>			
	48 States <sup>d</sup>	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	4,675	974	5,649	1,719	7,369	NA	974	12,264	1,027	11,238	56	509	20,034
2004 Average	4,533	908	5,441	1,809	7,250	NA	1,051	13,145	1,048	12,097	209	542	20,731
2005 Average	4,317	864	5,181	1,717	6,898	NA	989	13,714	1,165	12,549	145	510	20,802
2006 Average	4,347	741	5,088	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	640	20,680
2008 Average	4,317	683	5,000	1,784	6,783	NA	993	12,915	1,802	11,114	195	803	19,498
2009 Average	4,705	645	5,350	1,910	7,260	746	979	11,691	2,024	9,667	109	229	18,771
2010 Average	4,882	600	5,482	2,074	7,556	907	1,068	11,793	2,353	9,441	49	258	19,180
2011 Average	5,084	561	5,645	2,216	7,861	1,016	1,076	11,436	2,986	8,450	-121	357	18,882
2012 January	5,560	593	6,153	2,384	8,537	1,022	1,053	10,910	2,870	8,041	726	377	18,304
February	5,680	582	6,262	2,401	8,662	1,013	1,064	10,490	2,994	7,496	-179	229	18,643
March	5,730	567	6,297	2,385	8,682	991	1,074	10,605	3,116	7,489	519	446	18,164
April	5,744	552	6,296	2,379	8,675	1,002	1,027	10,611	3,272	7,339	33	201	18,211
May	5,796	546	6,342	2,393	8,735	1,017	1,089	11,117	3,207	7,910	366	204	18,589
June	5,759	493	6,252	2,338	8,590	1,003	1,100	11,424	3,216	8,208	478	434	18,857
July	5,976	415	6,391	2,327	8,717	928	1,065	10,794	3,237	7,556	91	339	18,515
August	5,914	404	6,318	2,371	8,689	954	1,045	10,880	3,081	7,798	-401	268	19,156
September	6,072	502	6,574	2,462	9,036	920	1,001	10,475	3,164	7,312	631	454	18,092
October	6,395	547	6,941	2,507	9,448	901	1,006	10,047	3,255	6,793	-304	254	18,705
November	6,491	553	7,044	2,536	9,580	913	1,032	10,181	3,404	6,777	11	236	18,528
December	6,526	555	7,081	2,415	9,496	904	1,152	9,644	3,636	6,008	-85	475	18,120
Average	5,971	526	6,497	2,408	8,905	964	1,059	10,598	3,205	7,393	158	327	18,490
2013 January	R 6,534	549	R 7,082	2,379	R 9,461	891	1,061	10,089	2,881	7,208	98	R 227	18,749
February	R 6,557	541	R 7,098	2,490	R 9,588	905	966	9,286	3,280	6,007	-738	R 439	18,643
March	R 6,638	533	R 7,171	2,485	R 9,655	950	1,012	9,534	3,111	6,423	92	R 583	18,531
April	R 6,841	523	R 7,364	2,513	R 9,877	971	1,093	10,168	3,235	6,933	491	R 202	18,584
May	R 6,770	515	R 7,286	2,556	R 9,842	1,011	1,039	10,174	3,472	6,703	291	R 475	18,779
June	R 6,759	486	R 7,244	2,542	R 9,786	1,034	1,087	9,882	3,594	6,288	72	R 683	18,806
July	R 6,988	493	R 7,480	2,618	R 10,099	1,021	1,132	10,300	3,851	6,449	-37	R 519	19,257
August	R 7,049	428	R 7,477	2,715	R 10,192	1,004	1,115	10,249	3,725	6,524	162	R 452	19,125
September	R 7,240	511	R 7,751	2,791	R 10,542	998	1,136	10,036	3,632	6,405	353	R 523	19,252
October	R 7,171	521	R 7,691	2,766	R 10,458	1,052	1,085	9,608	4,074	5,535	-754	R 429	19,312
November	R 7,353	536	R 7,888	2,747	R 10,635	1,083	1,126	9,385	3,967	5,419	-688	R 539	19,491
December	R 7,324	546	R 7,870	2,660	R 10,530	1,102	1,179	9,539	4,602	4,938	-903	R 331	18,983
Average	R 6,937	515	R 7,452	2,606	R 10,058	1,002	1,087	9,859	3,621	6,237	-127	R 450	18,961
2014 January	RE 7,423	RE 595	RE 8,017	2,639	RE 10,656	1,002	1,118	9,264	4,021	5,243	-561	R 340	18,921
February	RE 7,566	RE 569	RE 8,136	2,684	RE 10,820	1,019	1,080	9,151	3,611	5,540	14	R 548	18,994
March	RE 7,681	RE 581	RE 8,262	2,793	RE 11,055	1,025	1,009	9,240	3,858	5,382	323	R 378	18,526
April	RE 7,953	RE 591	RE 8,544	2,919	RE 11,463	1,044	1,080	9,584	3,966	5,618	906	R 485	18,783
May	RE 8,049	RE 574	RE 8,623	2,880	RE 11,504	1,058	1,027	9,380	4,121	5,260	935	R 602	18,516
June	RE 8,165	RE 531	RE 8,696	3,044	RE 11,740	1,088	1,125	8,815	4,156	4,659	150	R 370	18,833
July	RE 8,272	RE 443	RE 8,716	3,061	RE 11,777	1,092	1,108	9,472	4,479	4,994	130	R 323	19,164
August	RE 8,342	RE 415	RE 8,756	3,087	RE 11,843	1,035	1,162	9,309	4,533	4,776	127	R 586	19,276
September	RE 8,466	RE 516	RE 8,981	3,125	RE 12,107	1,048	1,010	9,152	3,962	5,190	445	R 129	19,039
October	RE 8,503	RE 543	RE 9,046	3,126	RE 12,172	R 1,037	R 1,024	R 9,905	R 4,112	R 4,793	R -158	R 445	R 19,630
November	E 8,547	E 516	E 9,063	E 3,237	E 12,300	E 1,033	E 1,129	E 9,007	E 3,882	E 5,125	E -236	E 94	E 19,917
December	E 8,609	E 519	E 9,128	E 3,460	E 12,588	E 1,033	E 1,139	E 9,650	E 3,766	E 5,884	E 748	E 232	E 20,128
Average	E 8,134	E 532	E 8,667	E 3,006	E 11,673	E 1,043	E 1,084	E 9,246	E 4,043	E 5,203	E 236	E 377	E 19,145

<sup>a</sup> 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."

<sup>b</sup> Includes lease condensate.

<sup>c</sup> 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.

<sup>d</sup> United States excluding Alaska and Hawaii.

<sup>e</sup> Natural gas plant liquids.

<sup>f</sup> Renewable fuels and oxygenate plant net production.

<sup>g</sup> Refinery and blender net production minus refinery and blender net inputs.

See Table 3.2.

<sup>h</sup> Includes Strategic Petroleum Reserve imports. See Table 3.3b.

<sup>i</sup> Net imports equal imports minus exports.

<sup>j</sup> 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.

<sup>k</sup> 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.

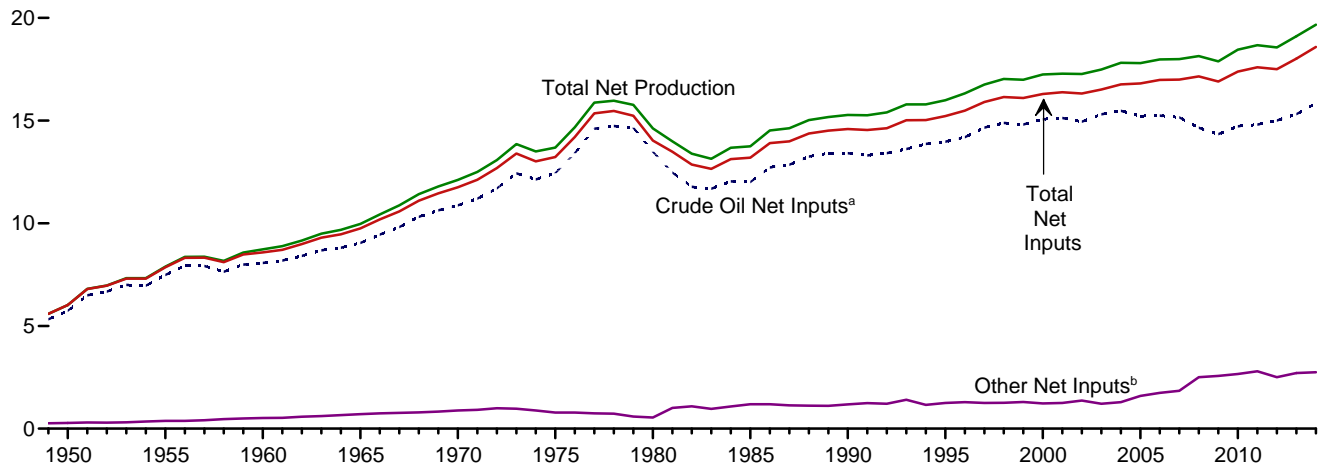
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

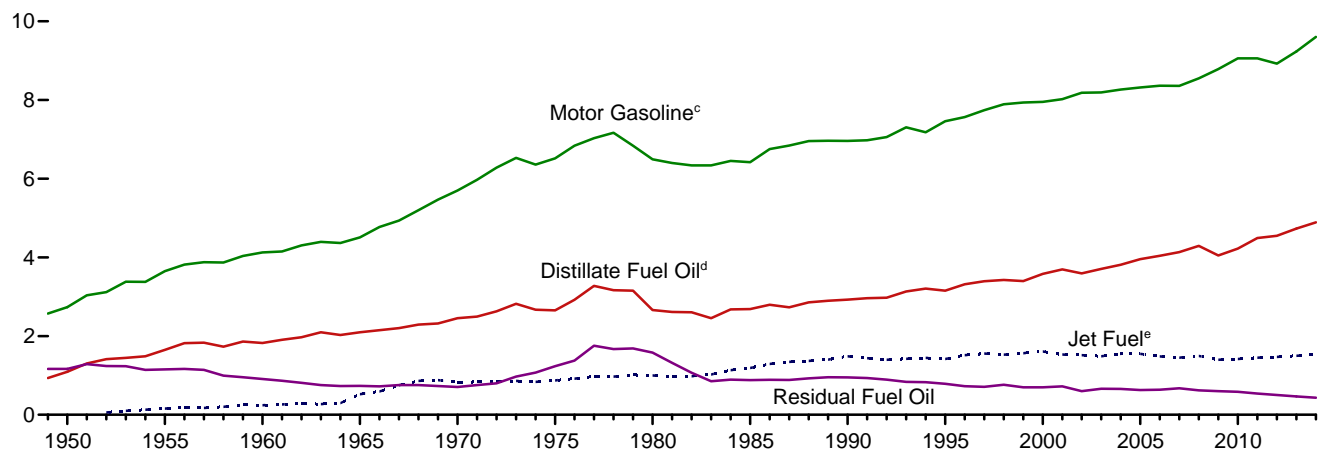
Sources: See end of section.

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

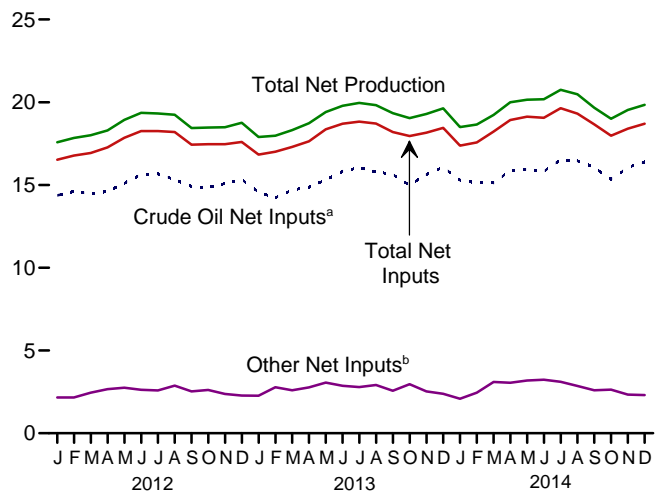
Net Inputs and Net Production, 1949–2014



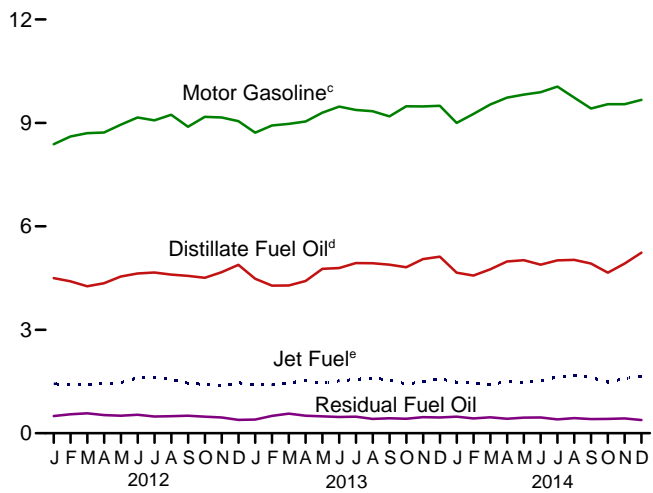
Net Production, Selected Products, 1949–2014



Net Inputs and Net Production, Monthly



Net Production, Selected Products, Monthly



<sup>a</sup> Includes lease condensate.

<sup>b</sup> Natural gas plant liquids and other liquids.

<sup>c</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline.

<sup>d</sup> Beginning in 2009, includes renewable diesel fuel (including biodie-

sel) blended into distillate fuel oil.

<sup>e</sup> Beginning in 2005, includes kerosene-type jet fuel only.

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

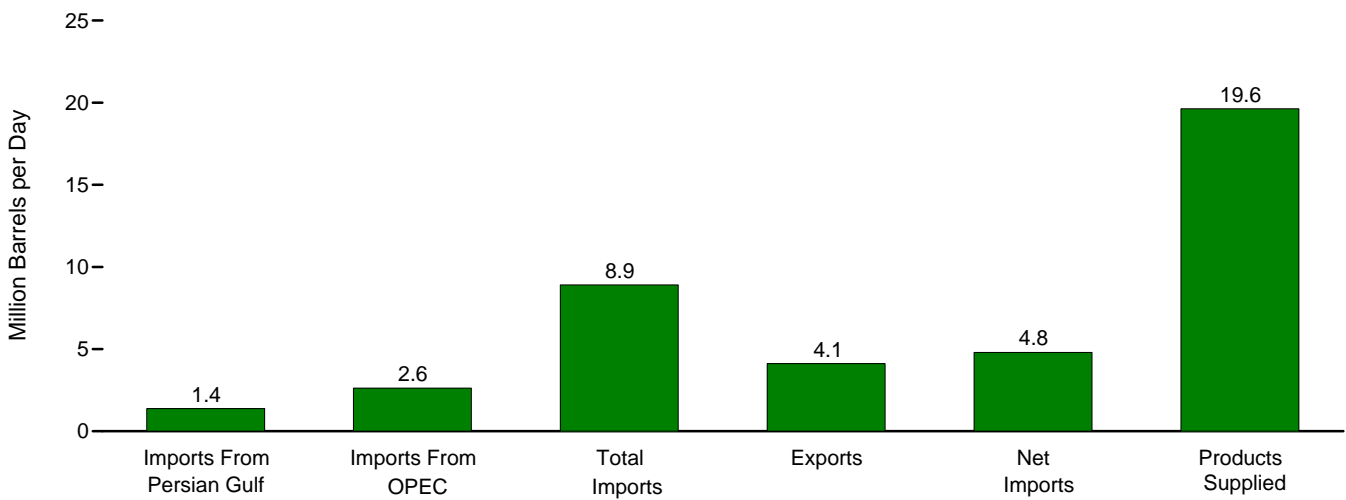
Source: Table 3.2.



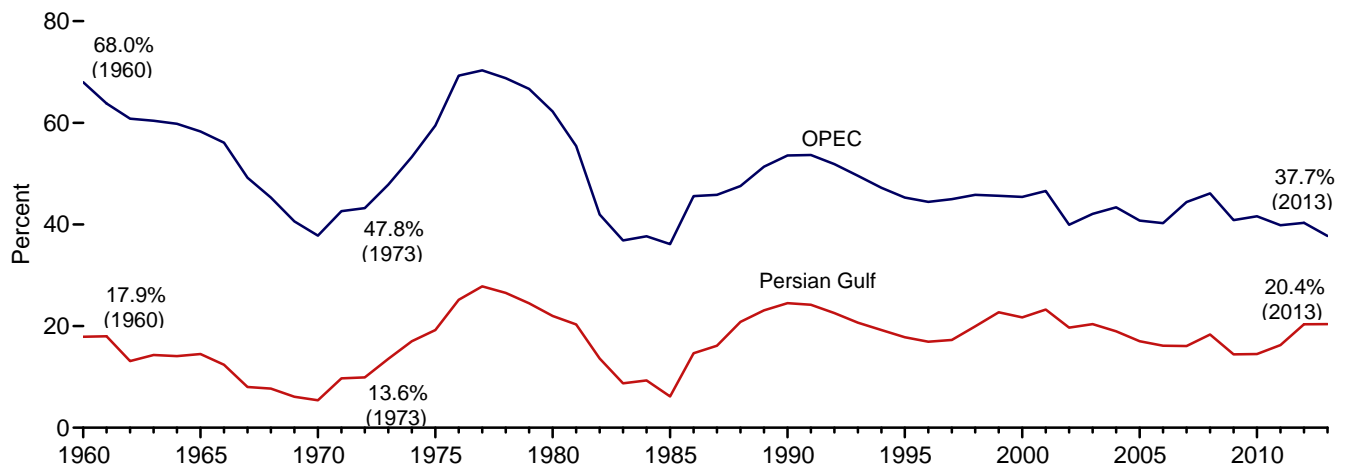


### Figure 3.3a Petroleum Trade: Overview

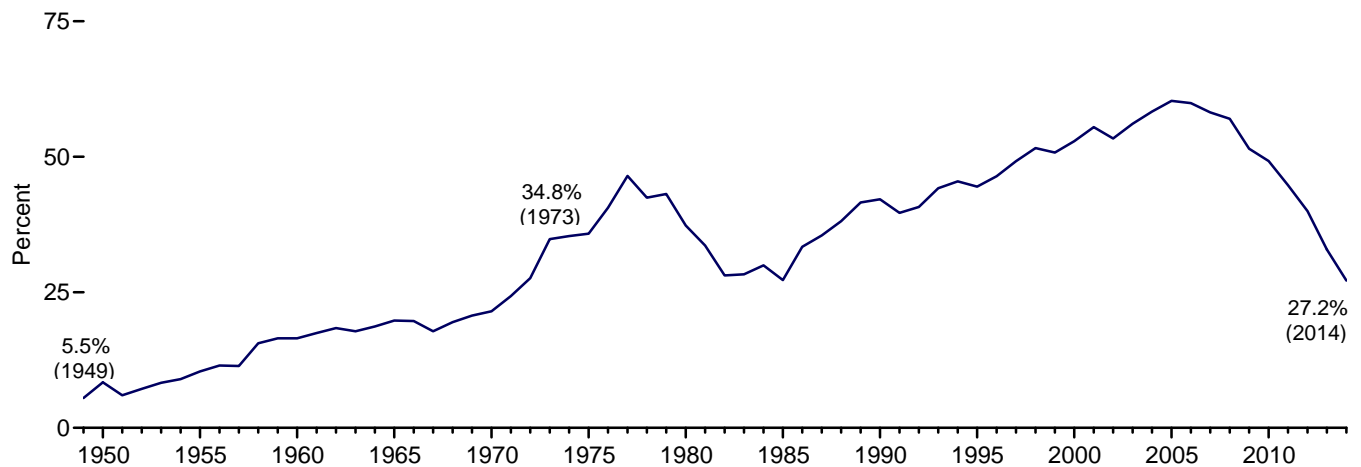
Overview, October 2014



#### Imports From OPEC and Persian Gulf as Share of Total Imports, 1960–2013



#### Net Imports as Share of Products Supplied, 1949–2014

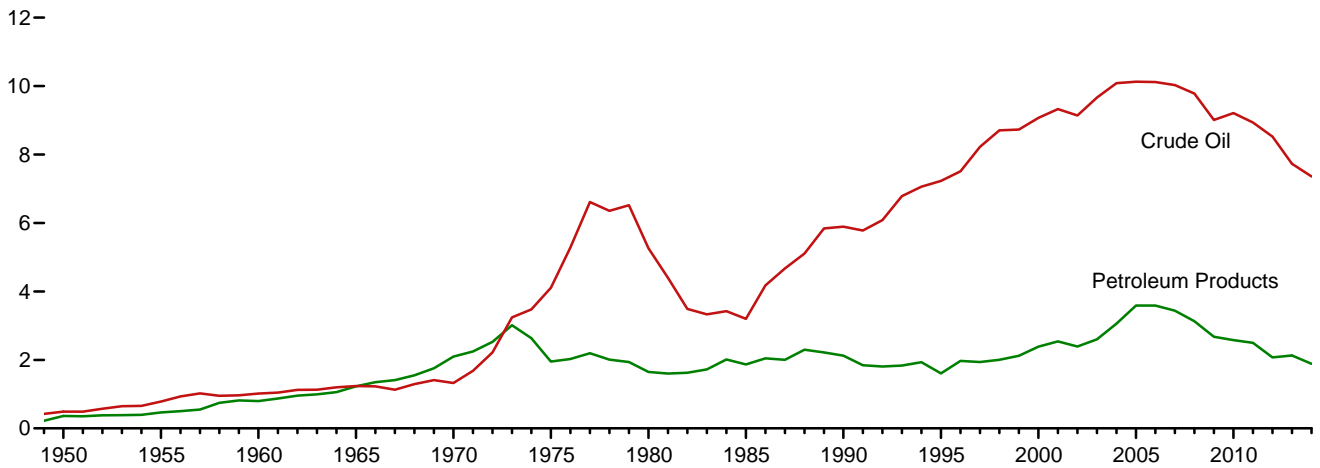


Note: OPEC=Organization of the Petroleum Exporting Countries.  
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.  
 Source: Table 3.3a.

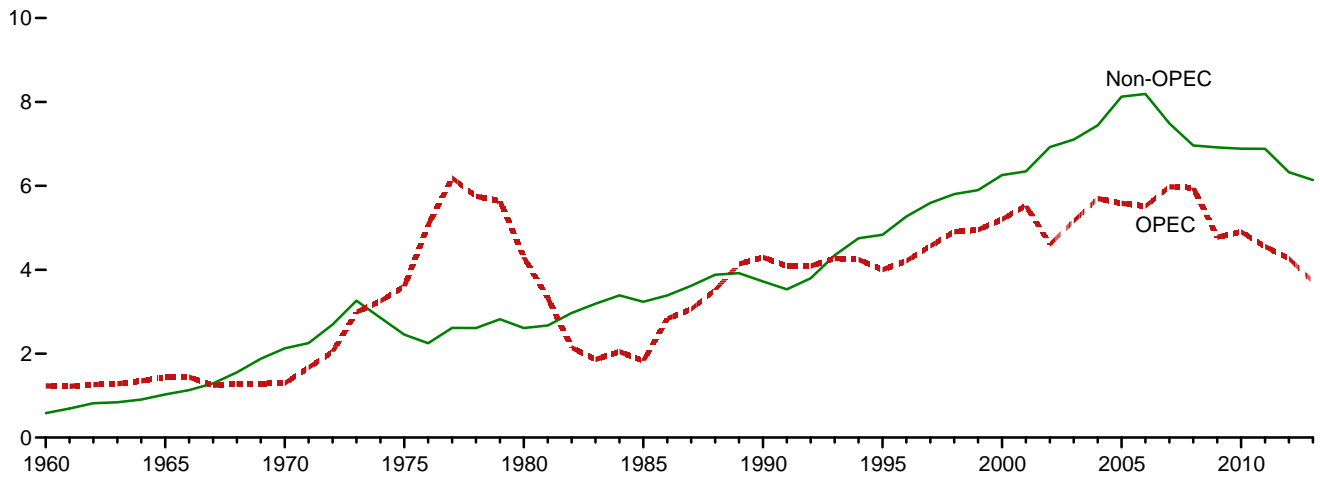


**Figure 3.3b Petroleum Trade: Imports**  
(Million Barrels per Day)

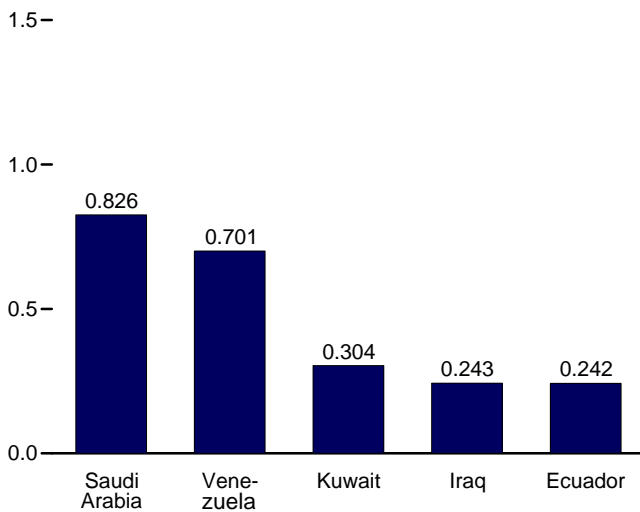
Overview, 1949–2014



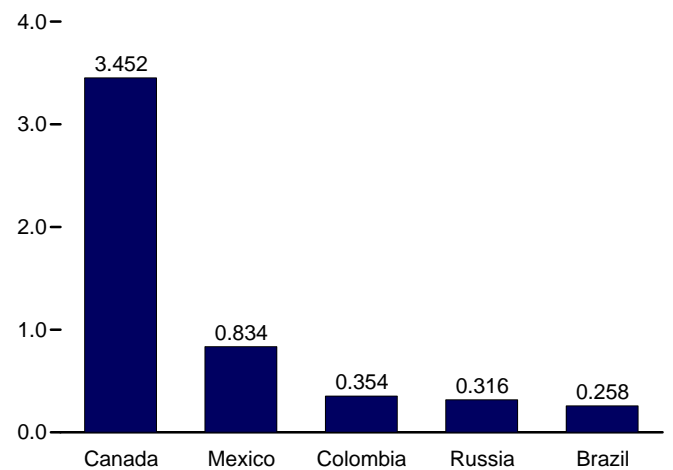
OPEC and Non-OPEC, 1960–2013



From Selected OPEC Countries, October 2014



From Selected Non-OPEC Countries, October 2014



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 <sup>a</sup>		Distillate Fuel Oil	Jet Fuel <sup>d</sup>	LPG <sup>b</sup>		Motor Gasoline <sup>f</sup>	Residual Fuel Oil	Other <sup>g</sup>	Total	Crude Oil <sup>a</sup>	Petroleum Products	Total
	SPR <sup>c</sup>	Total			Propane <sup>e</sup>	Total							
1950 Average	--	487	7	( <sup>d</sup> )	0	0	(s)	329	27	850	95	210	305
1955 Average	--	782	12	( <sup>d</sup> )	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 Average	--	8,935	179	69	110	135	105	328	1,686	11,436	47	2,939	2,986
2012 January	--	8,527	157	6	146	169	80	330	1,641	10,910	78	2,791	2,870
February	--	8,562	142	41	125	155	46	228	1,315	10,490	73	2,921	2,994
March	--	8,771	137	5	109	137	79	273	1,204	10,605	71	3,045	3,116
April	--	8,636	98	45	115	143	33	252	1,404	10,611	41	3,231	3,272
May	--	8,991	113	49	106	133	43	265	1,524	11,117	83	3,124	3,207
June	--	9,193	87	42	102	130	37	325	1,609	11,424	46	3,170	3,216
July	--	8,712	117	48	115	134	32	247	1,505	10,794	77	3,160	3,237
August	--	8,665	112	124	85	109	34	244	1,593	10,880	60	3,021	3,081
September	--	8,381	86	84	100	124	23	257	1,521	10,475	68	3,096	3,164
October	--	8,108	88	106	91	116	26	236	1,368	10,047	67	3,188	3,255
November	--	8,183	188	46	138	158	32	236	1,339	10,181	73	3,331	3,404
December	--	7,604	190	59	161	182	64	178	1,367	9,644	71	3,565	3,636
Average	--	8,527	126	55	116	141	44	256	1,450	10,598	67	3,137	3,205
2013 January	--	7,956	213	61	184	207	40	239	1,372	10,089	109	2,772	2,881
February	--	7,293	174	70	166	186	19	199	1,347	9,286	132	3,148	3,280
March	--	7,497	146	44	141	164	56	285	1,343	9,534	107	3,004	3,111
April	--	7,760	238	104	111	130	35	264	1,636	10,168	138	3,096	3,235
May	--	7,741	168	113	81	98	38	194	1,822	10,174	130	3,341	3,472
June	--	7,731	121	99	111	133	70	181	1,548	9,882	124	3,470	3,594
July	--	8,058	107	96	88	109	53	252	1,627	10,300	104	3,747	3,851
August	--	8,099	123	124	84	109	68	296	1,430	10,249	71	3,654	3,725
September	--	7,923	132	68	87	108	40	231	1,533	10,036	105	3,526	3,632
October	--	7,478	128	98	158	181	38	195	1,489	9,608	119	3,955	4,074
November	--	7,408	145	74	169	189	49	194	1,326	9,385	253	3,714	3,967
December	--	7,772	164	61	146	166	33	169	1,174	9,539	220	4,381	4,602
Average	--	7,730	155	84	127	148	45	225	1,471	9,859	134	3,487	3,621
2014 January	--	7,584	283	42	187	206	42	122	985	9,264	245	3,776	4,021
February	--	7,200	336	94	221	244	11	221	1,046	9,151	240	3,371	3,611
March	--	7,264	324	91	122	142	36	156	1,227	9,240	246	3,612	3,858
April	--	7,547	180	144	78	101	57	177	1,377	9,584	268	3,698	3,966
May	--	7,165	186	104	66	84	47	175	1,619	9,380	288	3,832	4,121
June	--	7,054	121	109	91	116	51	150	1,215	8,815	396	3,761	4,156
July	--	7,623	129	85	63	81	60	177	1,317	9,472	401	4,078	4,479
August	--	7,471	143	63	76	90	73	166	1,302	9,309	389	4,144	4,533
September	--	7,508	126	133	74	95	77	166	1,047	9,152	349	3,613	3,962
October	--	R 7,130	R 120	R 90	R 97	R 121	R 64	R 249	R 1,131	R 8,905	R 376	R 3,736	R 4,112
November	--	E 7,372	E 104	E 73	E 83	NA	E 57	E 210	NA	E 9,007	E 390	E 3,492	E 3,882
December	--	E 7,387	E 230	E 110	E 112	NA	E 89	E 166	NA	E 9,650	E 383	E 3,383	E 3,766
Average	--	E 7,360	E 190	E 95	E 105	NA	E 56	E 178	NA	E 9,246	E 331	E 3,711	E 4,043

<sup>a</sup> Includes lease condensate.

<sup>b</sup> Liquefied petroleum gases.

<sup>c</sup> "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.

<sup>d</sup> 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.")

<sup>e</sup> Includes propylene.

<sup>f</sup> 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.

<sup>g</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly 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. • 1981-2013: EIA, *Petroleum Supply Annual*, annual reports, and unpublished revisions. • 2014: 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.

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

	Algeria <sup>a</sup>	Angola <sup>b</sup>	Ecuador <sup>c</sup>	Iraq	Kuwait <sup>d</sup>	Libya <sup>e</sup>	Nigeria <sup>f</sup>	Saudi Arabia <sup>d</sup>	Venezuela	Other <sup>g</sup>	Total OPEC
<b>1960 Average</b> .....	(a)	(b)	(c)	22	182	(e)	(f)	84	911	34	1,233
<b>1965 Average</b> .....	(a)	(b)	(c)	16	74	42	(f)	158	994	155	1,439
<b>1970 Average</b> .....	8	(b)	(c)	0	48	47	(f)	30	989	172	1,294
<b>1975 Average</b> .....	282	(b)	57	2	16	232	762	715	702	832	3,601
<b>1980 Average</b> .....	488	(b)	27	28	27	554	857	1,261	481	577	4,300
<b>1985 Average</b> .....	187	(b)	67	46	21	4	293	168	605	439	1,830
<b>1990 Average</b> .....	280	(b)	49	518	86	0	800	1,339	1,025	199	4,296
<b>1995 Average</b> .....	234	(b)	(c)	0	218	0	627	1,344	1,480	98	4,002
<b>2000 Average</b> .....	225	(b)	(c)	620	272	0	896	1,572	1,546	72	5,203
<b>2001 Average</b> .....	278	(b)	(c)	795	250	0	885	1,662	1,553	105	5,528
<b>2002 Average</b> .....	264	(b)	(c)	459	228	0	621	1,552	1,398	83	4,605
<b>2003 Average</b> .....	382	(b)	(c)	481	220	0	867	1,774	1,376	61	5,162
<b>2004 Average</b> .....	452	(b)	(c)	656	250	20	1,140	1,558	1,554	70	5,701
<b>2005 Average</b> .....	478	(b)	(c)	531	243	56	1,166	1,537	1,529	47	5,587
<b>2006 Average</b> .....	657	(b)	(c)	553	185	87	1,114	1,463	1,419	38	5,517
<b>2007 Average</b> .....	670	508	(c)	484	181	117	1,134	1,485	1,361	39	5,980
<b>2008 Average</b> .....	548	513	221	627	210	103	988	1,529	1,189	26	5,954
<b>2009 Average</b> .....	493	460	185	450	182	79	809	1,004	1,063	50	4,776
<b>2010 Average</b> .....	510	393	212	415	197	70	1,023	1,096	988	3	4,906
<b>2011 Average</b> .....	358	346	206	459	191	15	818	1,195	951	16	4,555
<b>2012</b> January .....	269	385	100	374	319	5	494	1,423	751	41	4,159
February .....	256	230	244	271	252	29	353	1,420	934	-	3,989
March .....	325	175	174	386	454	60	374	1,369	984	-	4,301
April .....	259	253	201	395	235	68	483	1,597	904	7	4,402
May .....	300	249	199	675	407	65	428	1,540	861	7	4,730
June .....	236	378	248	668	250	93	515	1,456	794	17	4,655
July .....	213	285	176	375	304	110	372	1,466	1,080	7	4,387
August .....	303	153	180	550	301	126	504	1,220	1,048	-	4,385
September .....	175	237	218	461	310	67	468	1,291	1,038	6	4,272
October .....	186	183	122	593	287	59	543	1,258	951	4	4,187
November .....	199	157	151	489	276	30	516	1,316	1,076	18	4,228
December .....	179	116	155	462	254	16	248	1,034	1,092	-	3,556
<b>Average</b> .....	<b>242</b>	<b>233</b>	<b>180</b>	<b>476</b>	<b>305</b>	<b>61</b>	<b>441</b>	<b>1,365</b>	<b>960</b>	<b>9</b>	<b>4,271</b>
<b>2013</b> January .....	195	223	240	419	389	20	479	979	913	10	3,866
February .....	17	198	174	529	255	20	255	1,032	614	20	3,115
March .....	74	98	228	426	367	74	403	1,284	781	8	3,741
April .....	160	167	322	455	238	76	405	1,109	866	-	3,799
May .....	168	328	178	321	361	125	395	1,440	739	10	4,064
June .....	88	271	202	228	217	119	366	1,431	899	16	3,837
July .....	112	228	198	299	309	150	240	1,318	933	-	3,789
August .....	105	376	349	397	420	67	167	1,332	678	10	3,901
September .....	136	226	255	287	299	35	286	1,557	837	-	3,921
October .....	66	207	251	226	335	13	183	1,362	759	10	3,411
November .....	144	125	235	182	397	-	93	1,563	796	-	3,535
December .....	110	136	198	332	332	(s)	99	1,520	847	39	3,613
<b>Average</b> .....	<b>115</b>	<b>216</b>	<b>236</b>	<b>341</b>	<b>328</b>	<b>59</b>	<b>281</b>	<b>1,329</b>	<b>806</b>	<b>10</b>	<b>3,720</b>
<b>2014</b> January .....	68	94	191	249	474	-	89	1,462	687	1	3,314
February .....	79	114	207	290	348	-	59	1,464	807	31	3,398
March .....	92	117	173	291	360	-	112	1,444	772	19	3,380
April .....	69	118	170	321	342	-	187	1,607	853	1	3,668
May .....	102	178	217	351	334	-	118	1,241	772	1	3,313
June .....	147	166	138	529	355	-	115	1,017	747	38	3,251
July .....	118	159	214	496	375	-	61	1,232	901	40	3,598
August .....	137	129	305	543	263	10	48	894	867	76	3,272
September .....	185	202	305	350	245	-	57	1,004	823	42	3,215
October .....	101	147	242	243	304	-	59	826	701	6	2,628
<b>10-Month Average</b> .....	<b>110</b>	<b>142</b>	<b>216</b>	<b>367</b>	<b>340</b>	<b>1</b>	<b>91</b>	<b>1,217</b>	<b>793</b>	<b>25</b>	<b>3,302</b>
<b>2013 10-Month Average</b> .....	<b>113</b>	<b>233</b>	<b>240</b>	<b>357</b>	<b>320</b>	<b>70</b>	<b>318</b>	<b>1,286</b>	<b>803</b>	<b>8</b>	<b>3,750</b>
<b>2012 10-Month Average</b> .....	<b>252</b>	<b>253</b>	<b>185</b>	<b>476</b>	<b>313</b>	<b>68</b>	<b>454</b>	<b>1,403</b>	<b>935</b>	<b>9</b>	<b>4,348</b>

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

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

<sup>c</sup> 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.

<sup>d</sup> 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.

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

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

<sup>g</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1960 and monthly 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. • **1981–2013:** EIA, *Petroleum Supply Annual*, annual reports. • **2014:** EIA, *Petroleum Supply Monthly*, monthly reports.

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

	Brazil	Canada	Colombia	Mexico	Nether-lands	Norway	Russia <sup>a</sup>	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 Average .....	253	2,729	433	1,206	100	113	624	159	186	1,077	6,881
<b>2012</b> January .....	321	3,032	431	1,114	101	46	572	168	96	870	6,751
February .....	286	3,057	474	1,081	93	163	288	127	28	904	6,501
March .....	357	2,953	482	1,004	143	87	326	187	1	764	6,304
April .....	237	2,987	472	1,002	84	51	388	145	12	831	6,208
May .....	212	2,966	430	1,012	111	94	547	138	2	875	6,387
June .....	297	3,070	515	915	151	82	655	194	(s)	891	6,769
July .....	270	2,921	413	1,024	138	47	491	131	1	971	6,407
August .....	289	2,954	409	1,016	97	94	368	197	—	1,071	6,495
September .....	152	2,759	357	1,096	75	63	562	111	—	1,029	6,203
October .....	90	2,642	376	1,062	69	67	552	117	3	882	5,860
November .....	123	2,870	459	1,065	72	80	445	126	—	712	5,953
December .....	85	3,153	387	1,026	52	35	523	144	—	682	6,088
<b>Average .....</b>	<b>226</b>	<b>2,946</b>	<b>433</b>	<b>1,035</b>	<b>99</b>	<b>75</b>	<b>477</b>	<b>149</b>	<b>12</b>	<b>874</b>	<b>6,327</b>
<b>2013</b> January .....	103	3,456	351	1,068	121	48	328	116	—	632	6,223
February .....	79	3,457	366	978	121	10	454	95	—	612	6,172
March .....	123	3,037	479	677	122	57	454	111	—	733	5,793
April .....	97	3,208	465	973	76	40	584	131	—	795	6,369
May .....	198	2,854	389	885	88	30	554	180	—	931	6,110
June .....	192	2,885	356	846	74	80	519	198	—	896	6,045
July .....	185	3,014	588	930	69	68	456	192	—	1,011	6,511
August .....	241	3,082	375	912	85	36	572	163	—	882	6,348
September .....	262	3,086	314	839	61	56	459	149	—	890	6,116
October .....	95	3,218	384	878	83	114	555	160	—	711	6,197
November .....	133	3,130	308	1,014	78	53	325	124	—	685	5,850
December .....	105	3,296	293	1,030	90	54	265	146	—	648	5,926
<b>Average .....</b>	<b>151</b>	<b>3,142</b>	<b>389</b>	<b>919</b>	<b>89</b>	<b>54</b>	<b>460</b>	<b>147</b>	<b>—</b>	<b>786</b>	<b>6,138</b>
<b>2014</b> January .....	126	3,437	373	1,030	105	36	202	140	—	500	5,950
February .....	181	3,211	320	864	105	88	365	68	—	552	5,754
March .....	72	3,205	382	871	90	70	424	131	—	614	5,860
April .....	100	3,169	334	748	110	72	405	170	—	809	5,916
May .....	136	3,265	247	803	127	39	352	179	—	918	6,067
June .....	143	3,237	210	777	15	30	274	97	—	781	5,565
July .....	157	3,281	202	753	32	55	405	118	—	871	5,874
August .....	214	3,433	336	798	61	44	394	84	—	673	6,037
September .....	113	3,541	333	859	55	7	263	57	—	708	5,937
October .....	258	3,452	354	834	119	28	316	109	—	808	6,277
<b>10-Month Average .....</b>	<b>150</b>	<b>3,324</b>	<b>309</b>	<b>834</b>	<b>82</b>	<b>47</b>	<b>340</b>	<b>116</b>	<b>—</b>	<b>725</b>	<b>5,926</b>
<b>2013 10-Month Average .....</b>	<b>158</b>	<b>3,127</b>	<b>407</b>	<b>898</b>	<b>90</b>	<b>54</b>	<b>494</b>	<b>150</b>	<b>—</b>	<b>811</b>	<b>6,189</b>
<b>2012 10-Month Average .....</b>	<b>251</b>	<b>2,933</b>	<b>435</b>	<b>1,033</b>	<b>106</b>	<b>79</b>	<b>476</b>	<b>152</b>	<b>14</b>	<b>909</b>	<b>6,388</b>

<sup>a</sup> 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

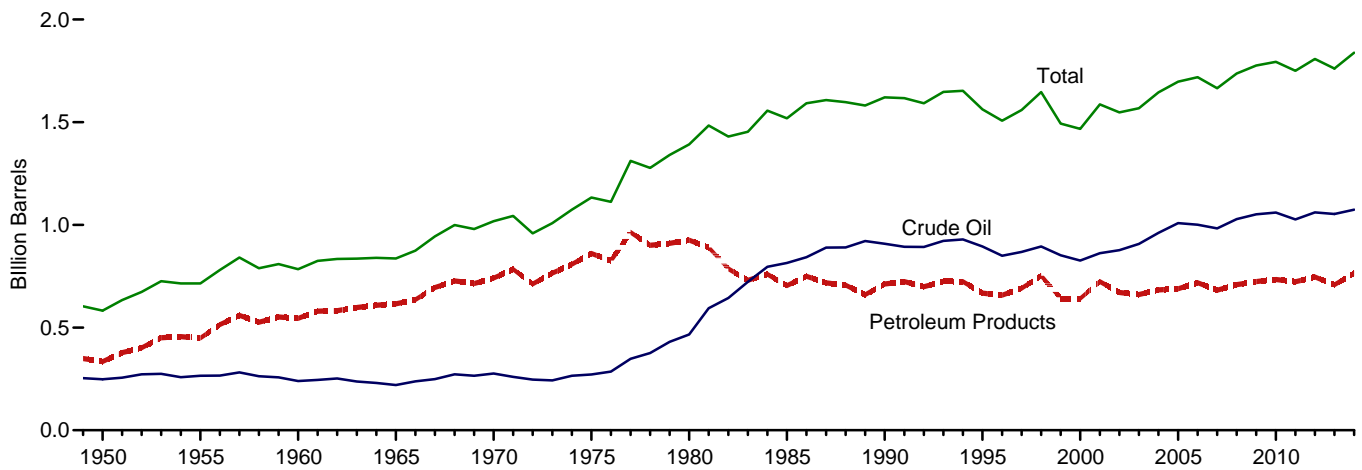
states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1960 and monthly data beginning in 1973.

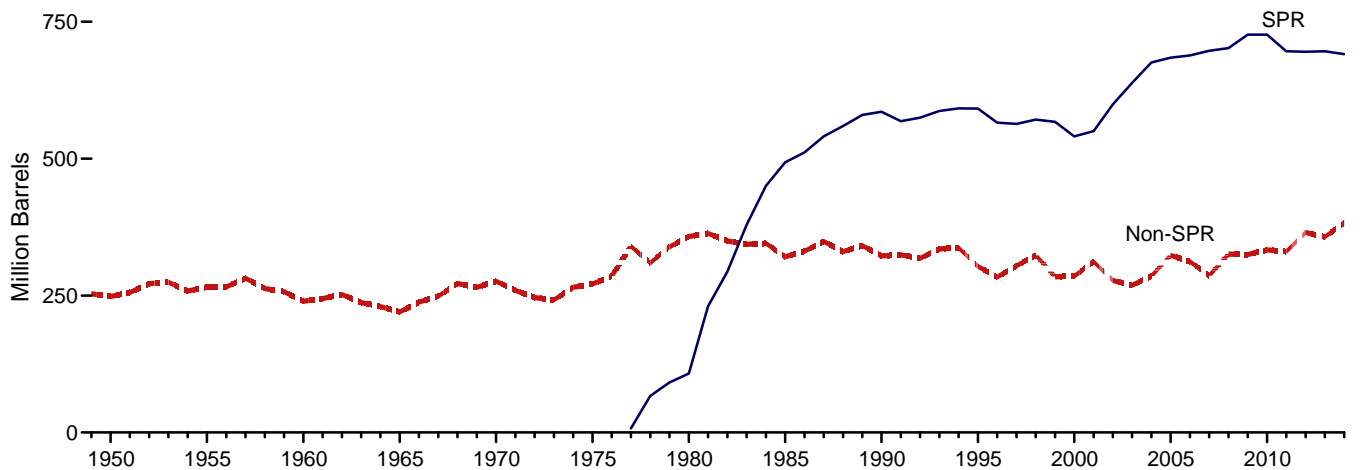
Sources: • **1960–1972:** Bureau of Mines, *Minerals Yearbook*, annual reports. • **1973–1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976–1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • **1981–2013:** EIA, *Petroleum Supply Annual*, annual reports. • **2014:** EIA, *Petroleum Supply Monthly*, monthly reports.

### Figure 3.4 Petroleum Stocks

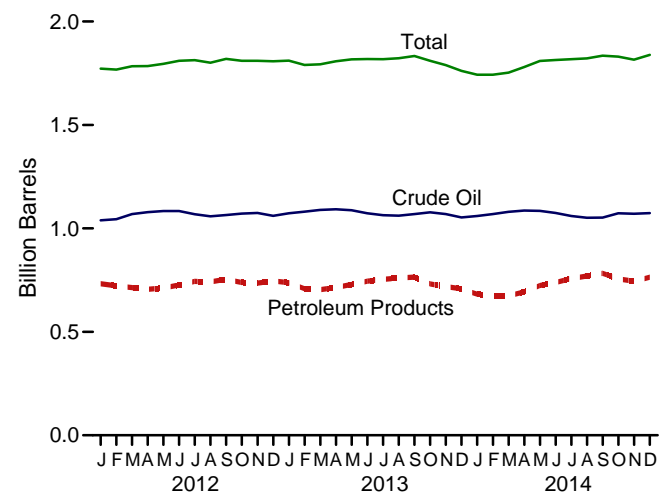
Overview, 1949–2014



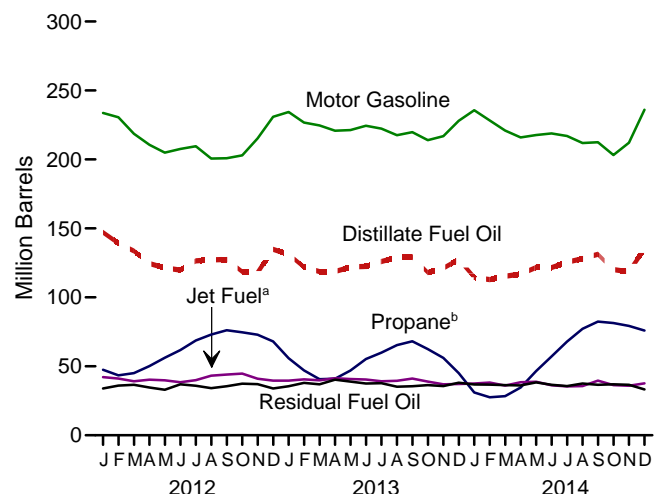
SPR and Non-SPR Crude Oil Stocks, 1949–2014



Overview, Monthly



Selected Products, Monthly



<sup>a</sup> Includes kerosene-type jet fuel only.

<sup>b</sup> 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)

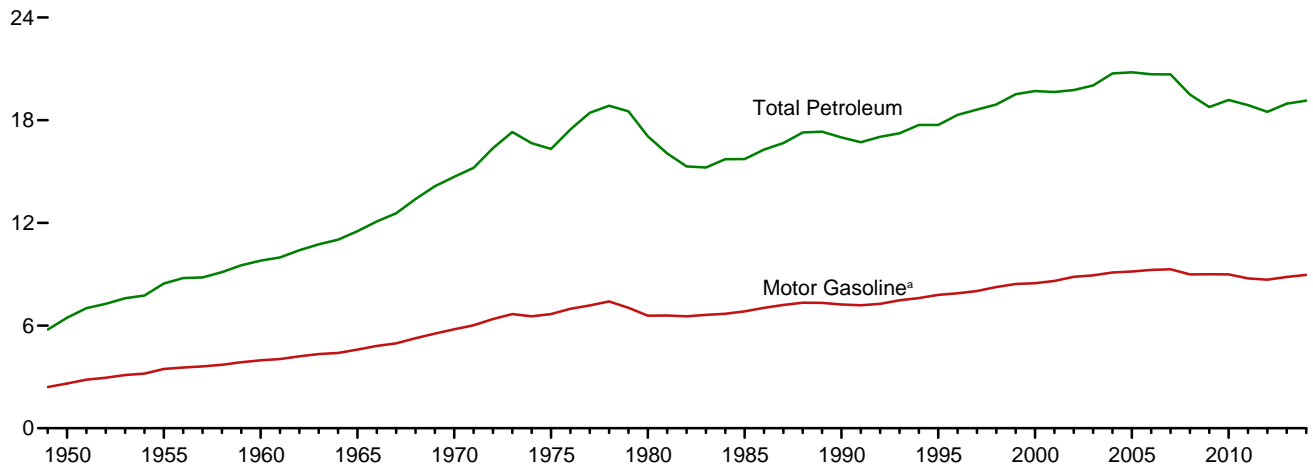
	Crude Oil <sup>a</sup>			Distillate Fuel Oil <sup>f</sup>	Jet Fuel <sup>g</sup>	LPG <sup>b</sup>		Motor Gasoline <sup>i</sup>	Residual Fuel Oil	Other <sup>j</sup>	Total
	SPR <sup>c</sup>	Non-SPR <sup>d,e</sup>	Total <sup>e</sup>			Propane <sup>h</sup>	Total				
1950 Year	--	248	248	72	( <sup>g</sup> )	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 Year	696	331	1,027	149	41	55	112	223	34	164	1,750
2012 January	696	343	1,039	147	42	48	101	234	34	175	1,773
February	696	348	1,044	139	41	43	96	231	36	180	1,767
March	696	373	1,069	134	39	45	103	219	37	184	1,783
April	696	383	1,079	125	40	50	116	211	35	179	1,784
May	696	388	1,084	121	40	56	133	205	33	180	1,796
June	696	388	1,084	120	38	62	147	208	37	177	1,810
July	696	373	1,069	126	40	69	160	210	36	173	1,813
August	696	362	1,058	127	43	73	170	201	34	166	1,801
September	695	370	1,065	127	44	76	175	201	36	172	1,819
October	695	376	1,071	119	45	75	168	203	37	167	1,810
November	695	379	1,074	118	41	73	158	215	37	167	1,810
December	695	365	1,061	135	40	68	141	231	34	167	1,808
2013 January	696	377	1,073	131	40	56	121	234	36	176	1,811
February	696	385	1,081	122	40	47	108	227	38	174	1,790
March	696	393	1,089	119	40	41	103	225	37	180	1,793
April	696	396	1,092	119	41	41	111	221	40	183	1,808
May	696	392	1,088	122	41	47	127	221	39	178	1,817
June	696	377	1,073	122	40	55	143	224	38	178	1,819
July	696	368	1,064	126	39	60	154	222	38	175	1,818
August	696	366	1,062	129	39	65	168	218	35	171	1,823
September	696	373	1,069	129	41	68	172	220	36	166	1,833
October	696	382	1,078	118	39	63	159	214	36	166	1,810
November	696	374	1,070	121	37	56	139	217	36	170	1,789
December	696	357	1,053	128	37	45	114	228	38	163	1,761
2014 January	696	364	1,060	115	38	31	88	236	37	170	1,743
February	696	373	1,069	113	38	28	81	228	37	177	1,743
March	696	384	1,080	115	36	28	85	221	36	180	1,753
April	693	393	1,086	117	38	35	102	216	36	184	1,780
May	691	394	1,085	122	39	47	125	218	38	182	1,809
June	691	384	1,075	122	36	57	149	219	37	176	1,814
July	691	369	1,060	126	35	68	172	217	36	172	1,818
August	691	361	1,052	128	36	77	187	212	38	170	1,822
September	691	361	1,052	131	40	82	192	212	37	171	1,835
October	691	R 382	R 1,073	R 120	R 36	R 81	R 185	R 203	37	R 175	R 1,830
November	E 691	E 380	E 1,071	E 119	E 36	E 79	RF 171	E 212	E 37	RE 171	E 1,815
December	E 691	E 383	E 1,074	E 135	E 38	E 76	F 152	E 236	E 33	E 170	E 1,839

<sup>a</sup> Includes lease condensate.  
<sup>b</sup> Liquefied petroleum gases.  
<sup>c</sup> "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.  
<sup>d</sup> All crude oil stocks other than those in "SPR."  
<sup>e</sup> Beginning in 1981, includes stocks of Alaskan crude oil in transit.  
<sup>f</sup> Excludes stocks in the Northeast Home Heating Oil Reserve. Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.  
<sup>g</sup> 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.")  
<sup>h</sup> Includes propylene.  
<sup>i</sup> Includes finished motor gasoline and motor gasoline blending components; excludes oxygenates. Through 1963, also includes aviation gasoline and special naphthas.  
<sup>j</sup> Asphalt and road oil, aviation gasoline blending components, kerosene,

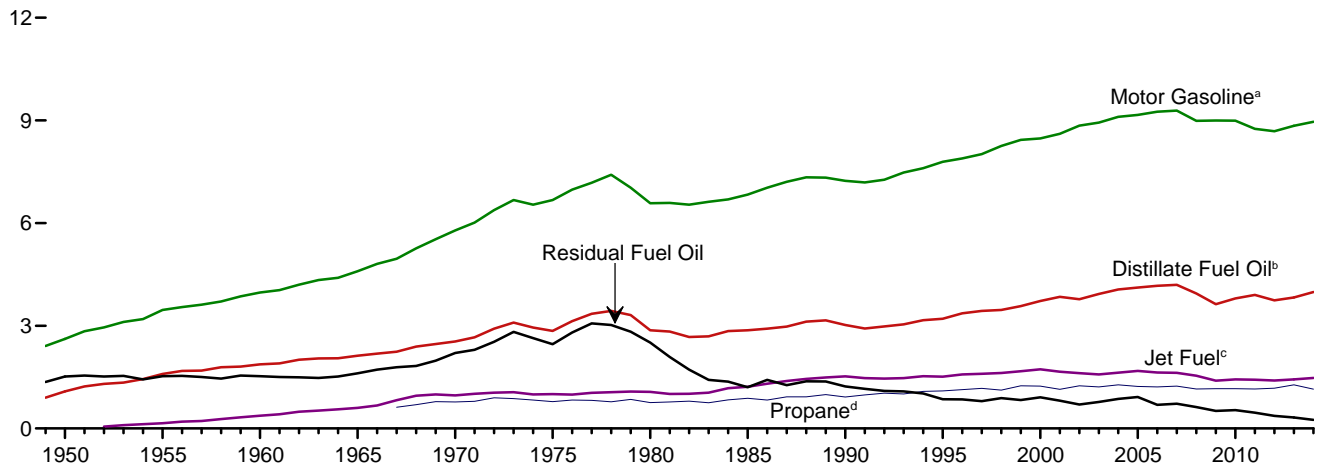
lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, unfinished oils, waxes, miscellaneous products, oxygenates, renewable fuels, and other hydrocarbons. Through 1964, also includes kerosene-type jet fuel. Beginning in 1964, also includes finished aviation gasoline and special naphthas. 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly 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. • 1981–2013: EIA, *Petroleum Supply Annual*, annual reports. • 2014: 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.

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

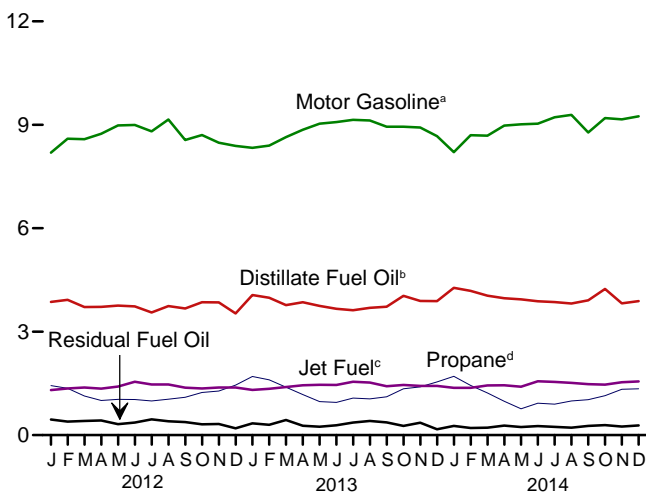
Total Petroleum and Motor Gasoline, 1949–2014



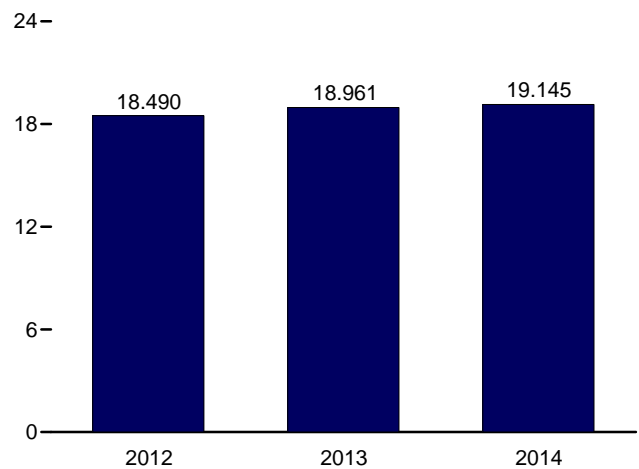
Selected Products, 1949–2014



Selected Products, Monthly



Total Petroleum, January–December



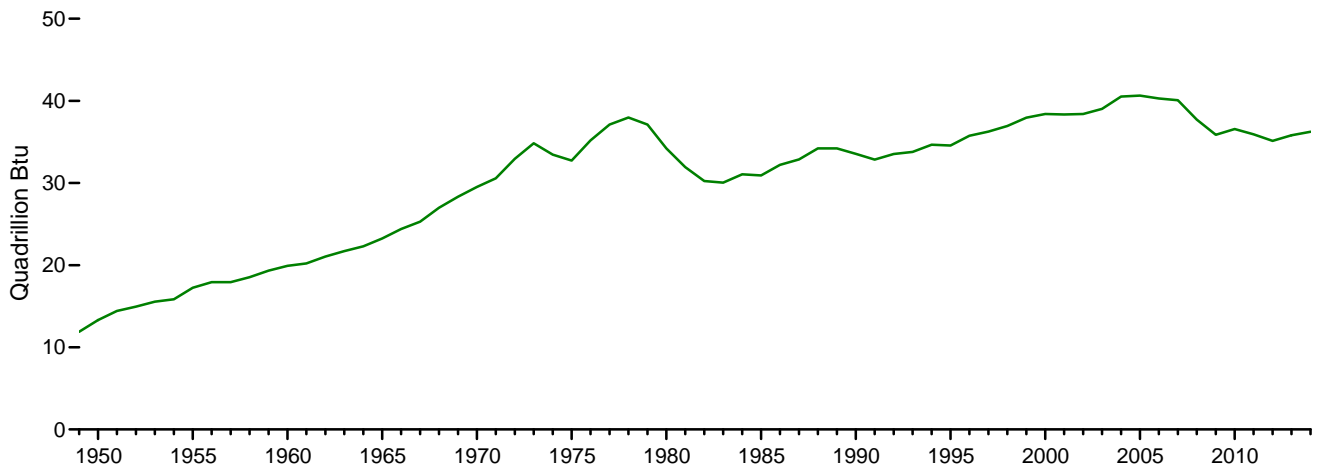
<sup>a</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline.  
<sup>b</sup> Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.  
<sup>c</sup> Beginning in 2005, includes kerosene-type jet fuel only.

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

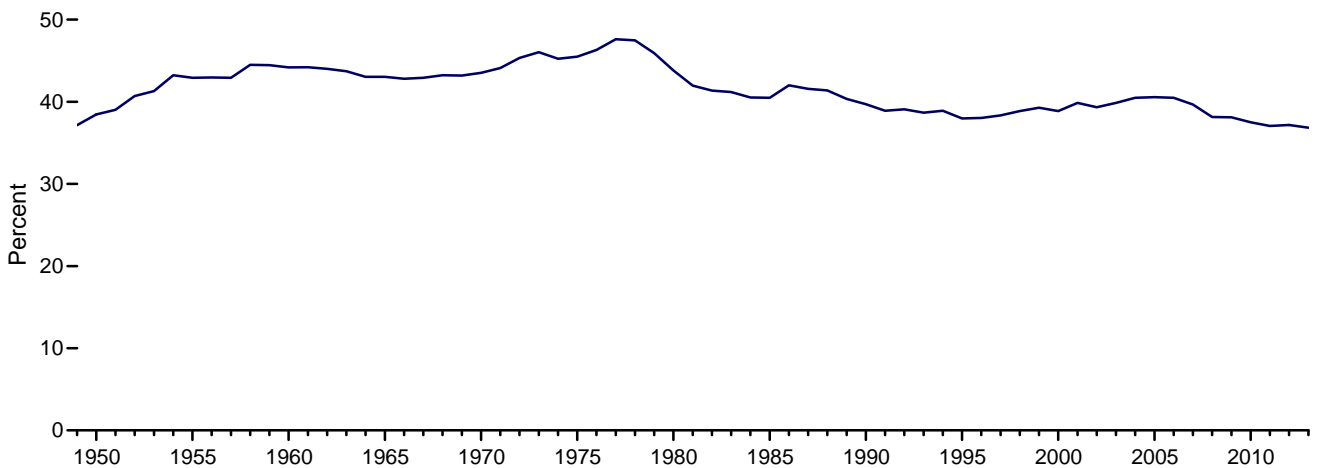


**Figure 3.6 Heat Content of Petroleum Products Supplied by Type**

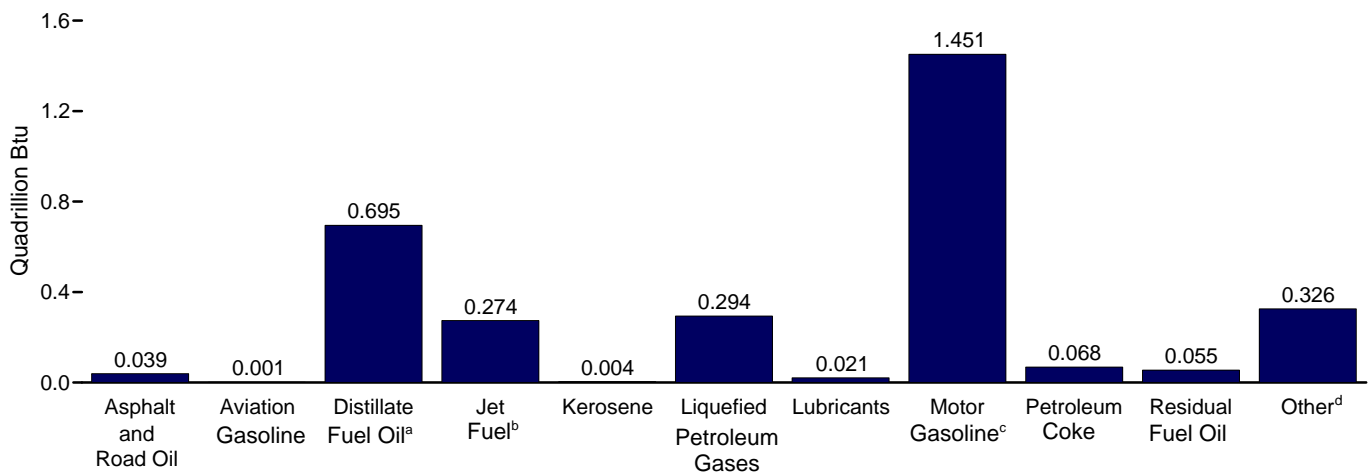
Total, 1949–2014



Petroleum Products Supplied as Share of Total Energy Consumption, 1949–2013



By Product, December 2014



<sup>a</sup> Includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

<sup>b</sup> Includes kerosene-type jet fuel only.

<sup>c</sup> Includes fuel ethanol blended into motor gasoline.

<sup>d</sup> 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 <sup>b</sup>	Jet Fuel <sup>c</sup>	Kerosene	LPG <sup>a</sup>		Lubricants	Motor Gasoline <sup>e</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>f</sup>	Total
						Propane <sup>d</sup>	Total						
1950 Total .....	435	199	2,300	( <sup>c</sup> )	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	R 6,812	3,132	112	1,534	2,512	346	R 14,834	802	1,955	2,837	R 34,558
2000 Total .....	1,276	36	R 7,927	3,580	140	1,734	2,945	369	R 16,167	895	2,091	2,979	R 38,406
2001 Total .....	1,257	35	R 8,170	3,426	150	1,598	2,697	338	R 16,386	961	1,861	3,056	R 38,337
2002 Total .....	1,240	34	R 8,020	3,340	90	1,747	2,852	334	R 16,829	1,018	1,605	3,040	R 38,401
2003 Total .....	1,220	30	R 8,341	3,265	113	1,701	2,748	309	R 16,968	1,000	1,772	3,264	R 39,030
2004 Total .....	1,304	31	R 8,642	3,383	133	1,791	2,824	313	R 17,333	R 1,148	1,990	3,428	R 40,528
2005 Total .....	1,323	35	R 8,745	3,475	144	1,721	2,682	312	R 17,378	R 1,125	2,111	3,318	R 40,647
2006 Total .....	1,261	33	R 8,831	3,379	111	1,701	2,700	303	R 17,531	R 1,141	1,581	3,416	R 40,289
2007 Total .....	1,197	32	R 8,860	3,358	67	1,729	2,733	313	R 17,472	R 1,072	1,659	3,313	R 40,075
2008 Total .....	1,012	28	R 8,346	3,193	30	1,620	2,574	291	R 16,865	R 1,017	1,432	2,941	R 37,728
2009 Total .....	873	27	R 7,661	2,883	36	1,624	2,664	262	R 16,750	R 937	1,173	2,611	R 35,877
2010 Total .....	878	27	R 8,014	2,963	41	1,624	2,821	291	R 16,668	R 831	1,228	2,800	R 36,561
2011 Total .....	859	27	R 8,217	2,950	25	1,614	2,839	276	R 16,191	R 801	1,058	2,676	R 35,920
2012 January .....	41	2	R 691	230	1	171	274	23	R 1,286	R 76	88	221	R 2,933
February .....	42	2	R 657	222	4	151	252	24	R 1,262	R 54	72	208	R 2,799
March .....	48	2	R 665	243	1	135	245	21	R 1,347	R 60	80	208	R 2,920
April .....	65	2	R 644	230	(s)	116	222	23	R 1,328	R 63	80	184	R 2,840
May .....	79	3	R 672	248	1	123	228	23	R 1,409	R 73	62	200	R 2,997
June .....	91	2	R 646	263	(s)	119	214	20	R 1,366	R 70	69	212	R 2,953
July .....	95	3	R 636	258	(s)	118	223	20	R 1,383	R 65	89	219	R 2,992
August .....	102	2	R 670	258	(s)	124	233	21	R 1,437	R 77	78	217	R 3,095
September .....	89	2	R 636	234	1	126	227	19	R 1,300	R 68	71	176	R 2,823
October .....	77	2	R 689	238	1	147	258	21	R 1,366	R 58	61	236	R 3,006
November .....	56	2	R 666	235	1	147	255	22	R 1,288	R 69	61	226	R 2,880
December .....	41	1	R 631	243	(s)	173	282	17	R 1,317	R 69	38	252	R 2,891
Total .....	827	25	R 7,903	2,901	11	1,649	2,912	254	R 16,089	R 802	849	2,558	R 35,130
2013 January .....	46	2	R 727	230	2	202	306	24	R 1,307	R 76	66	208	R 2,995
February .....	40	1	R 644	213	(s)	172	279	22	R 1,190	R 48	52	196	R 2,686
March .....	48	2	R 674	245	3	165	277	24	R 1,356	R 55	86	197	R 2,966
April .....	58	2	R 667	246	1	135	244	21	R 1,345	R 49	51	204	R 2,887
May .....	63	2	R 670	256	(s)	116	228	24	R 1,418	R 75	47	241	R 3,026
June .....	81	2	R 634	247	(s)	109	217	26	R 1,379	R 74	54	223	R 2,936
July .....	93	3	R 647	272	(s)	128	251	23	R 1,435	R 71	71	241	R 3,106
August .....	95	2	R 660	268	(s)	125	239	23	R 1,432	R 76	80	212	R 3,086
September .....	92	2	R 644	241	1	128	240	22	R 1,359	R 74	70	258	R 3,001
October .....	78	2	R 722	256	(s)	160	287	22	R 1,403	R 60	52	211	R 3,093
November .....	52	2	R 674	243	(s)	161	287	18	R 1,355	R 72	68	243	R 3,014
December .....	37	1	R 695	251	3	183	312	22	R 1,360	R 58	33	244	R 3,016
Total .....	783	22	R 8,058	2,969	11	1,785	3,167	268	R 16,339	R 786	731	2,677	R 35,811
2014 January .....	36	2	R 764	241	3	203	325	20	R 1,288	R 81	52	206	R 3,018
February .....	38	1	R 675	218	1	155	260	20	R 1,233	R 51	37	210	R 2,743
March .....	45	2	R 723	253	(s)	145	261	26	R 1,363	R 43	42	210	R 2,968
April .....	56	2	R 687	246	(s)	113	228	21	R 1,364	R 60	52	214	R 2,929
May .....	72	2	R 704	247	(s)	91	207	25	R 1,415	R 70	46	207	R 2,994
June .....	80	2	R 671	265	(s)	107	215	18	R 1,372	R 63	49	204	R 2,940
July .....	95	3	R 690	271	2	107	223	25	R 1,447	R 75	47	215	R 3,093
August .....	94	2	R 683	266	(s)	118	250	25	R 1,457	R 71	42	205	R 3,096
September .....	88	2	R 676	251	3	118	238	24	R 1,333	R 74	50	230	R 2,970
October .....	R 81	2	R 758	R 257	R 3	R 136	R 263	R 24	R 1,443	R 68	R 57	R 205	R 3,159
November .....	F 56	F 1	RE 661	E 261	RF 6	E 153	RF 280	F 20	RE 1,391	RF 69	E 47	RE 299	RE 3,092
December .....	F 39	F 1	E 695	E 274	F 4	E 160	F 294	F 21	E 1,451	F 68	E 55	E 326	E 3,228
Total .....	E 781	E 21	E 8,389	E 3,051	E 23	E 1,605	E 3,043	E 269	E 16,555	E 794	E 575	E 2,730	E 36,232

<sup>a</sup> Liquefied petroleum gases.  
<sup>b</sup> Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.  
<sup>c</sup> 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.")  
<sup>d</sup> Includes propylene.  
<sup>e</sup> Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.  
<sup>f</sup> 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.

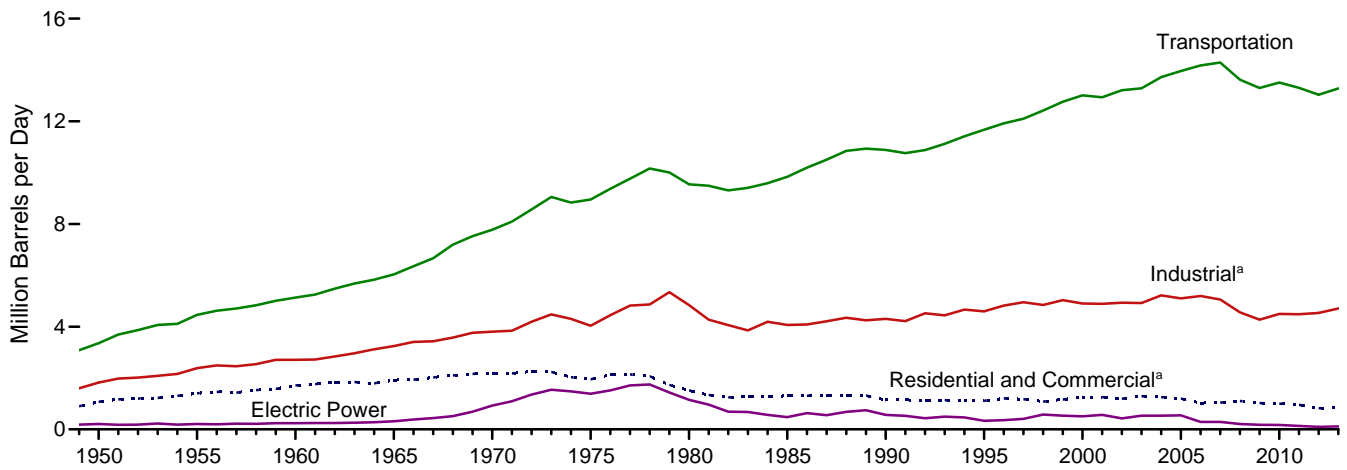
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

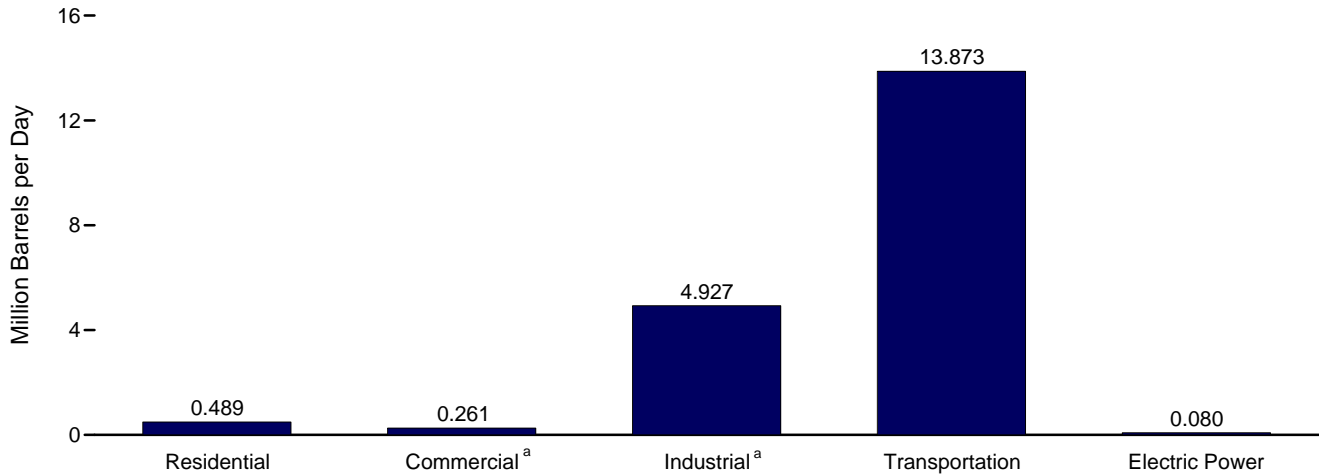
Historical revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Figure 3.7 Petroleum Consumption by Sector**

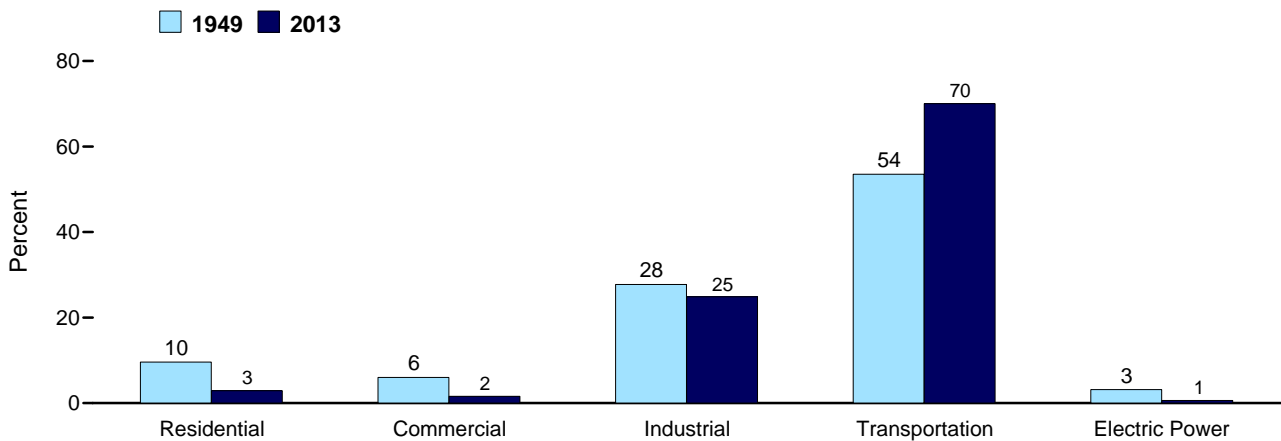
By Sector, 1949–2013



By Sector, October 2014



Sector Shares 1949 and 2013



<sup>a</sup> 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 <sup>a</sup>						
	Distillate Fuel Oil	Kero-sene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kero-sene	Liquefied Petroleum Gases	Motor Gasoline <sup>b</sup>	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	187	2	99	28	(s)	31	348
2010 Average	266	14	379	659	185	2	100	28	(s)	27	343
2011 Average	248	9	362	619	186	2	105	24	(s)	23	339
<b>2012</b> January	380	4	317	701	280	1	109	22	(s)	23	434
February	319	19	310	648	235	3	106	23	(s)	19	387
March	259	5	284	548	191	1	97	23	(s)	15	328
April	190	1	267	458	140	(s)	91	24	(s)	11	266
May	188	6	265	459	138	1	91	24	0	11	266
June	195	1	259	455	143	(s)	89	24	0	12	268
July	182	(s)	262	443	134	(s)	90	24	(s)	11	258
August	228	(s)	271	500	168	(s)	93	25	(s)	14	300
September	184	3	273	460	135	(s)	94	23	(s)	11	264
October	163	2	298	463	120	(s)	102	23	(s)	10	256
November	215	2	304	521	158	(s)	104	23	(s)	13	299
December	238	2	324	564	176	(s)	111	23	(s)	14	324
<b>Average</b>	<b>228</b>	<b>4</b>	<b>286</b>	<b>518</b>	<b>168</b>	<b>1</b>	<b>98</b>	<b>23</b>	<b>(s)</b>	<b>14</b>	<b>304</b>
<b>2013</b> January	433	8	350	791	303	1	120	22	(s)	20	466
February	444	2	353	798	311	(s)	121	23	(s)	20	475
March	348	11	317	676	244	2	109	23	(s)	16	393
April	270	3	290	564	189	1	99	24	(s)	12	325
May	171	1	264	436	119	(s)	91	24	0	8	242
June	125	1	260	386	87	(s)	89	24	0	6	207
July	122	1	290	412	85	(s)	99	25	(s)	6	214
August	157	1	277	435	110	(s)	95	25	(s)	7	237
September	178	3	289	470	124	(s)	99	24	(s)	8	256
October	127	1	331	459	89	(s)	114	24	(s)	6	233
November	200	(s)	342	542	140	(s)	117	24	(s)	9	290
December	239	14	359	612	167	2	123	23	(s)	11	327
<b>Average</b>	<b>233</b>	<b>4</b>	<b>310</b>	<b>547</b>	<b>163</b>	<b>1</b>	<b>106</b>	<b>24</b>	<b>(s)</b>	<b>11</b>	<b>304</b>
<b>2014</b> January	271	13	370	655	190	2	127	22	(s)	12	353
February	333	4	330	667	233	1	113	23	(s)	15	386
March	269	(s)	302	572	188	(s)	104	23	(s)	12	328
April	135	1	273	409	94	(s)	94	24	(s)	6	219
May	176	1	243	420	123	(s)	83	24	(s)	8	239
June	157	(s)	260	417	110	(s)	89	24	0	7	230
July	127	8	263	398	89	1	90	25	(s)	6	211
August	133	2	294	428	93	(s)	101	25	(s)	6	225
September	192	13	287	492	134	2	98	24	(s)	9	267
October	174	11	304	489	122	2	104	25	(s)	8	261
<b>10-Month Average</b>	<b>196</b>	<b>5</b>	<b>292</b>	<b>494</b>	<b>137</b>	<b>1</b>	<b>100</b>	<b>24</b>	<b>(s)</b>	<b>9</b>	<b>271</b>
<b>2013 10-Month Average</b>	<b>236</b>	<b>3</b>	<b>302</b>	<b>541</b>	<b>165</b>	<b>(s)</b>	<b>103</b>	<b>24</b>	<b>(s)</b>	<b>11</b>	<b>304</b>
<b>2012 10-Month Average</b>	<b>229</b>	<b>4</b>	<b>280</b>	<b>513</b>	<b>168</b>	<b>1</b>	<b>96</b>	<b>24</b>	<b>(s)</b>	<b>14</b>	<b>302</b>

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

<sup>b</sup> Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

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

	Industrial Sector <sup>a</sup>									
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>b</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>c</sup>	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	509	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 Average .....	355	586	2	1,714	64	138	295	59	1,272	4,484
<b>2012</b> January .....	201	721	1	2,041	62	122	338	38	1,253	4,777
February .....	220	808	5	1,994	71	128	250	33	1,238	4,747
March .....	234	631	1	1,825	57	128	288	35	1,160	4,358
April .....	327	619	(s)	1,715	64	130	317	36	1,067	4,275
May .....	383	598	1	1,705	63	134	351	27	1,128	4,389
June .....	455	513	(s)	1,665	55	134	347	28	1,219	4,417
July .....	464	393	(s)	1,683	55	131	304	36	1,228	4,293
August .....	497	454	(s)	1,746	56	136	368	33	1,221	4,510
September .....	445	552	1	1,757	55	127	332	31	1,010	4,310
October .....	374	699	1	1,917	58	129	272	27	1,331	4,808
November .....	282	722	1	1,954	62	126	338	27	1,309	4,821
December .....	201	524	(s)	2,084	47	125	327	15	1,408	4,731
<b>Average .....</b>	<b>340</b>	<b>602</b>	<b>1</b>	<b>1,841</b>	<b>59</b>	<b>129</b>	<b>319</b>	<b>30</b>	<b>1,215</b>	<b>4,536</b>
<b>2013</b> January .....	224	751	2	2,254	65	124	350	22	1,171	4,963
February .....	215	621	(s)	2,269	65	125	229	20	1,214	4,758
March .....	236	525	3	2,038	65	129	241	29	1,114	4,379
April .....	290	572	1	1,866	58	132	219	18	1,189	4,345
May .....	308	565	(s)	1,702	66	134	331	17	1,363	4,486
June .....	406	500	(s)	1,675	73	135	333	19	1,311	4,452
July .....	453	448	(s)	1,863	63	136	306	23	1,336	4,629
August .....	464	452	(s)	1,784	62	136	331	27	1,192	4,447
September .....	461	543	1	1,861	61	133	336	24	1,521	4,941
October .....	377	809	(s)	2,132	60	133	256	18	1,178	4,963
November .....	262	721	(s)	2,199	51	133	345	24	1,426	5,160
December .....	180	705	4	2,308	59	129	251	11	1,377	5,024
<b>Average .....</b>	<b>323</b>	<b>601</b>	<b>1</b>	<b>1,995</b>	<b>62</b>	<b>132</b>	<b>294</b>	<b>21</b>	<b>1,282</b>	<b>4,712</b>
<b>2014</b> January .....	177	980	3	2,384	55	122	365	16	1,143	5,245
February .....	205	853	1	2,126	60	129	238	14	1,301	4,928
March .....	218	771	(s)	1,944	71	129	162	14	1,168	4,477
April .....	282	794	(s)	1,757	59	134	281	19	1,225	4,551
May .....	350	679	(s)	1,561	68	134	316	16	1,145	4,269
June .....	402	604	(s)	1,675	52	134	285	18	1,189	4,359
July .....	463	603	2	1,690	70	137	340	16	1,212	4,533
August .....	458	557	(s)	1,889	68	138	322	13	1,147	4,593
September .....	444	645	3	1,848	68	131	350	17	1,337	4,844
October .....	393	885	3	1,954	64	137	324	19	1,148	4,927
<b>10-Month Average ...</b>	<b>340</b>	<b>737</b>	<b>1</b>	<b>1,882</b>	<b>64</b>	<b>133</b>	<b>299</b>	<b>16</b>	<b>1,200</b>	<b>4,671</b>
<b>2013 10-Month Average ...</b>	<b>344</b>	<b>579</b>	<b>1</b>	<b>1,943</b>	<b>64</b>	<b>132</b>	<b>294</b>	<b>22</b>	<b>1,259</b>	<b>4,636</b>
<b>2012 10-Month Average ...</b>	<b>360</b>	<b>598</b>	<b>1</b>	<b>1,805</b>	<b>60</b>	<b>130</b>	<b>317</b>	<b>32</b>	<b>1,186</b>	<b>4,488</b>

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

<sup>b</sup> Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

<sup>c</sup> 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 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.



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

	Transportation Sector							Electric Power Sector <sup>a</sup>				
	Aviation Gasoline	Distillate Fuel Oil <sup>b</sup>	Jet Fuel <sup>c</sup>	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>d</sup>	Residual Fuel Oil	Total	Distillate Fuel Oil <sup>e</sup>	Petroleum Coke	Residual Fuel Oil <sup>f</sup>	Total
1950 Average .....	108	226	( <sup>c</sup> )	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	13,297	33	63	79	175
2010 Average .....	15	2,764	1,432	21	64	8,824	389	13,508	38	65	67	170
2011 Average .....	15	2,849	1,425	24	61	8,591	338	13,303	30	66	41	137
<b>2012</b> January .....	12	2,454	1,308	29	59	8,047	357	12,267	27	65	34	126
February .....	11	2,538	1,351	29	67	8,447	314	12,757	23	55	27	105
March .....	14	2,614	1,381	26	54	8,431	333	12,853	20	29	29	77
April .....	14	2,748	1,350	25	61	8,587	348	13,133	23	28	28	79
May .....	17	2,804	1,409	25	59	8,821	251	13,385	28	34	28	91
June .....	13	2,852	1,546	24	52	8,838	279	13,605	29	38	45	112
July .....	20	2,818	1,468	24	52	8,656	359	13,397	30	41	52	123
August .....	13	2,869	1,470	25	53	8,993	317	13,741	24	43	38	105
September .....	15	2,782	1,378	25	52	8,410	305	12,966	21	42	29	92
October .....	14	2,848	1,353	28	55	8,548	243	13,088	22	37	31	90
November .....	10	2,728	1,381	28	59	8,334	255	12,795	24	40	28	92
December .....	9	2,564	1,381	30	45	8,241	138	12,408	27	38	28	93
<b>Average .....</b>	<b>14</b>	<b>2,719</b>	<b>1,398</b>	<b>27</b>	<b>56</b>	<b>8,530</b>	<b>291</b>	<b>13,034</b>	<b>25</b>	<b>41</b>	<b>33</b>	<b>99</b>
<b>2013</b> January .....	11	2,543	1,311	32	62	8,185	249	12,393	32	54	50	136
February .....	8	2,585	1,344	33	62	8,248	220	12,499	24	52	37	113
March .....	12	2,631	1,393	29	62	8,489	367	12,982	21	51	28	100
April .....	12	2,802	1,444	27	55	8,700	212	13,251	22	49	29	99
May .....	15	2,868	1,459	25	62	8,875	191	13,495	26	66	28	120
June .....	15	2,928	1,454	24	69	8,918	230	13,638	22	70	32	124
July .....	16	2,932	1,546	27	59	8,985	286	13,852	34	68	48	150
August .....	14	2,952	1,524	26	59	8,964	342	13,880	22	70	33	125
September .....	11	2,858	1,417	27	58	8,789	309	13,468	22	66	30	117
October .....	11	2,994	1,455	31	56	8,787	216	13,550	19	59	28	106
November .....	14	2,808	1,429	32	48	8,766	301	13,399	24	48	27	99
December .....	7	2,742	1,428	33	56	8,517	109	12,893	32	57	39	128
<b>Average .....</b>	<b>12</b>	<b>2,805</b>	<b>1,434</b>	<b>29</b>	<b>59</b>	<b>8,688</b>	<b>253</b>	<b>13,280</b>	<b>25</b>	<b>59</b>	<b>34</b>	<b>118</b>
<b>2014</b> January .....	10	2,673	1,371	34	52	8,062	103	12,305	159	67	138	363
February .....	7	2,716	1,373	31	57	8,546	123	12,852	46	60	55	162
March .....	12	2,770	1,440	28	67	8,532	133	12,982	47	64	57	168
April .....	11	2,928	1,446	25	56	8,821	223	13,511	19	46	28	93
May .....	14	2,933	1,404	23	64	8,857	188	13,482	25	58	24	106
June .....	11	2,987	1,560	24	49	8,875	209	13,716	22	62	27	111
July .....	17	3,021	1,543	24	66	9,058	186	13,915	21	55	32	108
August .....	14	3,012	1,516	27	64	9,124	160	13,918	22	56	34	112
September .....	11	2,916	1,477	27	65	8,621	213	13,328	22	56	29	107
October .....	11	3,037	1,464	28	61	9,034	238	13,873	19	34	27	80
<b>10-Month Average ...</b>	<b>12</b>	<b>2,901</b>	<b>1,460</b>	<b>27</b>	<b>60</b>	<b>8,755</b>	<b>178</b>	<b>13,392</b>	<b>40</b>	<b>56</b>	<b>45</b>	<b>141</b>
<b>2013 10-Month Average ...</b>	<b>12</b>	<b>2,811</b>	<b>1,436</b>	<b>28</b>	<b>60</b>	<b>8,697</b>	<b>263</b>	<b>13,307</b>	<b>24</b>	<b>60</b>	<b>34</b>	<b>119</b>
<b>2012 10-Month Average ...</b>	<b>14</b>	<b>2,733</b>	<b>1,402</b>	<b>26</b>	<b>56</b>	<b>8,578</b>	<b>311</b>	<b>13,120</b>	<b>25</b>	<b>41</b>	<b>34</b>	<b>100</b>

<sup>a</sup> 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.

<sup>b</sup> Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

<sup>c</sup> 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.)

<sup>d</sup> Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

<sup>e</sup> 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.

<sup>f</sup> 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.

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.

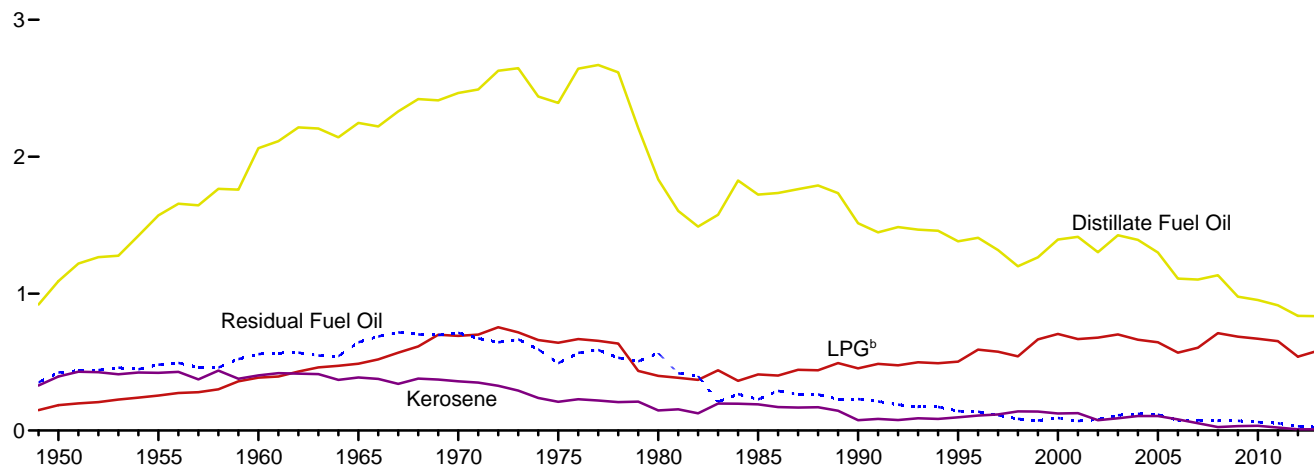
• Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

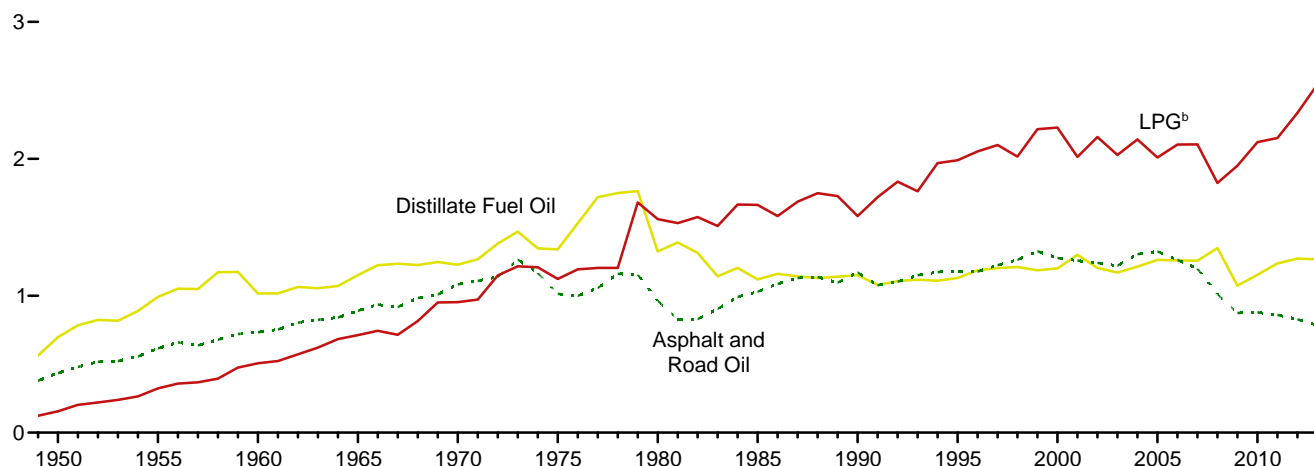
Sources: See end of section.

**Figure 3.8a Heat Content of Petroleum Consumption by End-Use Sector, 1949–2013**  
(Quadrillion Btu)

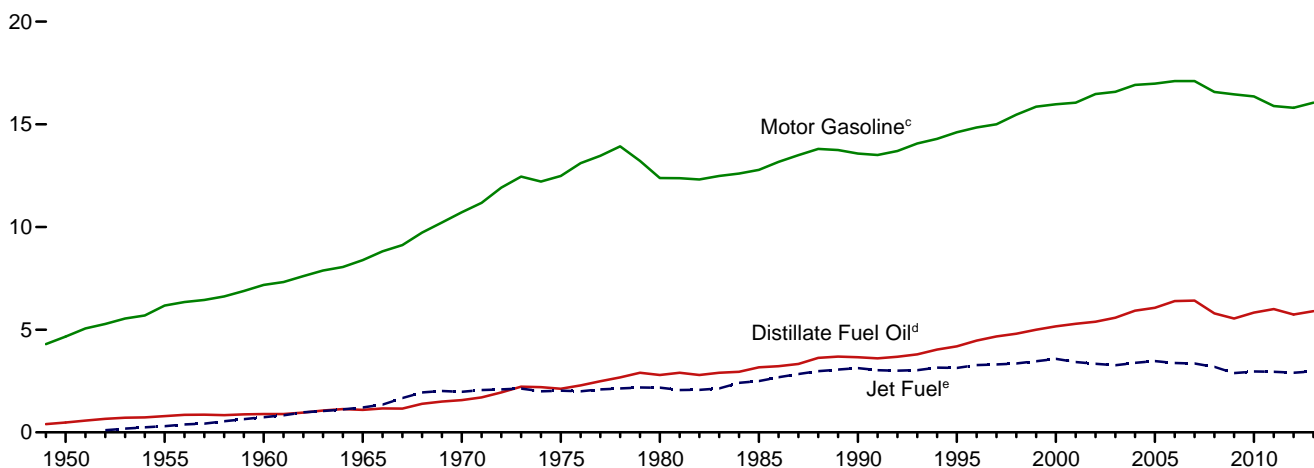
Residential and Commercial<sup>a</sup> Sectors, Selected Products



Industrial<sup>a</sup> Sector, Selected Products



Transportation Sector, Selected Products



<sup>a</sup> Includes combined-heat-and-power plants and a small number of electricity-only plants.

<sup>b</sup> Liquefied petroleum gases.

<sup>c</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline.

<sup>d</sup> Beginning in 2009, includes renewable diesel fuel (including biodiesel)

blended into distillate fuel oil.

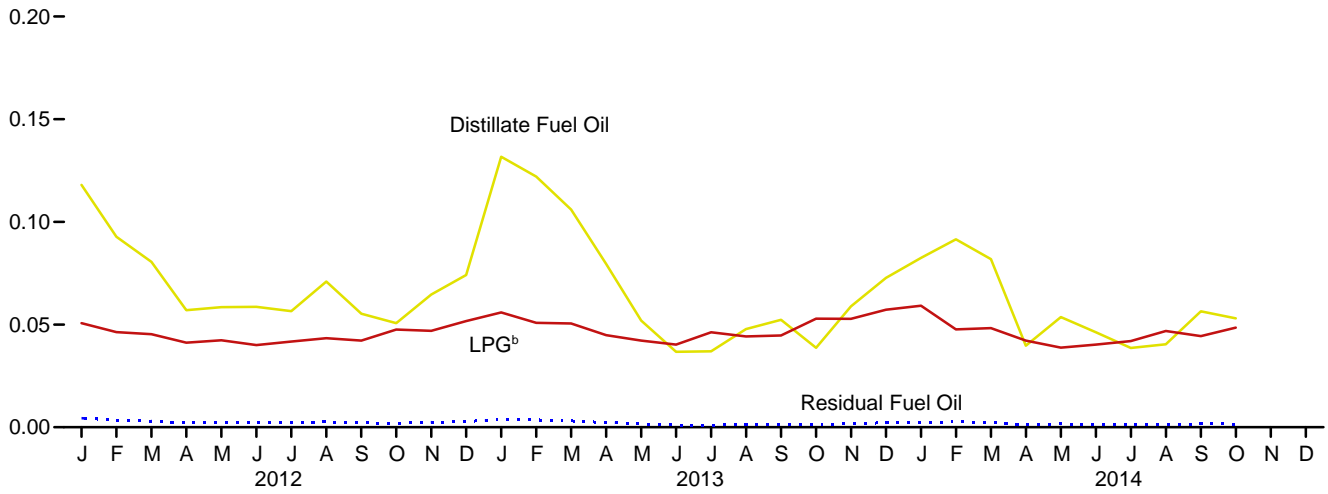
<sup>e</sup> Beginning in 2005, includes kerosene-type jet fuel only.

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

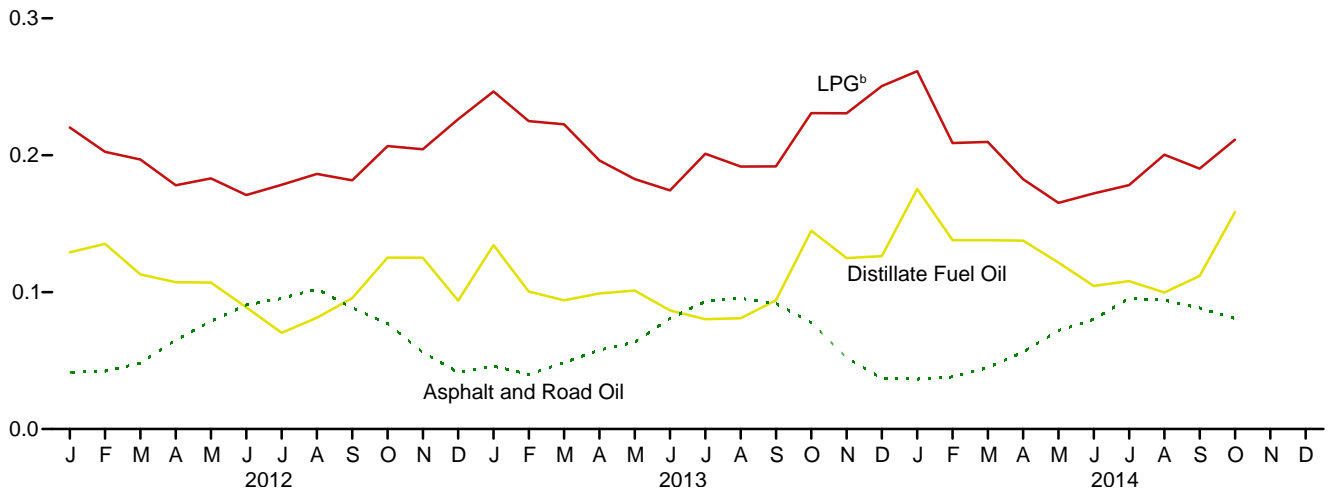
Sources: Tables 3.8a–3.8c.

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

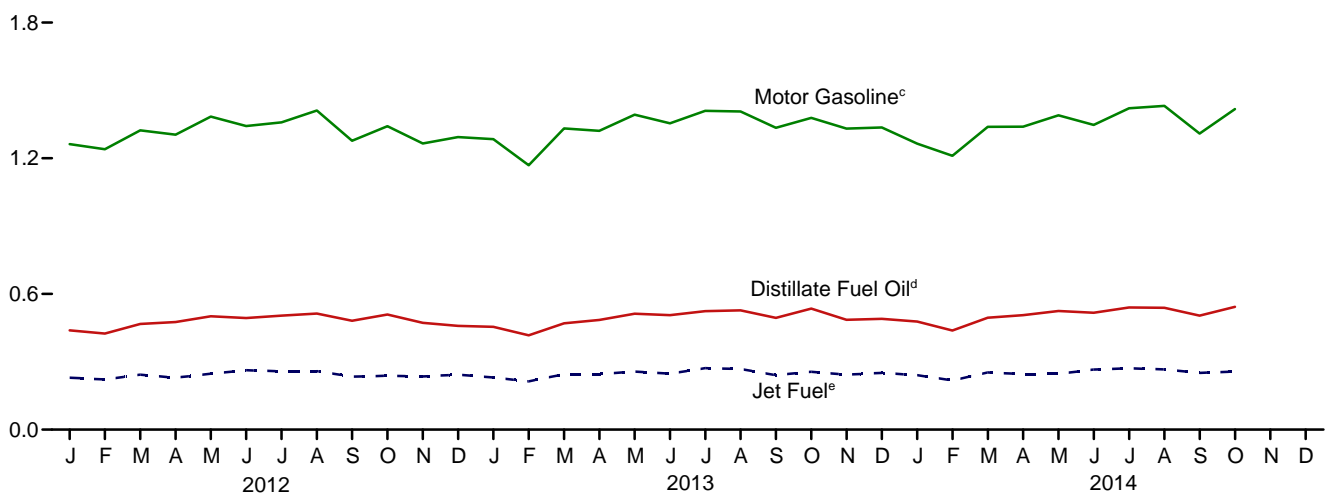
Residential and Commercial<sup>a</sup> Sectors, Selected Products



Industrial<sup>a</sup> Sector, Selected Products



Transportation Sector, Selected Products



<sup>a</sup> Includes combined-heat-and-power plants and a small number of electricity-only plants.

<sup>b</sup> Liquefied petroleum gases.

<sup>c</sup> Includes fuel ethanol blended into motor gasoline.

<sup>d</sup> Includes renewable diesel fuel (including biodiesel) blended into

distillate fuel oil.

<sup>e</sup> 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 <sup>a</sup>						
	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Motor Gasoline <sup>b</sup>	Petroleum Coke	Residual Fuel Oil	Total
<b>1950 Total</b> .....	829	347	146	1,322	262	47	39	100	NA	424	872
<b>1955 Total</b> .....	1,194	371	202	1,767	377	51	54	133	NA	480	1,095
<b>1960 Total</b> .....	1,568	354	305	2,227	494	48	81	67	NA	559	1,248
<b>1965 Total</b> .....	1,713	334	385	2,432	534	54	103	77	NA	645	1,413
<b>1970 Total</b> .....	1,878	298	549	2,725	587	61	143	86	NA	714	1,592
<b>1975 Total</b> .....	1,807	161	512	2,479	587	49	129	89	NA	492	1,346
<b>1980 Total</b> .....	1,316	107	311	1,734	518	41	88	107	NA	565	1,318
<b>1985 Total</b> .....	1,092	159	314	1,565	631	33	95	96	NA	228	1,083
<b>1990 Total</b> .....	978	64	352	1,394	536	12	102	111	0	230	991
<b>1995 Total</b> .....	R 904	74	395	R 1,373	R 478	22	109	18	(s)	141	769
<b>2000 Total</b> .....	R 904	95	555	R 1,553	R 490	30	150	45	(s)	92	807
<b>2001 Total</b> .....	R 907	95	526	R 1,528	508	31	143	37	(s)	70	R 789
<b>2002 Total</b> .....	R 859	60	537	R 1,456	444	16	141	45	(s)	80	726
<b>2003 Total</b> .....	R 931	70	544	R 1,546	496	19	157	60	(s)	111	R 842
<b>2004 Total</b> .....	R 923	85	512	R 1,519	470	20	152	45	(s)	122	810
<b>2005 Total</b> .....	R 853	84	513	R 1,450	447	22	131	46	(s)	116	762
<b>2006 Total</b> .....	R 709	66	446	R 1,221	R 400	15	123	R 48	(s)	75	R 662
<b>2007 Total</b> .....	R 721	44	484	R 1,249	R 381	9	121	R 60	(s)	75	R 648
<b>2008 Total</b> .....	R 750	21	553	R 1,324	R 384	4	158	R 45	(s)	71	R 663
<b>2009 Total</b> .....	R 582	28	547	R 1,157	R 395	4	139	R 52	(s)	71	R 662
<b>2010 Total</b> .....	R 562	29	530	R 1,121	R 391	5	140	R 52	(s)	62	R 650
<b>2011 Total</b> .....	R 523	19	506	R 1,048	R 391	3	146	R 44	(s)	54	R 639
<b>2012 January</b> .....	R 68	1	38	R 106	50	(s)	13	R 3	(s)	4	R 71
February .....	R 53	3	34	R 91	R 39	(s)	12	R 3	(s)	3	59
March .....	R 46	1	34	81	34	(s)	12	4	(s)	3	53
April .....	33	(s)	31	64	24	(s)	11	4	(s)	2	R 40
May .....	34	1	32	66	25	(s)	11	4	0	2	42
June .....	34	(s)	30	64	25	(s)	10	4	0	2	41
July .....	33	(s)	31	64	24	(s)	11	4	(s)	2	R 40
August .....	41	(s)	32	R 73	30	(s)	11	4	(s)	3	48
September .....	32	1	31	64	R 23	(s)	11	4	(s)	2	40
October .....	29	(s)	35	65	R 21	(s)	12	4	(s)	2	R 39
November .....	R 37	(s)	35	73	R 27	(s)	12	R 3	(s)	2	R 45
December .....	43	(s)	39	R 81	R 31	(s)	13	4	(s)	3	51
<b>Total</b> .....	R 482	8	402	R 892	R 355	1	138	R 43	(s)	31	R 569
<b>2013 January</b> .....	78	1	42	121	R 54	(s)	14	4	(s)	4	R 76
February .....	72	(s)	38	R 110	R 50	(s)	13	3	(s)	4	R 70
March .....	R 62	2	38	102	44	(s)	13	4	(s)	3	64
April .....	47	1	33	81	33	(s)	11	4	(s)	2	R 50
May .....	31	(s)	31	62	R 21	(s)	11	4	0	2	R 37
June .....	22	(s)	30	52	15	(s)	10	4	0	1	30
July .....	22	(s)	34	R 56	15	(s)	12	4	(s)	1	32
August .....	28	(s)	33	61	20	(s)	11	4	(s)	1	R 36
September .....	31	(s)	33	65	22	(s)	11	4	(s)	2	R 38
October .....	23	(s)	39	R 62	16	(s)	13	4	(s)	1	R 34
November .....	35	(s)	39	74	24	(s)	13	4	(s)	2	43
December .....	43	2	43	88	30	(s)	15	4	(s)	2	51
<b>Total</b> .....	R 492	8	434	R 933	R 344	1	149	R 44	(s)	24	R 562
<b>2014 January</b> .....	49	2	44	95	34	(s)	15	R 3	(s)	2	R 55
February .....	54	1	35	90	38	(s)	12	3	(s)	3	56
March .....	R 48	(s)	36	R 84	34	(s)	12	4	(s)	2	R 52
April .....	R 23	(s)	31	55	16	(s)	11	4	(s)	1	32
May .....	32	(s)	29	61	22	(s)	10	4	(s)	2	R 37
June .....	27	(s)	30	57	19	(s)	10	4	0	1	R 34
July .....	23	1	31	R 55	16	(s)	11	4	(s)	1	32
August .....	24	(s)	35	59	17	(s)	12	4	(s)	1	34
September .....	R 33	2	33	R 68	23	(s)	11	4	(s)	2	R 40
October .....	31	2	36	69	22	(s)	12	4	(s)	2	40
<b>10-Month Total</b> .....	344	9	341	694	240	1	117	37	(s)	17	413
<b>2013 10-Month Total</b> .....	414	5	352	771	289	1	121	37	(s)	21	468
<b>2012 10-Month Total</b> .....	402	7	328	738	296	1	112	36	(s)	26	473

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

<sup>b</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

Revisions are due to the incorporation of revised thermal conversion factors in Table A3.

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

	Industrial Sector <sup>a</sup>									
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>b</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>c</sup>	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	R 1,130	15	1,990	178	200	721	337	2,837	R 8,587
2000 Total	1,276	R 1,199	16	2,228	190	150	796	241	2,979	R 9,075
2001 Total	1,257	R 1,299	23	2,014	174	295	858	203	3,056	R 9,179
2002 Total	1,240	R 1,203	14	2,160	172	309	842	190	3,040	R 9,170
2003 Total	1,220	R 1,169	24	2,028	159	324	825	220	3,264	R 9,233
2004 Total	1,304	R 1,213	28	2,141	161	R 371	R 937	249	3,428	R 9,832
2005 Total	1,323	R 1,262	39	2,009	160	R 355	R 894	281	3,318	R 9,641
2006 Total	1,261	R 1,258	30	2,104	156	R 374	R 938	239	3,416	R 9,777
2007 Total	1,197	R 1,256	13	2,106	161	R 302	R 910	193	3,313	R 9,452
2008 Total	1,012	R 1,348	4	1,823	150	R 246	R 870	194	2,941	R 8,588
2009 Total	873	R 1,073	4	1,950	135	R 238	R 805	130	2,611	R 7,819
2010 Total	878	R 1,153	7	2,121	149	R 260	R 694	120	2,800	R 8,183
2011 Total	859	R 1,236	4	2,152	142	R 255	R 663	135	2,676	R 8,121
2012 January	41	R 129	(s)	220	12	R 19	R 64	7	221	715
February	42	R 135	1	203	13	19	R 45	6	208	R 670
March	48	R 113	(s)	197	11	R 20	R 55	7	208	659
April	65	R 107	(s)	178	12	20	R 58	7	184	R 630
May	79	R 107	(s)	183	12	R 21	R 67	5	200	R 673
June	91	R 89	(s)	171	10	R 20	R 64	5	212	662
July	95	R 70	(s)	178	10	21	R 58	7	219	659
August	102	R 81	(s)	186	11	R 21	R 70	6	217	695
September	89	R 96	(s)	182	10	R 19	R 61	6	176	638
October	77	R 125	(s)	207	11	R 20	R 52	5	236	R 733
November	56	R 125	(s)	204	11	R 19	R 62	5	226	R 709
December	41	R 94	(s)	226	9	20	R 62	3	252	707
Total	827	R 1,271	2	2,335	130	R 239	R 717	70	2,558	R 8,150
2013 January	46	R 134	(s)	247	12	R 19	R 67	4	208	738
February	40	R 100	(s)	225	11	18	R 40	4	196	R 633
March	48	R 94	(s)	223	12	R 20	R 46	6	197	647
April	58	R 99	(s)	196	11	R 20	R 41	3	204	632
May	63	R 101	(s)	183	12	R 21	R 63	3	241	688
June	81	R 87	(s)	174	13	21	R 62	4	223	664
July	93	R 80	(s)	201	12	R 21	R 59	5	241	711
August	95	R 81	(s)	192	12	R 21	R 63	5	212	681
September	92	R 94	(s)	192	11	R 20	R 62	5	258	734
October	78	R 145	(s)	231	11	R 21	R 49	3	211	R 749
November	52	R 125	(s)	231	9	R 20	R 64	5	243	R 748
December	37	R 126	1	251	11	R 20	R 48	2	244	740
Total	783	R 1,267	2	2,544	138	R 243	R 662	48	2,677	R 8,365
2014 January	36	R 175	1	261	10	R 19	R 70	3	206	782
February	38	R 138	(s)	209	10	R 18	R 41	3	210	R 667
March	45	R 138	(s)	210	13	R 20	R 31	3	210	R 670
April	56	R 138	(s)	183	11	R 20	R 52	4	214	R 677
May	72	R 122	(s)	165	13	R 21	R 60	3	207	663
June	80	R 105	(s)	172	9	R 20	R 53	3	204	647
July	95	R 108	(s)	178	13	22	R 65	3	215	700
August	94	R 100	(s)	200	13	22	R 62	3	205	698
September	88	R 112	1	190	12	20	R 65	3	230	721
October	81	158	1	211	12	21	62	4	205	754
10-Month Total	686	1,293	2	1,980	117	204	560	31	2,105	6,978
2013 10-Month Total	694	1,016	1	2,063	118	203	551	42	2,190	6,877
2012 10-Month Total	729	1,053	2	1,905	110	201	592	62	2,080	6,734

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

<sup>b</sup> Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

<sup>c</sup> 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 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

Revisions are due to the incorporation of revised thermal conversion factors in Table A3.

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

	Transportation Sector								Electric Power Sector <sup>a</sup>			
	Aviation Gasoline	Distillate Fuel Oil <sup>b</sup>	Jet Fuel <sup>c</sup>	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>d</sup>	Residual Fuel Oil	Total	Distillate Fuel Oil <sup>e</sup>	Petroleum Coke	Residual Fuel Oil <sup>f</sup>	Total
<b>1950 Total</b> .....	199	480	( <sup>c</sup> )	3	141	4,664	1,201	6,690	32	NA	440	472
<b>1955 Total</b> .....	354	791	301	13	155	6,175	1,009	8,799	32	NA	439	471
<b>1960 Total</b> .....	298	892	739	19	152	7,183	844	10,125	22	NA	530	553
<b>1965 Total</b> .....	222	1,093	1,215	32	149	8,386	770	11,866	29	NA	693	722
<b>1970 Total</b> .....	100	1,569	1,973	44	147	10,716	761	15,310	141	19	1,958	2,117
<b>1975 Total</b> .....	71	2,121	2,029	43	155	12,485	711	17,615	226	2	2,937	3,166
<b>1980 Total</b> .....	64	2,795	2,179	18	172	12,383	1,398	19,009	169	5	2,459	2,634
<b>1985 Total</b> .....	50	3,170	2,497	30	156	12,784	786	19,472	85	7	998	1,090
<b>1990 Total</b> .....	45	3,661	3,129	23	176	13,575	1,016	21,626	97	30	1,163	1,289
<b>1995 Total</b> .....	40	R 4,191	3,132	18	168	R 14,616	911	R 23,075	108	81	566	755
<b>2000 Total</b> .....	36	R 5,159	3,580	12	179	R 15,973	888	R 25,827	175	99	871	1,144
<b>2001 Total</b> .....	35	R 5,286	3,426	14	164	R 16,053	586	R 25,564	R 170	103	1,003	R 1,276
<b>2002 Total</b> .....	34	R 5,387	3,340	14	162	R 16,474	677	R 26,089	127	175	659	961
<b>2003 Total</b> .....	30	R 5,584	3,265	18	150	R 16,585	571	R 26,203	161	175	869	1,205
<b>2004 Total</b> .....	31	R 5,925	3,383	19	152	R 16,917	740	R 27,166	111	R 211	879	R 1,201
<b>2005 Total</b> .....	35	R 6,068	3,475	28	151	R 16,977	837	R 27,573	R 114	R 231	876	R 1,222
<b>2006 Total</b> .....	33	R 6,390	3,379	27	147	R 17,108	906	R 27,991	R 113	R 203	361	R 637
<b>2007 Total</b> .....	32	R 6,413	3,358	22	152	R 17,109	994	R 28,078	89	R 163	397	R 648
<b>2008 Total</b> .....	28	R 5,792	3,193	40	141	R 16,574	926	R 26,695	73	R 146	240	R 459
<b>2009 Total</b> .....	27	R 5,541	2,883	28	127	R 16,460	791	R 25,857	70	R 132	181	R 382
<b>2010 Total</b> .....	27	R 5,828	2,963	29	141	R 16,356	892	R 26,236	80	R 137	154	R 370
<b>2011 Total</b> .....	27	R 6,003	2,950	34	134	R 15,892	776	R 25,817	64	R 138	93	R 295
<b>2012 January</b> .....	2	R 439	230	3	11	R 1,263	70	R 2,018	5	R 11	7	R 23
February .....	2	R 425	222	3	12	R 1,240	57	R 1,961	4	R 9	5	18
March .....	2	R 468	243	3	10	R 1,323	65	R 2,114	4	5	6	R 14
April .....	2	R 476	230	3	11	R 1,304	66	R 2,091	4	5	5	14
May .....	3	R 502	248	3	11	R 1,385	49	R 2,199	5	6	6	17
June .....	2	R 494	263	3	10	R 1,342	53	R 2,166	5	7	9	20
July .....	3	R 504	258	3	10	R 1,359	70	R 2,206	5	R 7	10	23
August .....	2	R 513	258	3	10	R 1,411	62	R 2,260	4	8	7	R 19
September .....	2	R 481	234	3	9	R 1,277	57	R 2,065	4	R 7	6	R 16
October .....	2	R 509	238	3	10	R 1,342	47	R 2,152	4	7	6	R 16
November .....	2	R 472	235	3	11	R 1,266	48	R 2,037	4	7	5	R 16
December .....	1	R 459	243	4	8	R 1,294	27	R 2,035	5	7	6	R 17
<b>Total</b> .....	<b>25</b>	<b>R 5,741</b>	<b>2,901</b>	<b>37</b>	<b>123</b>	<b>R 15,806</b>	<b>671</b>	<b>R 25,305</b>	<b>R 52</b>	<b>R 85</b>	<b>77</b>	<b>R 214</b>
<b>2013 January</b> .....	2	R 455	230	4	12	R 1,284	49	R 2,035	6	10	10	R 25
February .....	1	R 417	213	4	11	R 1,169	39	R 1,854	4	R 8	6	19
March .....	2	R 470	245	3	12	R 1,332	72	R 2,136	4	9	6	R 18
April .....	2	R 485	246	3	10	R 1,321	40	R 2,106	4	R 8	6	18
May .....	2	R 513	256	3	12	R 1,393	37	R 2,216	5	12	5	R 22
June .....	2	R 507	247	3	12	R 1,354	43	R 2,169	4	R 12	6	22
July .....	3	R 524	272	3	11	R 1,410	56	R 2,278	6	R 12	9	28
August .....	2	R 528	268	3	11	R 1,407	67	R 2,285	4	R 12	6	R 23
September .....	2	R 494	241	3	11	R 1,335	58	R 2,143	4	R 11	6	21
October .....	2	R 535	256	4	11	R 1,379	42	R 2,228	3	R 10	5	R 19
November .....	2	R 486	243	4	9	R 1,331	57	R 2,131	4	R 8	5	R 17
December .....	1	R 490	251	4	10	R 1,337	21	R 2,114	6	R 10	8	R 23
<b>Total</b> .....	<b>22</b>	<b>R 5,903</b>	<b>2,969</b>	<b>40</b>	<b>130</b>	<b>R 16,052</b>	<b>580</b>	<b>R 25,697</b>	<b>53</b>	<b>R 123</b>	<b>78</b>	<b>R 255</b>
<b>2014 January</b> .....	2	R 478	241	4	10	R 1,265	20	R 2,019	R 28	12	27	R 67
February .....	1	R 439	218	3	10	R 1,211	22	R 1,903	7	10	10	27
March .....	2	R 495	253	3	13	R 1,339	26	R 2,131	8	R 11	11	R 31
April .....	2	R 507	246	3	10	R 1,340	42	R 2,149	3	8	5	17
May .....	2	R 524	247	3	12	R 1,390	37	R 2,214	4	R 10	5	R 19
June .....	2	R 517	265	3	9	R 1,348	39	R 2,183	4	11	5	20
July .....	3	R 540	271	3	12	R 1,421	36	R 2,287	4	10	6	20
August .....	2	R 538	266	3	12	R 1,432	31	R 2,286	4	10	7	R 20
September .....	2	R 504	251	3	12	R 1,309	40	R 2,121	4	10	5	19
October .....	2	543	257	3	11	1,418	46	2,281	3	6	5	15
<b>10-Month Total</b> .....	<b>18</b>	<b>5,085</b>	<b>2,516</b>	<b>32</b>	<b>111</b>	<b>13,472</b>	<b>340</b>	<b>21,574</b>	<b>71</b>	<b>97</b>	<b>86</b>	<b>254</b>
<b>2013 10-Month Total</b> .....	<b>19</b>	<b>4,928</b>	<b>2,474</b>	<b>33</b>	<b>111</b>	<b>13,384</b>	<b>502</b>	<b>21,451</b>	<b>43</b>	<b>105</b>	<b>66</b>	<b>214</b>
<b>2012 10-Month Total</b> .....	<b>22</b>	<b>4,810</b>	<b>2,424</b>	<b>30</b>	<b>104</b>	<b>13,247</b>	<b>596</b>	<b>21,233</b>	<b>43</b>	<b>72</b>	<b>66</b>	<b>181</b>

<sup>a</sup> 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.

<sup>b</sup> Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

<sup>c</sup> 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.)

<sup>d</sup> Finished motor gasoline. Through 1963, also includes special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor gasoline.

<sup>e</sup> 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.

<sup>f</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#petroleum> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

Revisions are due to the incorporation of revised thermal conversion factors in Table A3.

## 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, and unpublished revisions; *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

Product supplied data in thousand barrels per day for asphalt and road oil are from Table 3.5, and are converted to trillion Btu by multiplying by the asphalt and road oil heat content factors in Table A1.

#### Aviation Gasoline

Product supplied data in thousand barrels per day for aviation gasoline are from Table 3.5, and are converted to trillion Btu by multiplying by the aviation gasoline (finished) heat content factor in Table A1.

#### Distillate Fuel Oil

1949–2008: Product supplied data in thousand barrels per day for distillate fuel oil are from Table 3.5, and are converted to trillion Btu by multiplying by the distillate fuel oil heat content factors in Table A3.

2009 forward: Data in thousand barrels per day for refinery and blender net inputs of renewable diesel fuel, from U.S. Energy Information's (EIA) *Petroleum Supply Annual (PSA)* and *Petroleum Supply Monthly (PSM)*, are converted to trillion Btu by multiplying by the biodiesel heat content factor in Table A1. Product supplied data in thousand barrels per day for distillate fuel oil, from Table 3.5, minus 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 distillate fuel oil heat content factors in Table A3. Total distillate fuel oil product supplied is the sum of the data in trillion Btu for renewable diesel fuel and distillate fuel oil (excluding renewable diesel fuel).

### **Jet Fuel**

Product supplied data in thousand barrels per day for kerosene-type jet fuel and, through 2004, naphtha-type jet fuel are from EIA's 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 jet fuel product supplied is the sum of the data in trillion Btu for kerosene-type and naphtha-type jet fuel.

### **Kerosene**

Product supplied data in thousand barrels per day for kerosene are from Table 3.5, and are converted to trillion Btu by multiplying by the kerosene heat content factor in Table A1.

### **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.

### **Lubricants**

Product supplied data in thousand barrels per day for lubricants are from Table 3.5, and are converted to trillion Btu by multiplying by the lubricants heat content factor in Table A1.

### **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.

### **Petroleum Coke**

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

### **Propane**

Product supplied data in thousand barrels per day for propane are from Table 3.5, and are converted to trillion Btu by multiplying by the propane/propylene heat content factor in Table A1.

### **Residual Fuel Oil**

Product supplied data in thousand barrels per day for residual fuel oil are from Table 3.5, and are converted to trillion Btu by multiplying by the residual fuel oil heat content factor in Table A1.

### **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.

1981–2013: EIA, *Petroleum Supply Annual*, annual reports, and unpublished revisions.

2014: 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, 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, End-Use Sectors, Annual Data**

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, End-Use Sectors, Monthly Data**

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, 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, End-Use Sectors, Annual Data**

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, End-Use Sectors, Monthly Data**

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

Residential and commercial sector consumption data in thousand barrels per day for distillate fuel oil are from Table 3.7a, and are converted to trillion Btu by multiplying by the distillate fuel oil heat content factors in Table A3.

### Kerosene

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

### Petroleum Coke

1949–2003: Commercial sector consumption data in thousand barrels per day for petroleum coke are from Table 3.7a, and are converted to trillion Btu by multiplying by the total petroleum coke heat content factor in Table A1.

2004 forward: Commercial sector consumption data in thousand barrels per day for petroleum coke are from Table 3.7a, and are converted to trillion Btu by multiplying by the marketable petroleum coke heat content factor in Table A1.

### Residual Fuel Oil

Commercial sector consumption data in thousand barrels per day for residual fuel oil are from Table 3.7a, and are converted to trillion Btu by multiplying by the residual fuel oil heat content factor Table A1.

### 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

Industrial sector consumption data in thousand barrels per day for asphalt and road oil are from Table 3.7b, and are converted to trillion Btu by multiplying by the asphalt and road oil heat content factor in Table A1.

### Distillate Fuel Oil

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

### Kerosene

Industrial sector consumption data in thousand barrels per day for kerosene are from Table 3.7b, and are converted to trillion Btu by multiplying by the kerosene heat content factor 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).

### Lubricants

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

### 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.

### Petroleum Coke

1949–2003: Industrial sector consumption data in thousand barrels per day for petroleum coke are from Table 3.7b, and are converted to trillion Btu by multiplying by the total petroleum coke heat content factor in Table A1.

2004 forward: Industrial sector consumption data for petroleum coke are calculated by subtracting petroleum coke consumption data in trillion Btu for the commercial (Table 3.8a) and electric power (Table 3.8c) sectors from total petroleum coke consumption (Table 3.6).

### Residual Fuel Oil

Industrial sector consumption data in thousand barrels per day for residual fuel oil are from Table 3.7b, and are converted to trillion Btu by multiplying by the residual fuel oil heat content factor in Table A1.

### 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

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

### Distillate Fuel Oil, Electric Power Sector

Electric power sector consumption data in thousand barrels per day for distillate fuel oil are from Table 3.7c, and are converted to trillion Btu by multiplying by the distillate fuel oil heat content factors in Table A3.

### Distillate Fuel Oil, Transportation Sector

1949–2008: Transportation sector consumption data in thousand barrels per day for distillate fuel oil are from Table 3.7c, and are converted to trillion Btu by multiplying by the distillate fuel oil heat content factors in Table A3.

2009 forward: Data in thousand barrels per day for refinery and blender net inputs of renewable diesel fuel, from the U.S. Energy Information’s (EIA) *Petroleum Supply Annual (PSA)* and *Petroleum Supply Monthly (PSM)*, are converted to trillion Btu by multiplying by the biodiesel heat content factor in Table A1. Transportation sector consumption data in thousand barrels per day for distillate fuel oil, from Table 3.7c, minus 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 distillate fuel oil heat content factors in Table A3. Total transportation sector distillate fuel oil consumption is the sum of the data in trillion Btu for renewable diesel fuel and distillate fuel oil (excluding renewable diesel fuel).

### 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/propylene heat content factor in Table A1.

### Lubricants

Transportation sector consumption data in thousand barrels per day for lubricants are from Table 3.7c, and are converted to trillion Btu by multiplying by the lubricants 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.

### Petroleum Coke

1949–2003: Electric power sector consumption data in thousand barrels per day for petroleum coke are from Table 3.7c, and are converted to trillion Btu by multiplying by the total petroleum heat content factor in Table A1.

2004 forward: Electric power sector consumption data in thousand barrels per day for petroleum coke are from Table 3.7c, and are converted to trillion Btu by multiplying by the marketable petroleum heat content factor in Table A1.

### Residual Fuel Oil

Transportation and electric power consumption data in thousand barrels per day for residual fuel oil are from Table 3.7c, and are converted to trillion Btu by multiplying by the residual fuel oil heat content factor in Table A1.

### 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.

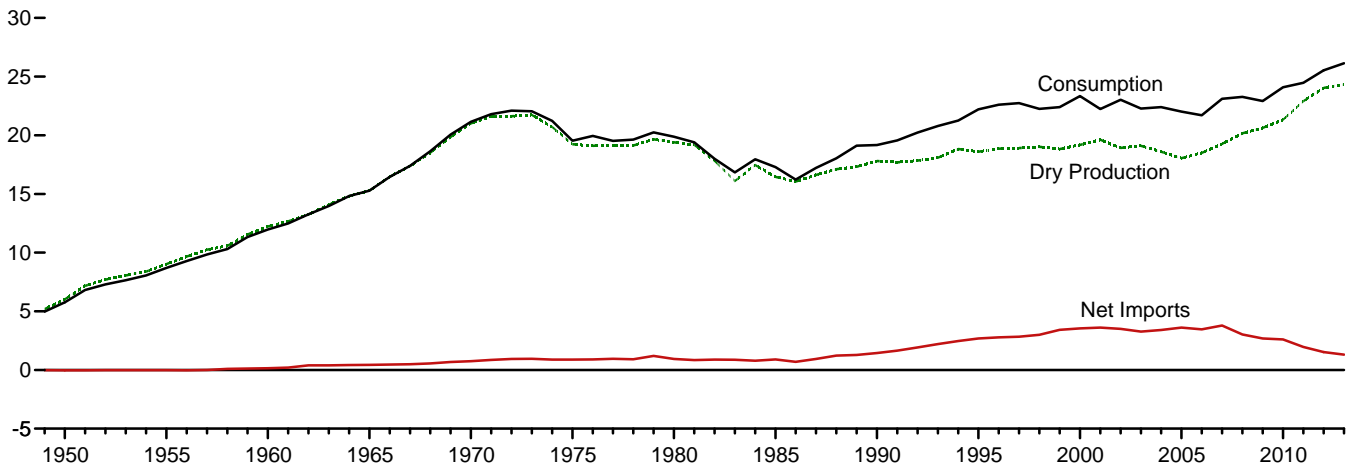
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## 4. Natural Gas

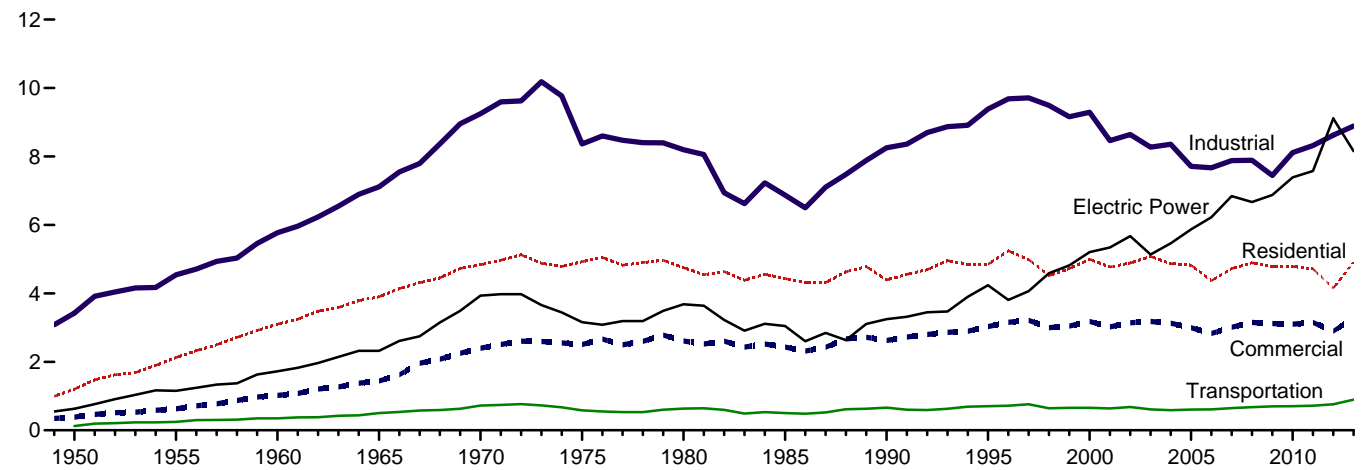
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**Figure 4.1 Natural Gas**  
(Trillion Cubic Feet)

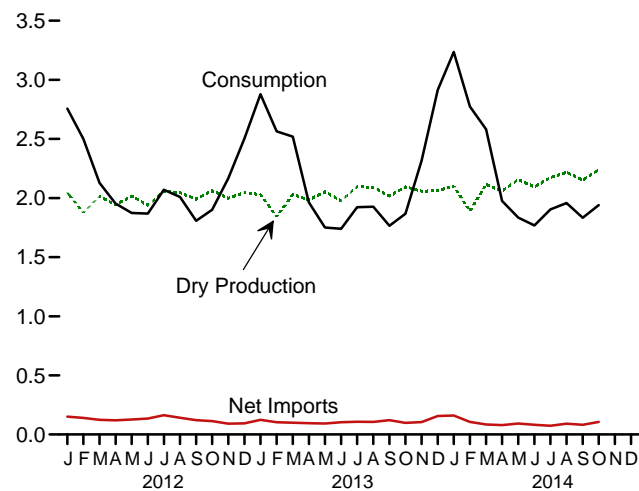
Overview, 1949–2013



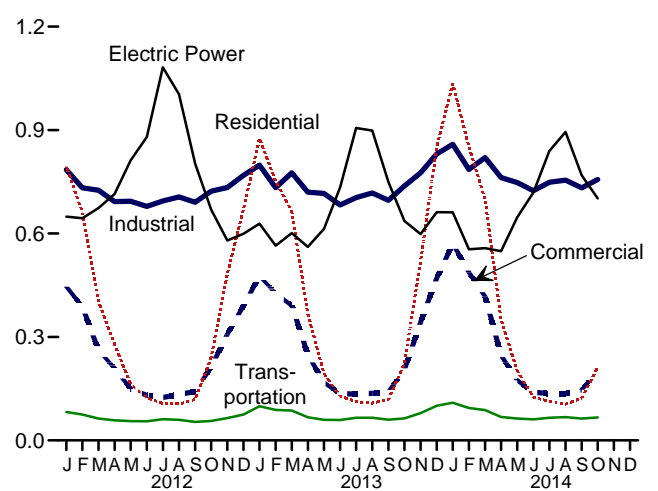
Consumption by Sector, 1949–2013



Overview, Monthly



Consumption by Sector, Monthly



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





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

	Imports									Exports				
	Algeria <sup>a</sup>	Canada <sup>b</sup>	Egypt <sup>a</sup>	Mexico <sup>b</sup>	Nigeria <sup>a</sup>	Qatar <sup>a</sup>	Trinidad and Tobago <sup>a</sup>	Other <sup>a,c</sup>	Total	Canada <sup>b</sup>	Japan <sup>a</sup>	Mexico <sup>b</sup>	Other <sup>a,d</sup>	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	(s)	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 Total	0	3,117	35	3	2	91	129	92	3,469	937	18	499	52	1,506
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	154
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	221	71	0	55	0	126
May	0	229	0	(s)	0	0	6	0	234	82	0	60	0	142
June	0	229	0	(s)	0	0	8	0	237	76	0	58	0	134
July	0	228	0	(s)	0	0	8	0	236	66	0	62	0	129
August	0	227	0	(s)	0	0	6	3	236	68	0	62	0	130
September	0	227	0	(s)	3	0	9	6	244	70	0	53	0	122
October	0	215	0	(s)	0	0	3	3	220	70	0	53	0	122
November	0	216	0	(s)	0	0	3	0	219	60	0	54	0	114
December	0	270	0	(s)	0	0	0	3	273	73	0	44	0	117
Total	0	2,786	0	(s)	3	7	70	17	2,883	911	0	661	0	1,572
2014 January	0	287	0	(s)	0	0	6	2	295	82	0	53	0	135
February	0	241	0	(s)	0	0	4	0	245	85	0	51	3	139
March	0	231	0	(s)	0	0	3	0	234	91	0	58	0	150
April	0	198	0	(s)	0	0	3	0	201	65	0	57	0	122
May	0	204	0	(s)	0	0	0	3	207	50	2	62	0	114
June	0	192	0	(s)	0	0	7	3	202	55	0	65	0	120
July	0	195	0	(s)	0	0	6	0	201	55	3	69	0	127
August	0	205	0	(s)	0	0	2	0	207	47	3	66	0	115
September	0	196	0	(s)	0	0	3	3	202	52	3	65	0	120
October	0	214	0	(s)	0	0	4	3	221	52	3	60	0	115
10-Month Total	0	2,162	0	(s)	1	0	38	13	2,214	634	13	607	3	1,256
2013 10-Month Total	0	2,300	0	(s)	1	3	67	14	2,391	778	0	563	0	1,341
2012 10-Month Total	0	2,508	3	(s)	0	31	96	14	2,652	777	14	518	8	1,318

<sup>a</sup> As liquefied natural gas.

<sup>b</sup> By pipeline, except for small amounts of: liquefied natural gas (LNG) imported from Canada in 1973, 1977, 1981, 2013 and 2014; LNG exported to Canada in 2007 and 2012 forward; compressed natural gas (CNG) imported from Canada in 2014; CNG exported to Canada in 2013 and 2014; and LNG exported to Mexico beginning in 1998. See Note 9, "Natural Gas Imports and Exports," at end of section.

<sup>c</sup> 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 forward; Oman in 2000–2005; Peru in 2010 and 2011; United Arab Emirates in 1996–2000; Yemen in 2010 forward; and Other (unassigned) in 2004 and 2014.

<sup>d</sup> Brazil in 2010–2012 and 2014; Chile in 2011; China in 2011; India in 2010–2012; Portugal in 2012; Russia in 2007; South Korea in 2009–2011; Spain in 2010 and 2011; and United Kingdom in 2010 and 2011.

(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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#naturalgas> (Excel and CSV files) for all available annual data beginning in 1949 and monthly 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." • 1988–2011: EIA, *Natural Gas Annual*, annual reports. • 2012 forward: EIA, *Natural Gas Monthly*, December 2014, Tables 4 and 5; and U.S. Department of Energy, Office of Fossil Energy, "Natural Gas Imports and Exports."



**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 <sup>a</sup>	Volume	Percent	Withdrawals	Injections	Net <sup>b,c</sup>
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 Total	4,302	3,462	7,764	351	11.3	3,074	3,422	-348
<b>2012</b> January	4,309	2,910	7,219	604	26.2	619	75	544
February	4,310	2,449	6,758	727	42.2	516	56	460
March	4,321	2,473	6,795	896	56.8	205	240	-35
April	4,325	2,611	6,936	823	46.0	126	264	-137
May	4,332	2,887	7,219	700	32.0	74	358	-284
June	4,338	3,115	7,454	586	23.2	91	323	-232
July	4,343	3,245	7,588	470	16.9	130	264	-134
August	4,348	3,406	7,754	387	12.8	134	300	-166
September	4,352	3,693	8,045	277	8.1	67	357	-290
October	4,365	3,929	8,294	125	3.3	86	328	-242
November	4,372	3,799	8,172	-44	-1.1	281	156	125
December	4,372	3,413	7,785	-49	-1.4	490	105	385
<b>Total</b>	<b>4,372</b>	<b>3,413</b>	<b>7,785</b>	<b>-49</b>	<b>-1.4</b>	<b>2,818</b>	<b>2,825</b>	<b>-7</b>
<b>2013</b> January	4,377	2,699	7,077	-211	-7.2	793	72	721
February	4,384	2,099	6,483	-349	-14.3	648	44	604
March	4,382	1,720	6,102	-753	-30.5	483	103	380
April	4,381	1,855	6,236	-756	-29.0	135	272	-137
May	4,385	2,270	6,655	-617	-21.4	49	468	-419
June	4,385	2,643	7,027	-473	-15.2	69	441	-372
July	4,365	2,937	7,302	-308	-9.5	99	373	-275
August	4,362	3,212	7,574	-194	-5.7	102	374	-272
September	4,363	3,565	7,928	-129	-3.5	66	421	-355
October	4,364	3,817	8,181	-112	-2.9	84	340	-256
November	4,366	3,605	7,971	-194	-5.1	366	155	211
December	4,365	2,890	7,255	-523	-15.3	808	94	714
<b>Total</b>	<b>4,365</b>	<b>2,890</b>	<b>7,255</b>	<b>-523</b>	<b>-15.3</b>	<b>3,702</b>	<b>3,156</b>	<b>546</b>
<b>2014</b> January	4,363	1,925	6,288	-774	-28.7	1,039	68	971
February	4,360	1,200	5,560	-899	-42.8	833	104	728
March	4,350	857	5,207	-863	-50.2	488	134	354
April	4,357	1,066	5,423	-789	-42.5	105	323	-217
May	4,353	1,548	5,901	-722	-31.8	51	529	-478
June	4,358	2,005	6,364	-637	-24.1	44	506	-462
July	4,361	2,402	6,763	-535	-18.2	63	463	-400
August	4,366	2,770	7,136	-442	-13.8	73	447	-374
September	4,367	3,190	7,558	-374	-10.5	47	469	-422
October	4,364	3,590	7,955	-227	-5.9	52	452	-400
<b>10-Month Total</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2,795</b>	<b>3,495</b>	<b>-700</b>
<b>2013 10-Month Total</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2,528</b>	<b>2,907</b>	<b>-379</b>
<b>2012 10-Month Total</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>2,048</b>	<b>2,565</b>	<b>-517</b>

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

<sup>b</sup> For 1980–2013, data differ from those shown on Table 4.1, which includes liquefied natural gas storage for that period.

<sup>c</sup> 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.

-- =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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#naturalgas> (Excel and CSV files) for all available annual data beginning in 1949 and monthly 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. **1996–2011**—EIA, *Natural Gas Monthly (NGM)*, monthly issues. **2012 forward**—EIA, NGM, December 2014, 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." **1996–2011**—EIA, NGM, monthly issues. **2012 forward**—EIA, NGM, December 2014, Table 8.

## 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 Plant Liquids Production.** Natural gas plant liquids (NGPL) production 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 NGPL production, see the NGA.

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

Monthly data are revised and considered final after publication of the NGA. Final monthly data are estimated by allocating annual NGPL production 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. Injection and withdrawal data from the FERC-8/EIA-191 survey may be adjusted to correspond to data from Form EIA-176 for publication of EIA's *Natural Gas Annual (NGA)*.

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	1989	...	8,120	2003	...	8,206
1976	...	6,544	1990	...	7,794	2004	...	8,255
1977	...	6,678	1991	...	7,993	2005	...	8,268
1978	...	6,890	1992	...	7,932	2006	...	8,330
1979	...	6,929	1993	...	7,989	2007	...	8,402
1980	...	7,434	1994	...	8,043	2008	...	8,499
1981	...	7,805	1995	...	7,953	2009	...	8,656
1982	...	7,915	1996	...	7,980	2010	...	8,764
1983	...	7,985	1997	...	8,332	2011	...	8,849
1984	...	8,043	1998	...	8,179	2012	...	8,991
1985	...	8,087	1999	...	8,229	2013	...	9,173
1986	...	8,145	2000	...	8,241			
1987	...	8,124	2001	...	8,182			
1988	...	8,124	2002	...	8,207			

Through 1990, 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 1991, all data are collected on the revised Form EIA-191. Injection and withdrawal data from the EIA-191 survey may be 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 1980–2013 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 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](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), NGPL Production (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), 1981 (6 million cubic feet), 2013 (555 million cubic feet), and 2014 (63 million cubic feet). Also, small amounts of compressed natural gas (CNG) were imported from Canada in 2014. The United States exports natural gas via pipeline to Canada and Mexico; and exports LNG via tanker to Brazil, Chile, China, India, Japan, Portugal, Russia, South Korea, Spain, and United Kingdom. Also, small amounts of LNG have gone to Mexico since 1998 and to Canada in 2007 and 2012–2014. Small amounts of CNG have been exported to Canada since 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.

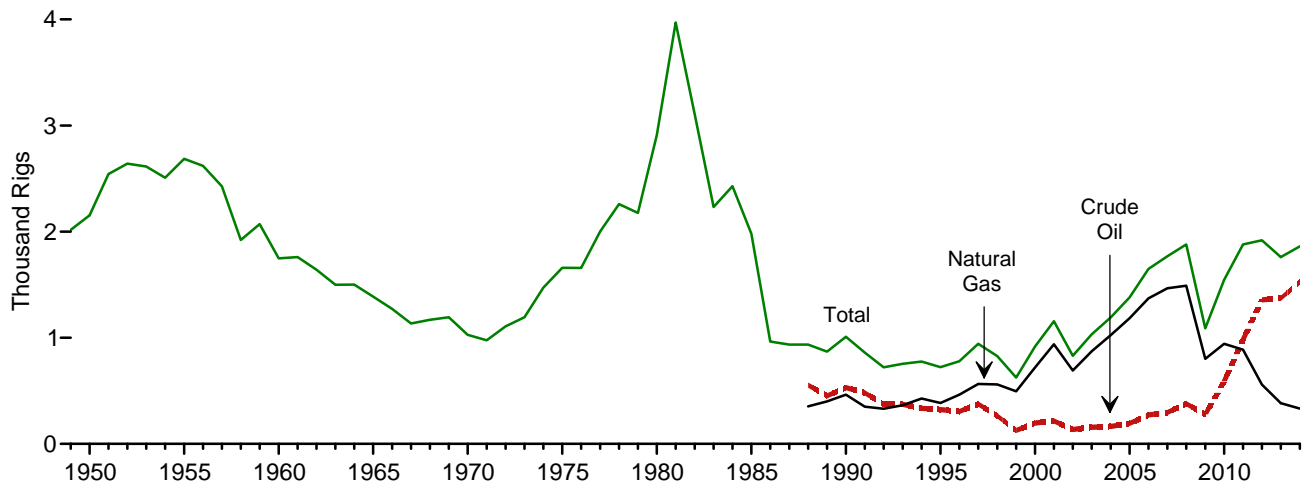
Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see EIA's *Natural Gas Monthly*. Preliminary data are revised after publication of EIA's *U.S. Imports and Exports of Natural Gas*.

# **5. Crude Oil and Natural Gas Resource Development**

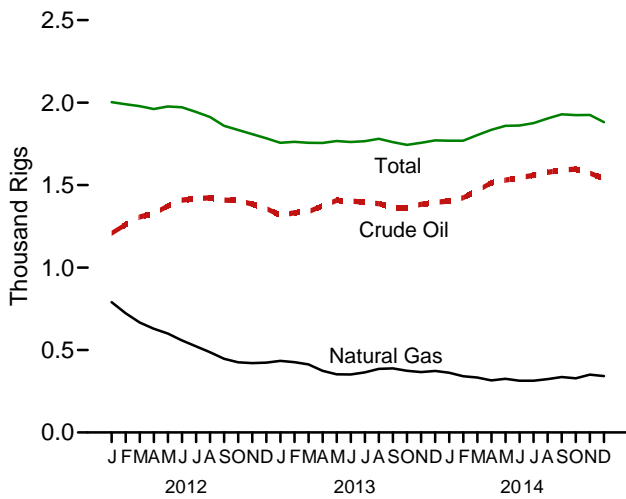
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**Figure 5.1 Crude Oil and Natural Gas Resource Development Indicators**

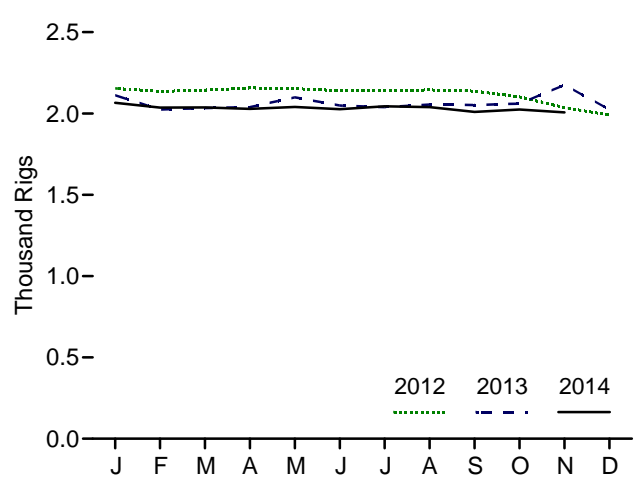
Rotary Rigs in Operation by Type, 1949–2014



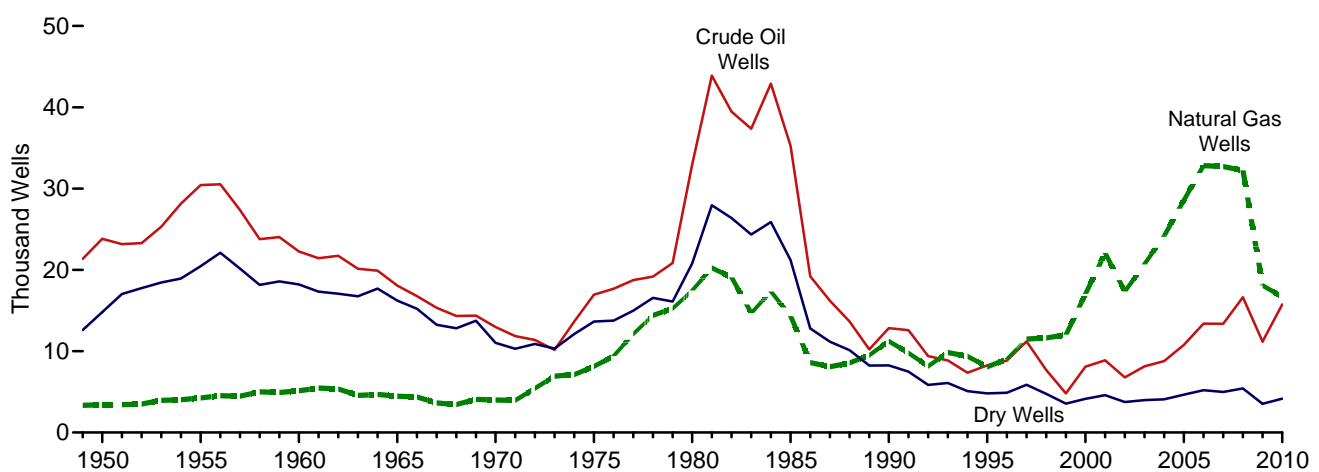
Rotary Rigs in Operation by Type, Monthly



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 <sup>a</sup>					Active Well Service Rig Count <sup>c</sup>
	By Site		By Type		Total <sup>b</sup>	
	Onshore	Offshore	Crude Oil	Natural Gas		
<b>1950 Average</b> .....	NA	NA	NA	NA	2,154	NA
<b>1955 Average</b> .....	NA	NA	NA	NA	2,686	NA
<b>1960 Average</b> .....	NA	NA	NA	NA	1,748	NA
<b>1965 Average</b> .....	NA	NA	NA	NA	1,388	NA
<b>1970 Average</b> .....	NA	NA	NA	NA	1,028	NA
<b>1975 Average</b> .....	1,554	106	NA	NA	1,660	2,486
<b>1980 Average</b> .....	2,678	231	NA	NA	2,909	4,089
<b>1985 Average</b> .....	1,774	206	NA	NA	1,980	4,716
<b>1990 Average</b> .....	902	108	532	464	1,010	3,658
<b>1995 Average</b> .....	622	101	323	385	723	3,041
<b>2000 Average</b> .....	778	140	197	720	918	2,692
<b>2001 Average</b> .....	1,003	153	217	939	1,156	2,267
<b>2002 Average</b> .....	717	113	137	691	830	1,830
<b>2003 Average</b> .....	924	108	157	872	1,032	1,967
<b>2004 Average</b> .....	1,095	97	165	1,025	1,192	2,064
<b>2005 Average</b> .....	1,287	94	194	1,184	1,381	2,222
<b>2006 Average</b> .....	1,559	90	274	1,372	1,649	2,364
<b>2007 Average</b> .....	1,695	72	297	1,466	1,768	2,388
<b>2008 Average</b> .....	1,814	65	379	1,491	1,879	2,515
<b>2009 Average</b> .....	1,046	44	278	801	1,089	1,722
<b>2010 Average</b> .....	1,514	31	591	943	1,546	1,854
<b>2011 Average</b> .....	1,846	32	984	887	1,879	2,075
<b>2012</b> 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
<b>Average</b> .....	<b>1,871</b>	<b>48</b>	<b>1,357</b>	<b>558</b>	<b>1,919</b>	<b>2,113</b>
<b>2013</b> 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	2,039
August .....	1,720	61	1,388	386	1,781	2,055
September .....	1,695	65	1,364	389	1,760	2,052
October .....	1,683	61	1,364	374	1,744	2,061
November .....	1,698	58	1,364	366	1,756	2,175
December .....	1,710	61	1,396	373	1,771	2,024
<b>Average</b> .....	<b>1,705</b>	<b>56</b>	<b>1,373</b>	<b>383</b>	<b>1,761</b>	<b>2,064</b>
<b>2014</b> January .....	1,711	58	1,403	362	1,769	2,066
February .....	1,714	55	1,424	341	1,769	2,036
March .....	1,750	54	1,466	333	1,803	2,037
April .....	1,784	52	1,515	316	1,835	2,028
May .....	1,801	58	1,530	325	1,859	2,040
June .....	1,804	58	1,545	314	1,861	2,026
July .....	1,819	57	1,560	314	1,876	2,044
August .....	1,842	62	1,578	324	1,904	2,039
September .....	1,866	64	1,592	336	1,930	2,010
October .....	1,867	58	1,596	328	1,924	2,024
November .....	1,872	53	1,573	351	1,925	R 2,007
December .....	1,824	59	1,539	342	1,882	NA
<b>Average</b> .....	<b>1,804</b>	<b>57</b>	<b>1,527</b>	<b>333</b>	<b>1,862</b>	<b>NA</b>

<sup>a</sup> 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.

<sup>b</sup> 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.

<sup>c</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#crude> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: • **Rotary Rigs in Operation:** Baker Hughes, Inc., Houston, TX, "North America Rig Count," used with permission. See <http://phx.corporate-ir.net/phoenix.zhtml?c=79687&p=irol-reportsother>. • **Active Well Service Rig Count:** Cameron International Corporation, Houston, TX. See <http://www.c-a-m.com/products-and-services/drilling/well-service-equipment-and-rig-count/types/guiberson-rig-count>.



## 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.

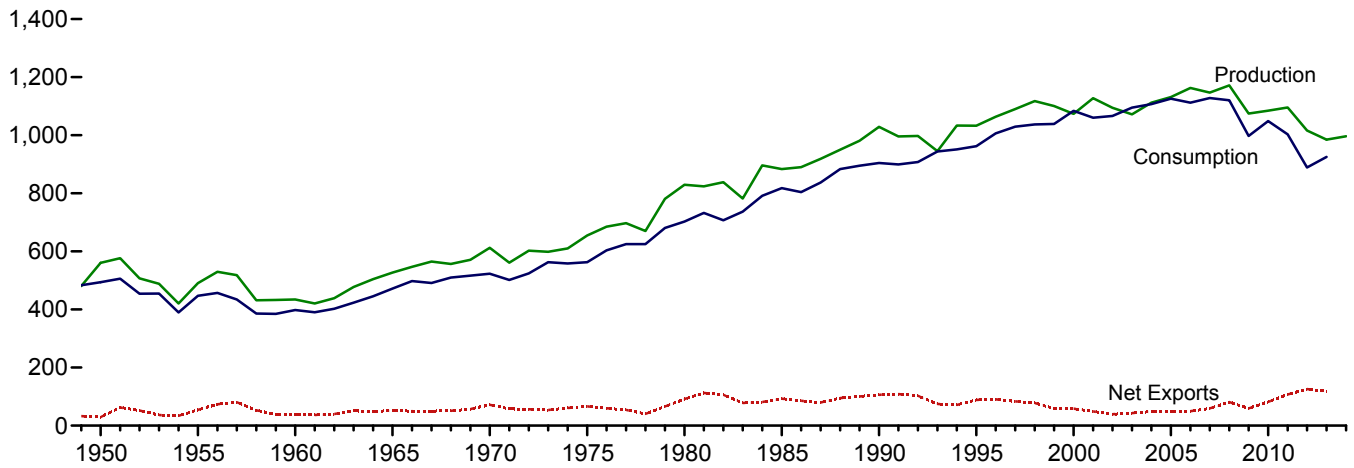
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## **6. Coal**

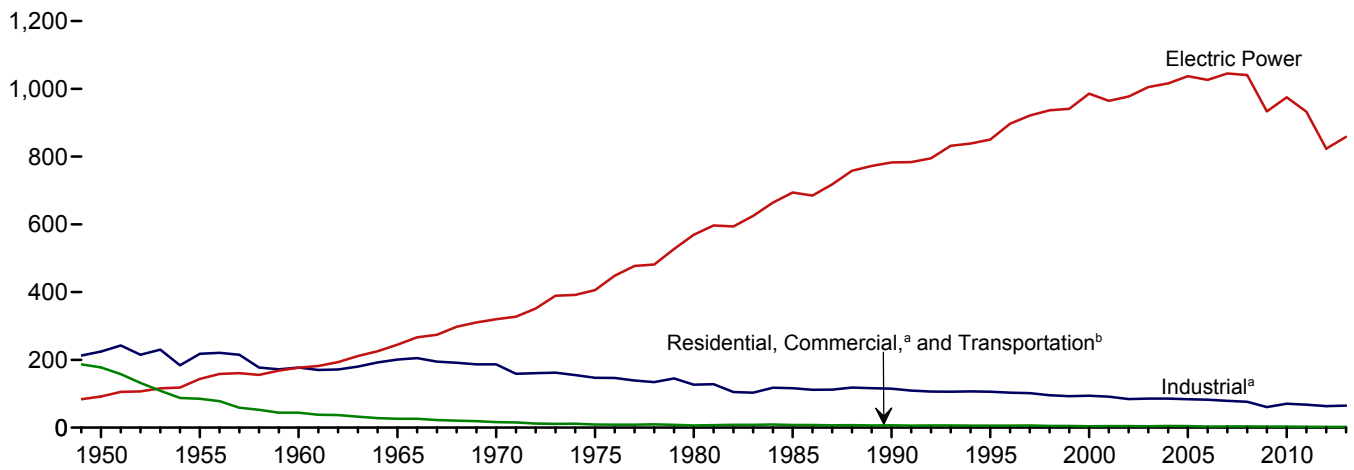
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**Figure 6.1 Coal**  
(Million Short Tons)

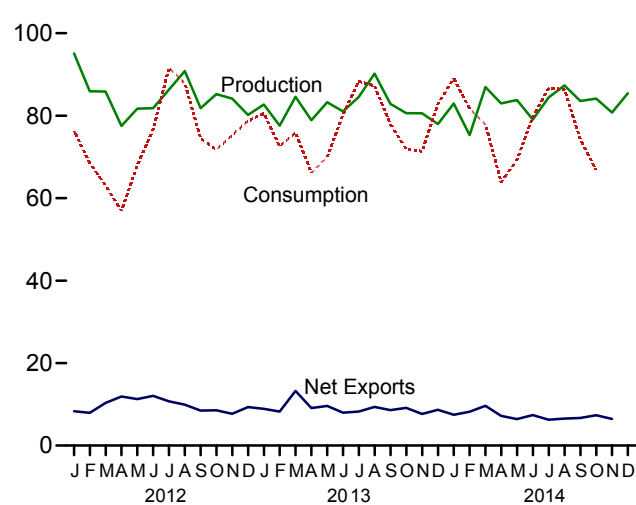
Overview, 1949–2014



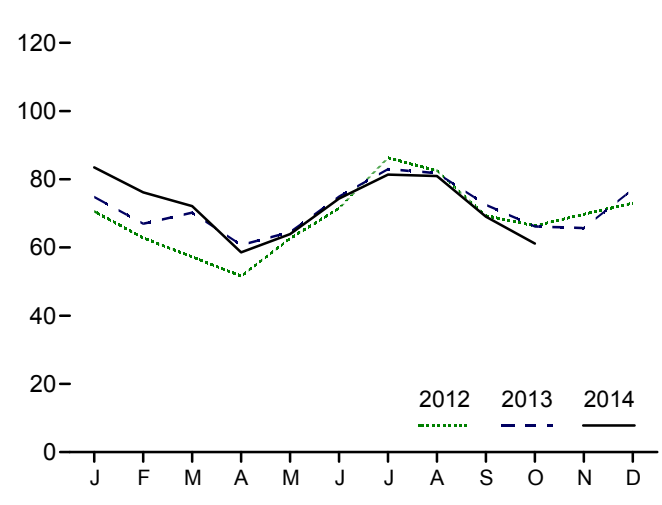
Consumption by Sector, 1949–2013



Overview, Monthly



Electric Power Sector Consumption, Monthly



<sup>a</sup>Includes combined-heat-and-power (CHP) plants and a small number of electricity-only-plants.

<sup>b</sup>For 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 <sup>a</sup>	Waste Coal Supplied <sup>b</sup>	Trade			Stock Change <sup>d,e</sup>	Losses and Unaccounted for <sup>e,f</sup>	Consumption
			Imports	Exports	Net Imports <sup>c</sup>			
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 Total	1,095,628	13,209	13,088	107,259	-94,171	211	11,506	1,002,948
2012 January	95,102	1,104	789	9,126	-8,337	3,832	7,745	76,292
February	85,914	926	534	8,460	-7,927	7,905	2,542	68,466
March	85,849	863	699	11,055	-10,356	9,618	3,663	63,075
April	77,514	681	623	12,529	-11,905	7,132	2,260	56,899
May	81,717	892	986	12,257	-11,271	419	2,905	68,015
June	81,816	926	719	12,749	-12,030	-5,461	-469	76,642
July	86,321	1,058	894	11,623	-10,729	-15,082	145	91,588
August	90,816	1,039	667	10,597	-9,930	-6,905	912	87,919
September	81,818	885	855	9,344	-8,489	2,352	-2,615	74,477
October	85,239	796	868	9,421	-8,554	3,999	1,709	71,774
November	84,147	1,090	798	8,516	-7,718	1,639	562	75,319
December	80,205	934	727	10,068	-9,341	-2,545	-4,377	78,721
Total	1,016,458	11,196	9,159	125,746	-116,586	6,902	14,980	889,185
2013 January	R 82,713	933	654	9,572	-8,917	-8,189	R 2,346	80,571
February	R 77,586	869	385	8,627	-8,242	-6,262	R 3,940	72,535
March	R 84,568	1,063	390	13,637	-13,247	-5,516	R 1,963	75,936
April	R 78,909	676	672	9,754	-9,082	2,486	R 1,892	66,125
May	R 83,271	940	870	10,478	-9,608	5,308	R -713	70,008
June	R 81,031	934	1,213	9,194	-7,981	-7,412	R 1,062	80,335
July	R 84,518	1,040	874	9,125	-8,251	-9,336	R -1,701	88,344
August	R 90,199	840	710	10,073	-9,363	-7,765	R 2,209	87,231
September	R 82,878	608	815	9,391	-8,576	-2,482	R -528	77,919
October	R 80,603	626	707	9,855	-9,148	672	R -496	71,906
November	R 80,576	618	850	8,511	-7,662	2,376	R -231	71,388
December	R 77,990	1,047	766	9,443	-8,676	-5,268	R -7,181	82,810
Total	R 984,842	10,194	8,906	117,659	-108,753	-41,386	R 2,562	925,106
2014 January	R 82,964	1,116	1,064	8,516	-7,452	-16,063	R 3,645	89,046
February	R 75,294	999	583	8,785	-8,203	-14,274	R 653	81,710
March	R 86,929	1,089	803	10,430	-9,627	-1,742	R 2,284	77,849
April	R 82,976	934	930	8,134	-7,205	10,679	R 2,122	63,903
May	R 83,788	852	1,280	7,718	-6,439	8,171	R 779	69,250
June	R 79,063	1,003	1,319	8,704	-7,385	-3,606	R -3,436	79,724
July	R 84,429	RF 865	928	7,191	-6,264	-7,251	R -359	86,641
August	R 87,327	RF 865	1,122	7,665	-6,544	-4,359	R -355	86,362
September	R 83,563	RF 865	1,148	7,848	-6,700	2,913	R 526	74,289
October	R 84,145	RF 865	584	7,939	-7,355	R 12,871	R -2,016	R 66,799
November	R 80,774	NA	R 1,003	R 7,464	R -6,461	NA	NA	NA
December	85,414	NA	NA	NA	NA	NA	NA	NA
Total	996,666	NA	NA	NA	NA	NA	NA	NA

<sup>a</sup> 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).

<sup>b</sup> 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."

<sup>c</sup> Net imports equal imports minus exports. A minus sign indicates exports are greater than imports.

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

<sup>e</sup> In 1949, stock change is included in "Losses and Unaccounted for."

<sup>f</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#coal> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.





**Table 6.3 Coal Stocks by Sector**  
(Thousand Short Tons)

	Producers and Distributors	End-Use Sectors					Electric Power Sector <sup>c,d</sup>	Total
		Residential <sup>a</sup> and Commercial	Industrial			Total		
			Coke Plants	Other <sup>b</sup>	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	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	8,836	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 Year	51,897	603	2,610	4,455	7,065	7,668	172,387	231,951
2012 January	48,318	587	2,507	4,280	6,786	7,374	180,091	235,783
February	49,743	572	2,403	4,104	6,508	7,080	186,866	243,688
March	51,141	557	2,300	3,929	6,229	6,786	195,380	253,307
April	51,283	566	2,299	4,025	6,324	6,890	202,265	260,439
May	50,726	575	2,297	4,122	6,419	6,995	203,137	260,858
June	50,374	585	2,295	4,219	6,514	7,099	197,924	255,397
July	49,120	589	2,329	4,318	6,647	7,236	183,958	240,314
August	47,499	592	2,363	4,418	6,781	7,373	178,537	233,409
September	46,231	596	2,396	4,518	6,914	7,510	182,020	235,761
October	45,830	592	2,438	4,504	6,942	7,534	186,396	239,760
November	45,550	587	2,480	4,489	6,970	7,557	188,291	241,398
December	46,157	583	2,522	4,475	6,997	7,581	185,116	238,853
2013 January	F 44,632	565	2,417	4,303	6,720	7,286	178,747	230,664
February	F 42,087	548	2,312	4,131	6,443	6,991	175,325	224,403
March	F 40,673	530	2,207	3,959	6,166	6,696	171,518	218,887
April	F 41,922	529	2,305	3,964	6,268	6,797	172,654	221,373
May	F 43,112	529	2,402	3,968	6,370	6,899	176,670	226,681
June	F 41,735	528	2,500	3,973	6,473	7,001	170,534	219,270
July	F 43,263	529	2,516	4,090	6,606	7,135	159,536	209,934
August	F 40,782	529	2,531	4,208	6,739	7,269	154,119	202,169
September	F 40,100	530	2,546	4,326	6,872	7,402	152,185	199,688
October	F 39,805	518	2,431	4,253	6,684	7,202	153,352	200,360
November	F 39,979	506	2,315	4,181	6,496	7,003	155,754	202,736
December	F 42,692	495	2,200	4,108	6,308	6,803	147,973	197,468
2014 January	F 42,632	465	2,064	3,921	5,984	6,449	132,324	181,404
February	F 42,087	435	1,927	3,733	5,660	6,095	118,949	167,131
March	F 41,673	405	1,791	3,545	5,336	5,741	117,974	165,388
April	F 41,922	413	1,833	3,579	5,412	5,825	128,321	176,067
May	F 42,112	421	1,875	3,613	5,488	5,908	136,218	184,239
June	F 41,735	429	1,937	3,647	5,584	6,013	132,885	180,633
July	F 41,763	F 431	F 1,904	F 3,895	F 5,799	F 6,230	125,389	173,382
August	F 41,532	F 433	F 1,879	F 4,138	F 6,016	F 6,449	121,042	169,023
September	F 41,100	F 435	F 1,847	F 4,378	F 6,225	F 6,659	124,176	171,936
October	F 41,805	F 436	F 1,852	F 4,525	F 6,378	F 6,814	136,188	184,807

<sup>a</sup> Through 1979, data are for the residential and commercial sectors. Beginning in 2008, data are for the commercial sector only.

<sup>b</sup> 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.

<sup>c</sup> 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.

<sup>d</sup> Excludes waste coal. 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#coal> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

## 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.

From 2002 through 2014, the weekly coal production model used statistical auto regressive methods to estimate national coal production as a function of railcar loadings of coal, heating degree-days, and cooling degree-days. On Thursday of each week, EIA received from the AAR data for the previous week. The latest weekly national data for heating degree-days and cooling degree-days were obtained from the National Oceanic and Atmospheric Administration’s Climate Prediction Center.

Beginning in 2015, the revised weekly coal production model uses statistical auto regressive methods to estimate national coal production as a function of railcar loadings of coal. EIA receives AAR data on Thursday of each week for prior week car loadings. The weekly coal model is run and a national level coal production estimate is obtained. From there, state-level estimates are calculated using historical state production share. The state estimates are then aggregated to various regional-level estimates. 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 historical state-level production data, the methodology for which can be seen in the documentation located 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, Consumption, and Inventories.” 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, Consumption, and Inventories.” 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.

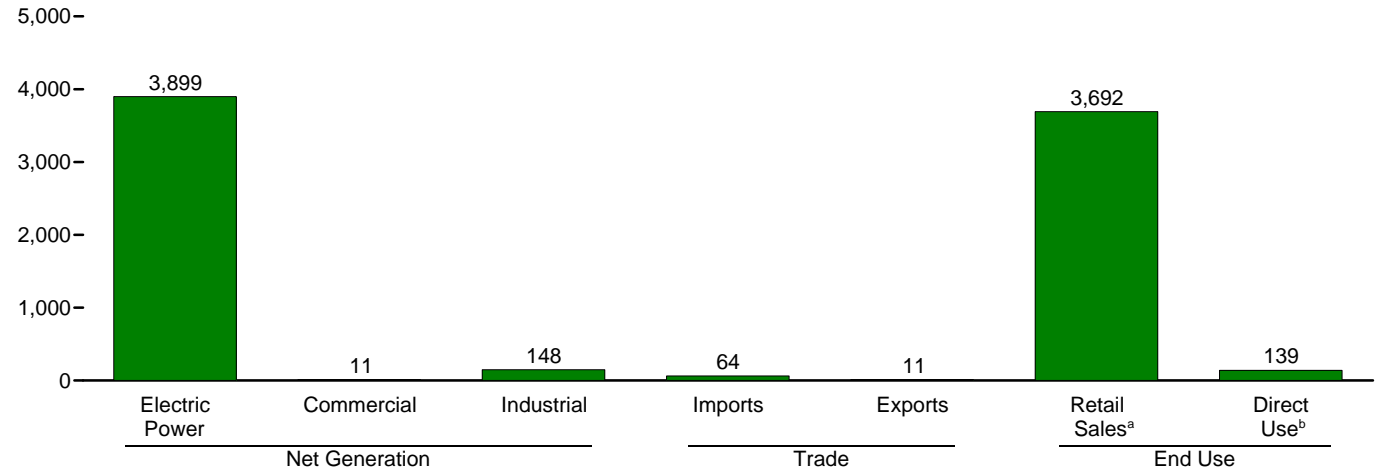
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## 7. Electricity

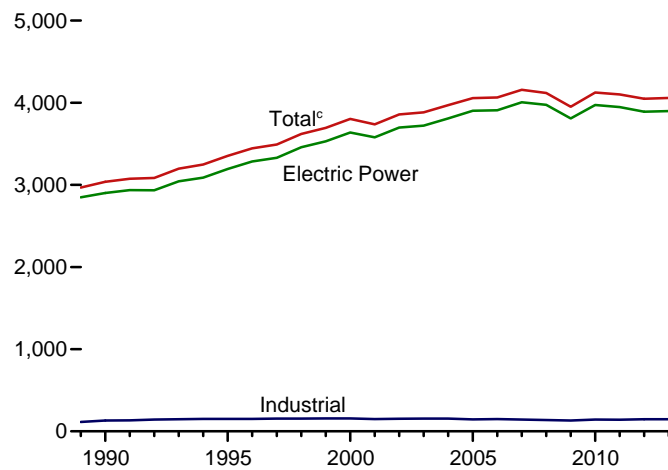
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**Figure 7.1 Electricity Overview**  
(Billion Kilowatthours)

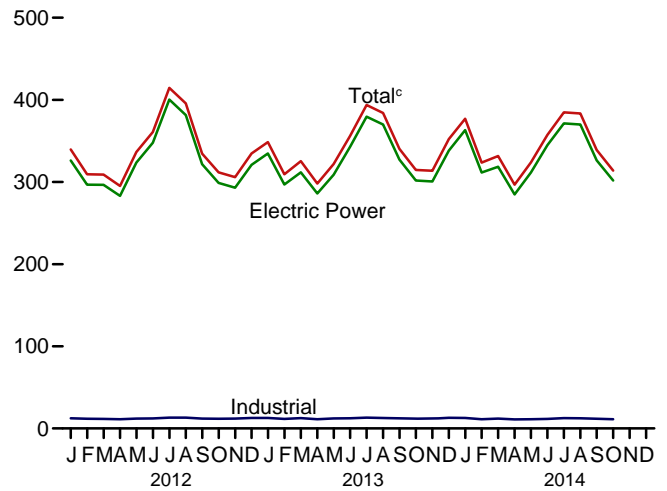
Overview, 2013



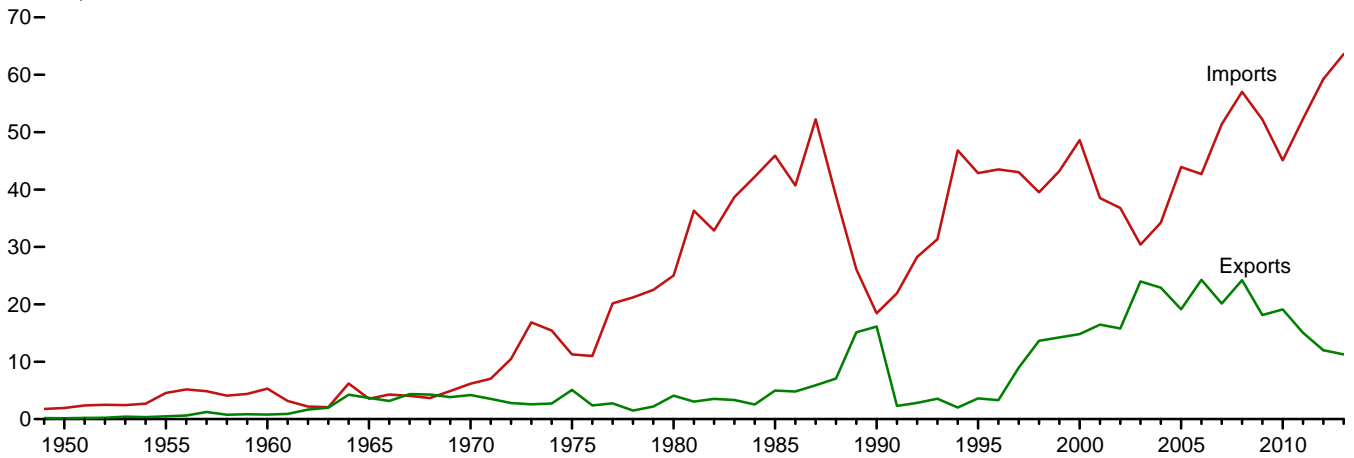
Net Generation by Sector, 1989–2013



Net Generation by Sector, Monthly



Trade, 1949–2013



<sup>a</sup> Electricity retail sales to ultimate customers reported by electric utilities and other energy service providers.

<sup>b</sup> See "Direct Use" in Glossary.

<sup>c</sup> 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 <sup>e</sup> and Unaccounted for <sup>f</sup>	End Use		
	Electric Power Sector <sup>a</sup>	Com- mercial Sector <sup>b</sup>	Indus- trial Sector <sup>c</sup>	Total	Imports <sup>d</sup>	Exports <sup>d</sup>	Net Imports <sup>d</sup>		Retail Sales <sup>g</sup>	Direct Use <sup>h</sup>	Total
<b>1950 Total</b> .....	329	NA	5	334	2	(s)	2	44	291	NA	291
<b>1955 Total</b> .....	547	NA	3	550	5	(s)	4	58	497	NA	497
<b>1960 Total</b> .....	756	NA	4	759	5	1	5	76	688	NA	688
<b>1965 Total</b> .....	1,055	NA	3	1,058	4	4	(s)	104	954	NA	954
<b>1970 Total</b> .....	1,532	NA	3	1,535	6	4	2	145	1,392	NA	1,392
<b>1975 Total</b> .....	1,918	NA	3	1,921	11	5	6	180	1,747	NA	1,747
<b>1980 Total</b> .....	2,286	NA	3	2,290	25	4	21	216	2,094	NA	2,094
<b>1985 Total</b> .....	2,470	NA	3	2,473	46	5	41	190	2,324	NA	2,324
<b>1990 Total</b> .....	2,901	6	<sup>c</sup> 131	3,038	18	16	2	203	2,713	125	2,837
<b>1995 Total</b> .....	3,194	8	151	3,353	43	4	39	229	3,013	151	3,164
<b>2000 Total</b> .....	3,638	8	157	3,802	49	15	34	244	3,421	171	3,592
<b>2001 Total</b> .....	3,580	7	149	3,737	39	16	22	202	3,394	163	3,557
<b>2002 Total</b> .....	3,698	7	153	3,858	37	16	21	248	3,465	166	3,632
<b>2003 Total</b> .....	3,721	7	155	3,883	30	24	6	228	3,494	168	3,662
<b>2004 Total</b> .....	3,808	8	154	3,971	34	23	11	266	3,547	168	3,716
<b>2005 Total</b> .....	3,902	8	145	4,055	44	19	25	269	3,661	150	3,811
<b>2006 Total</b> .....	3,908	8	148	4,065	43	24	18	266	3,670	147	3,817
<b>2007 Total</b> .....	4,005	8	143	4,157	51	20	31	298	3,765	126	3,890
<b>2008 Total</b> .....	3,974	8	137	4,119	57	24	33	287	3,733	132	3,865
<b>2009 Total</b> .....	3,810	8	132	3,950	52	18	34	261	3,597	127	3,724
<b>2010 Total</b> .....	3,972	9	144	4,125	45	19	26	265	3,754	132	3,886
<b>2011 Total</b> .....	3,948	10	142	4,100	52	15	37	255	3,750	133	3,883
<b>2012 January</b> .....	326	1	12	340	4	1	3	20	311	<sup>E</sup> 12	323
February .....	297	1	12	309	4	1	3	14	287	<sup>E</sup> 11	298
March .....	296	1	12	309	4	1	3	17	284	<sup>E</sup> 11	295
April .....	283	1	11	295	5	1	4	18	271	<sup>E</sup> 11	281
May .....	324	1	12	337	5	1	4	33	297	<sup>E</sup> 11	308
June .....	348	1	12	361	5	1	4	28	325	<sup>E</sup> 11	337
July .....	400	1	13	415	7	1	6	37	371	<sup>E</sup> 13	383
August .....	381	1	13	396	6	1	5	24	365	<sup>E</sup> 12	377
September .....	322	1	12	335	5	1	4	9	318	<sup>E</sup> 11	329
October .....	299	1	12	312	4	1	4	13	291	<sup>E</sup> 11	302
November .....	293	1	12	306	5	1	4	20	278	<sup>E</sup> 11	290
December .....	321	1	13	335	4	1	3	29	297	<sup>E</sup> 12	309
<b>Total</b> .....	<b>3,890</b>	<b>11</b>	<b>146</b>	<b>4,048</b>	<b>59</b>	<b>12</b>	<b>47</b>	<b>263</b>	<b>3,695</b>	<b><sup>E</sup> 139</b>	<b>3,831</b>
<b>2013 January</b> .....	335	1	13	348	5	1	4	23	318	<sup>E</sup> 12	330
February .....	297	1	12	309	5	1	4	14	289	<sup>E</sup> 11	300
March .....	312	1	13	325	5	1	4	23	294	<sup>E</sup> 12	306
April .....	286	1	11	298	5	1	3	16	275	<sup>E</sup> 11	285
May .....	309	1	12	322	5	1	5	28	287	<sup>E</sup> 11	298
June .....	343	1	12	356	6	1	5	32	317	<sup>E</sup> 12	329
July .....	380	1	13	394	6	1	5	31	356	<sup>E</sup> 12	368
August .....	370	1	13	384	6	1	6	27	350	<sup>E</sup> 12	363
September .....	327	1	12	340	5	1	4	12	321	<sup>E</sup> 11	332
October .....	302	1	12	315	5	1	4	15	292	<sup>E</sup> 11	303
November .....	301	1	12	314	5	1	4	27	279	<sup>E</sup> 12	291
December .....	338	1	13	352	5	1	4	30	314	<sup>E</sup> 12	326
<b>Total</b> .....	<b>3,899</b>	<b>11</b>	<b>148</b>	<b>4,058</b>	<b>64</b>	<b>11</b>	<b>52</b>	<b>279</b>	<b>3,692</b>	<b><sup>E</sup> 139</b>	<b>3,831</b>
<b>2014 January</b> .....	363	1	13	377	5	1	4	30	339	<sup>E</sup> 12	351
February .....	312	1	11	324	4	1	3	7	309	<sup>E</sup> 11	320
March .....	319	1	12	332	5	2	3	24	300	<sup>E</sup> 11	311
April .....	285	1	11	297	4	1	3	16	273	<sup>E</sup> 10	283
May .....	312	1	11	324	5	1	4	29	288	<sup>E</sup> 11	299
June .....	345	1	12	357	5	1	4	31	319	<sup>E</sup> 11	330
July .....	371	1	12	385	6	1	5	31	347	<sup>E</sup> 12	359
August .....	370	1	12	383	6	1	5	29	348	<sup>E</sup> 12	360
September .....	326	1	12	339	6	1	5	9	323	<sup>E</sup> 11	334
October .....	302	1	11	314	5	1	4	14	293	<sup>E</sup> 11	304
<b>10-Month Total</b> ...	<b>3,304</b>	<b>10</b>	<b>118</b>	<b>3,431</b>	<b>51</b>	<b>12</b>	<b>39</b>	<b>220</b>	<b>3,139</b>	<b><sup>E</sup> 112</b>	<b>3,251</b>
<b>2013 10-Month Total</b> ...	<b>3,260</b>	<b>10</b>	<b>123</b>	<b>3,392</b>	<b>54</b>	<b>9</b>	<b>44</b>	<b>222</b>	<b>3,098</b>	<b><sup>E</sup> 116</b>	<b>3,214</b>
<b>2012 10-Month Total</b> ...	<b>3,276</b>	<b>10</b>	<b>121</b>	<b>3,407</b>	<b>50</b>	<b>10</b>	<b>40</b>	<b>214</b>	<b>3,119</b>	<b><sup>E</sup> 114</b>	<b>3,234</b>

<sup>a</sup> 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.

<sup>b</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

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

<sup>d</sup> Electricity transmitted across U.S. borders. Net imports equal imports minus exports.

<sup>e</sup> 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.

<sup>f</sup> Data collection frame differences and nonsampling error.

<sup>g</sup> Electricity retail sales to ultimate customers by electric utilities and, beginning

in 1996, other energy service providers.

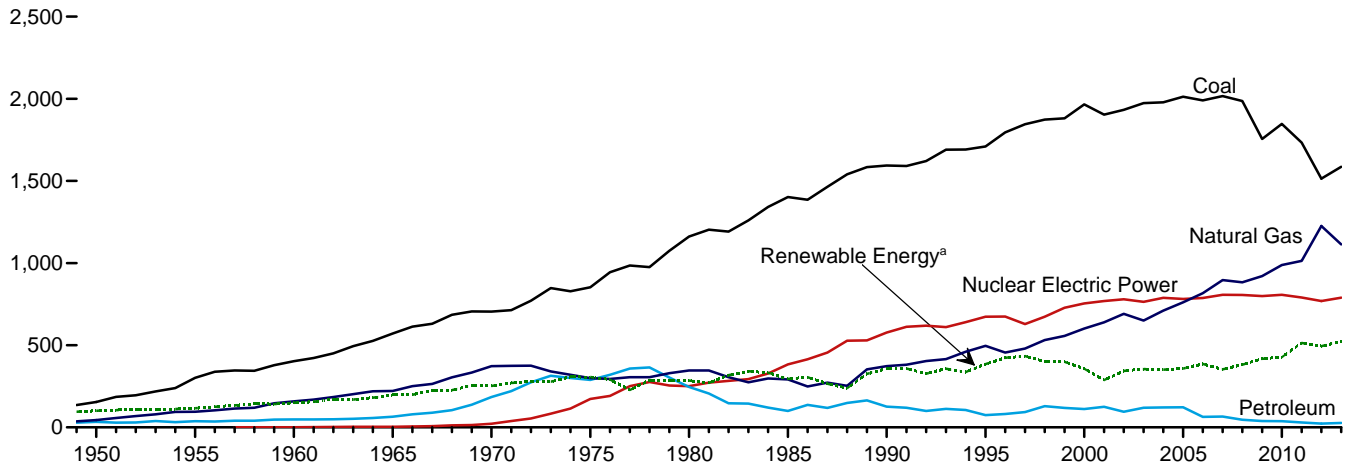
<sup>h</sup> Use of electricity that is 1) self-generated, 2) produced by either the same entity that consumes the power or an affiliate, and 3) used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct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

<sup>i</sup> E=Estimate. NA=Not available. (s)=Less than 0.5 billion kilowatthours.

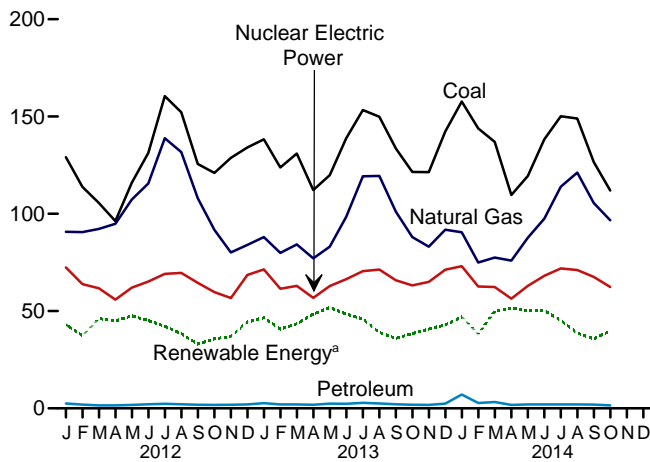
Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.  
• Totals may not equal sum of components due to independent rounding.  
• Geographic coverage is the 50 states and the District of Columbia.  
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.  
Sources: See end of section.

**Figure 7.2 Electricity Net Generation**  
(Billion Kilowatthours)

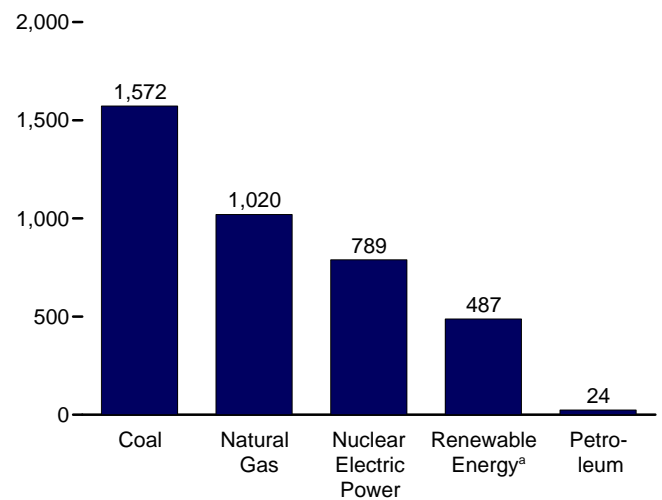
Total (All Sectors), Major Sources, 1949–2013



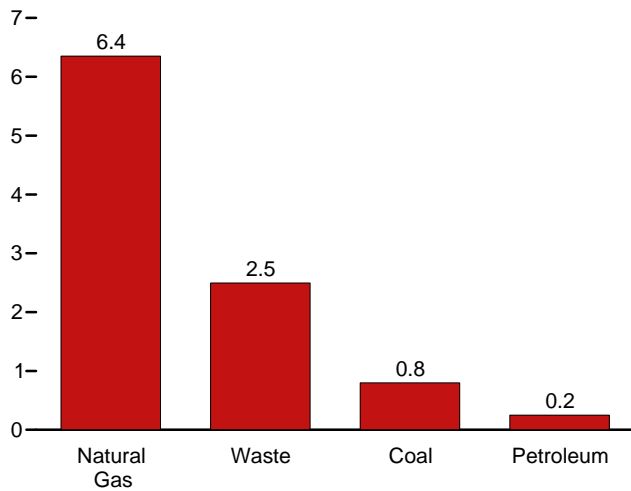
Total (All Sectors), Major Sources, Monthly



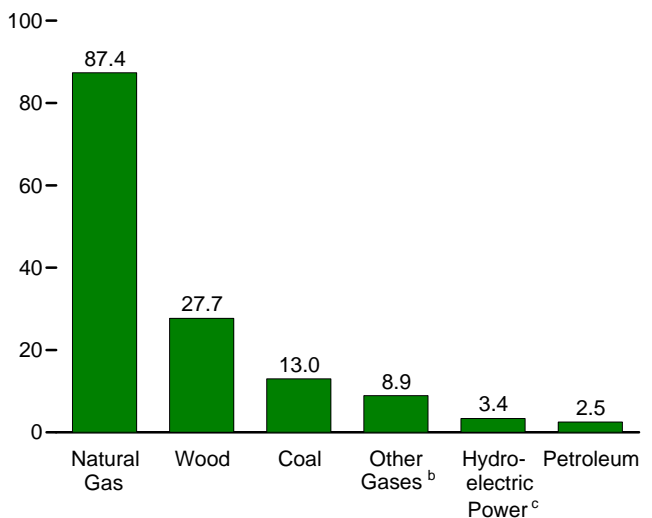
Electric Power Sector, Major Sources, 2013



Commercial Sector, Major Sources, 2013



Industrial Sector, Major Sources, 2013



<sup>a</sup> Conventional hydroelectric power, wood, waste, geothermal, solar/PV, and wind.

<sup>b</sup> Blast furnace gas, and other manufactured and waste gases derived from fossil fuels.

<sup>c</sup> Conventional hydroelectric power.

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

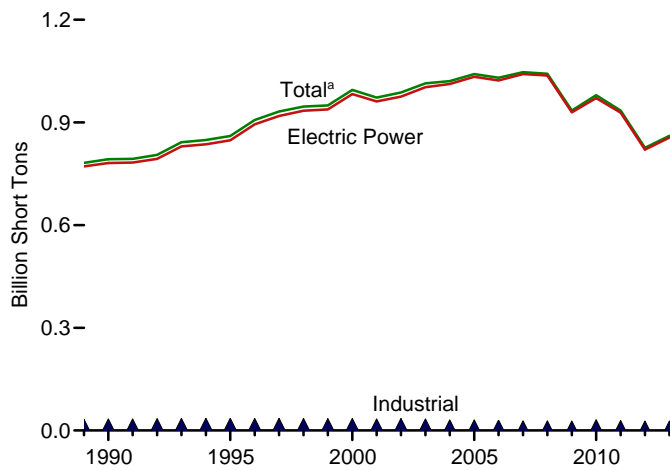




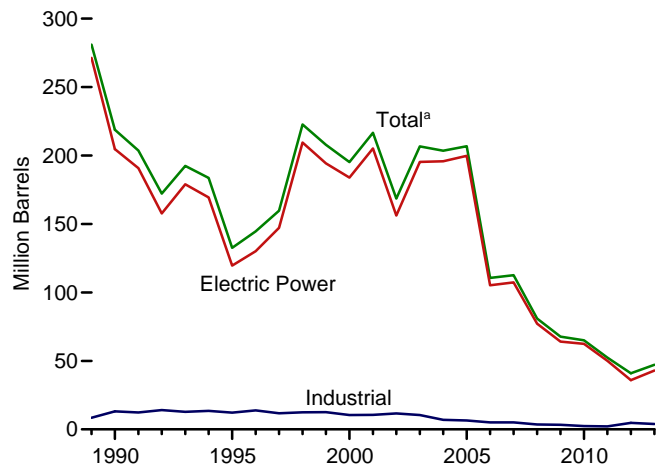


**Figure 7.3 Consumption of Selected Combustible Fuels for Electricity Generation**

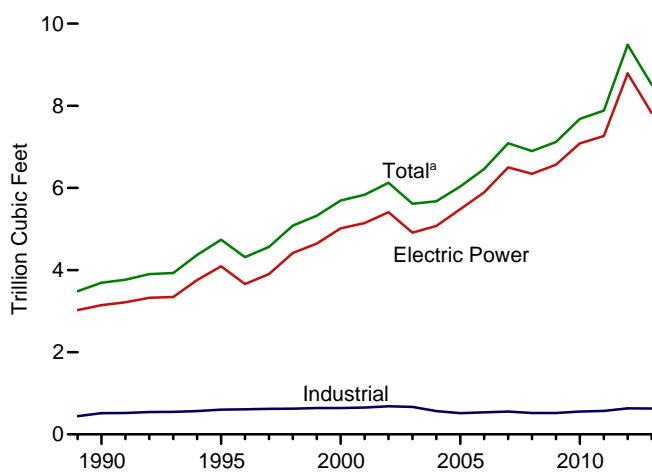
**Coal by Sector, 1989–2013**



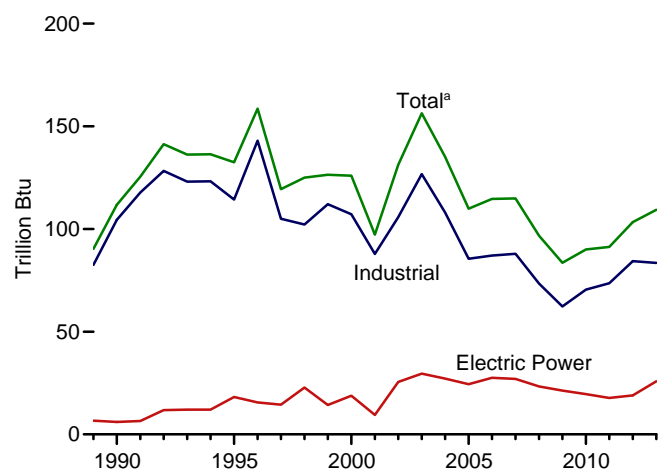
**Petroleum by Sector, 1989–2013**



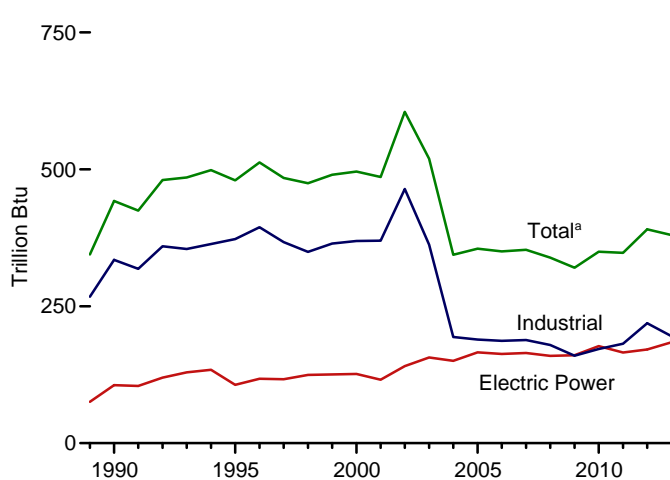
**Natural Gas by Sector, 1989–2013**



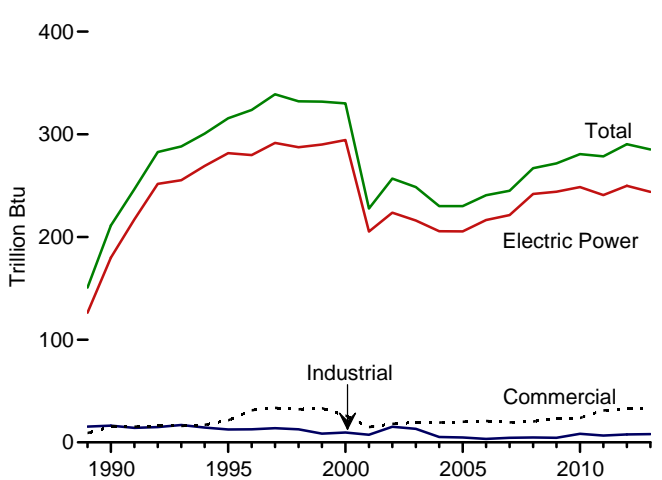
**Other Gases<sup>b</sup> by Sector, 1989–2013**



**Wood by Sector, 1989–2013**



**Waste by Sector, 1989–2013**



<sup>a</sup> Includes commercial sector.

<sup>b</sup> 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 <sup>a</sup> Thousand Short Tons	Petroleum					Natural Gas <sup>f</sup> Billion Cubic Feet	Other Gases <sup>g</sup>	Biomass		Other <sup>j</sup>
		Distillate Fuel Oil <sup>b</sup> Thousand Barrels	Residual Fuel Oil <sup>c</sup> Thousand Barrels	Other Liquids <sup>d</sup> Thousand Barrels	Petroleum Coke <sup>e</sup> Thousand Short Tons	Total <sup>e</sup> Thousand Barrels			Wood <sup>h</sup> Trillion Btu	Waste <sup>i</sup> Trillion Btu	
<b>1950 Total</b> .....	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
<b>1955 Total</b> .....	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
<b>1960 Total</b> .....	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
<b>1965 Total</b> .....	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
<b>1970 Total</b> .....	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
<b>1975 Total</b> .....	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
<b>1980 Total</b> .....	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
<b>1985 Total</b> .....	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
<b>1990 Total</b> <sup>k</sup> .....	792,457	18,143	190,652	437	1,914	218,800	3,692	112	442	211	36
<b>1995 Total</b> .....	860,594	19,615	95,507	680	3,355	132,578	4,738	133	480	316	42
<b>2000 Total</b> .....	994,933	31,675	143,381	1,450	3,744	195,228	5,691	126	496	330	46
<b>2001 Total</b> .....	972,691	31,150	165,312	855	3,871	216,672	5,832	97	486	228	160
<b>2002 Total</b> .....	987,583	23,286	109,235	1,894	6,836	168,597	6,126	131	605	257	191
<b>2003 Total</b> .....	1,014,058	29,672	142,518	2,947	6,303	206,653	5,616	156	519	249	193
<b>2004 Total</b> .....	1,020,523	20,163	142,088	2,856	7,677	203,494	5,675	135	344	230	183
<b>2005 Total</b> .....	1,041,448	20,651	141,518	2,968	8,330	206,785	6,036	110	355	230	173
<b>2006 Total</b> .....	1,030,556	13,174	58,473	2,174	7,363	110,634	6,462	115	350	241	172
<b>2007 Total</b> .....	1,046,795	15,683	63,833	2,917	6,036	112,615	7,089	115	353	245	168
<b>2008 Total</b> .....	1,042,335	12,832	38,191	2,822	5,417	80,932	6,896	97	339	267	172
<b>2009 Total</b> .....	934,683	12,658	28,576	2,328	4,821	67,668	7,121	84	320	272	170
<b>2010 Total</b> .....	979,684	14,050	23,997	2,056	4,994	65,071	7,680	90	350	281	184
<b>2011 Total</b> .....	934,938	11,231	14,251	1,844	5,012	52,387	7,884	91	348	279	205
<b>2012</b> .....											
January .....	70,744	856	1,019	57	476	4,315	677	9	35	24	17
February .....	62,974	666	775	103	363	3,358	672	9	33	22	16
March .....	57,468	627	889	114	226	2,762	704	9	31	24	17
April .....	51,806	701	811	100	212	2,674	742	9	28	23	16
May .....	62,801	885	850	129	255	3,140	843	9	30	24	18
June .....	71,656	877	1,305	137	280	3,719	912	8	32	24	18
July .....	86,516	954	1,585	143	307	4,220	1,118	9	35	25	18
August .....	82,676	752	1,134	128	338	3,704	1,039	9	35	25	18
September .....	69,478	656	839	95	314	3,161	835	8	33	24	17
October .....	66,486	703	912	107	280	3,124	700	8	32	25	17
November .....	69,913	749	804	94	314	3,215	612	8	32	25	17
December .....	73,217	857	832	357	308	3,585	630	8	35	26	17
<b>Total</b> .....	<b>825,734</b>	<b>9,285</b>	<b>11,755</b>	<b>1,565</b>	<b>3,675</b>	<b>40,977</b>	<b>9,485</b>	<b>103</b>	<b>390</b>	<b>290</b>	<b>204</b>
<b>2013</b> .....											
January .....	74,985	1,014	1,569	231	382	4,726	660	9	32	23	14
February .....	67,141	676	1,010	134	313	3,386	593	8	29	21	13
March .....	70,395	654	832	96	371	3,435	632	9	32	24	15
April .....	60,899	661	827	110	347	3,334	587	8	25	23	14
May .....	64,737	816	817	116	475	4,123	641	10	30	24	15
June .....	75,178	681	903	92	481	4,082	765	9	32	24	16
July .....	83,223	1,085	1,466	156	480	5,108	939	10	34	25	16
August .....	81,984	693	979	103	495	4,251	929	10	35	24	16
September .....	72,704	661	831	110	452	3,862	777	9	32	23	15
October .....	66,359	606	801	87	408	3,535	665	9	32	24	15
November .....	65,902	733	744	106	309	3,127	629	10	33	23	14
December .....	77,283	1,016	1,174	163	378	4,245	694	9	35	26	16
<b>Total</b> .....	<b>860,790</b>	<b>9,294</b>	<b>11,952</b>	<b>1,505</b>	<b>4,893</b>	<b>47,215</b>	<b>8,512</b>	<b>109</b>	<b>380</b>	<b>285</b>	<b>182</b>
<b>2014</b> .....											
January .....	83,710	4,918	4,426	1,032	446	12,607	689	9	36	23	14
February .....	76,350	1,294	1,552	179	376	4,905	573	7	33	20	12
March .....	72,320	1,469	1,759	294	439	5,718	585	8	36	24	15
April .....	58,747	599	782	81	313	3,028	575	7	31	23	14
May .....	64,097	783	678	83	384	3,464	673	9	33	23	15
June .....	74,579	681	743	52	409	3,521	745	9	36	23	15
July .....	81,631	656	920	91	369	3,514	870	10	37	25	16
August .....	81,210	708	977	81	369	3,610	923	10	37	25	16
September .....	69,293	668	825	95	356	3,368	797	10	34	24	15
October .....	61,390	619	763	98	224	2,599	727	9	34	24	15
<b>10-Month Total</b> ...	<b>723,328</b>	<b>12,392</b>	<b>13,426</b>	<b>2,087</b>	<b>3,686</b>	<b>46,334</b>	<b>7,159</b>	<b>86</b>	<b>347</b>	<b>234</b>	<b>149</b>
<b>2013 10-Month Total</b> ...	<b>717,605</b>	<b>7,546</b>	<b>10,033</b>	<b>1,236</b>	<b>4,206</b>	<b>39,842</b>	<b>7,189</b>	<b>90</b>	<b>312</b>	<b>236</b>	<b>152</b>
<b>2012 10-Month Total</b> ...	<b>682,604</b>	<b>7,678</b>	<b>10,120</b>	<b>1,114</b>	<b>3,053</b>	<b>34,177</b>	<b>8,243</b>	<b>87</b>	<b>324</b>	<b>240</b>	<b>170</b>

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.  
<sup>b</sup> 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.  
<sup>c</sup> 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.  
<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.  
<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.  
<sup>f</sup> Natural gas, plus a small amount of supplemental gaseous fuels.  
<sup>g</sup> Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.  
<sup>h</sup> Wood and wood-derived fuels.  
<sup>i</sup> 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).  
<sup>j</sup> 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).  
<sup>k</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.  
 Sources: See sources for Tables 7.3b and 7.3c.

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

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Biomass		Other <sup>j</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e</sup>			Wood <sup>h</sup>	Waste <sup>i</sup>	
		Thousand Barrels							Thousand Short Tons	Thousand Barrels	
Thousand Short Tons	Thousand Barrels					Thousand Short Tons	Thousand Barrels	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 <sup>k</sup>	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 Total	928,857	10,961	13,861	1,655	4,726	50,105	7,265	18	166	241	133
2012 January	70,305	809	965	38	389	3,759	621	2	15	20	11
February	62,572	649	735	80	307	2,997	619	2	14	19	10
March	57,053	607	848	93	168	2,388	650	2	14	20	11
April	51,427	683	778	82	157	2,328	689	2	11	20	10
May	62,417	868	803	112	200	2,784	785	2	13	21	11
June	71,251	853	1,278	121	222	3,364	852	2	15	21	12
July	86,036	926	1,547	127	244	3,821	1,052	2	16	22	12
August	82,209	726	1,099	110	257	3,222	974	2	16	22	11
September	69,074	634	807	80	241	2,726	777	1	15	20	11
October	66,104	681	868	88	220	2,735	644	1	13	21	11
November	69,521	728	769	78	229	2,722	556	1	14	21	11
December	72,791	835	795	331	226	3,092	571	2	15	22	11
Total	820,762	9,000	11,292	1,339	2,861	35,937	8,788	19	171	250	132
2013 January	74,596	987	1,497	218	323	4,317	600	2	15	20	10
February	66,767	658	963	129	284	3,171	538	1	14	17	9
March	69,973	636	801	88	305	3,052	574	2	15	20	11
April	60,534	639	801	100	281	2,943	535	2	10	20	10
May	64,318	796	785	99	403	3,696	586	2	14	21	11
June	74,740	662	871	86	412	3,677	708	2	15	21	11
July	82,750	1,053	1,419	148	410	4,669	878	2	17	22	12
August	81,553	668	949	95	426	3,842	869	3	17	20	11
September	72,293	643	807	101	387	3,486	723	2	16	20	11
October	65,968	587	776	82	356	3,226	610	2	16	20	11
November	65,509	716	718	97	279	2,925	571	3	17	20	10
December	76,857	998	1,121	150	342	3,978	633	3	18	23	12
Total	855,856	9,044	11,507	1,393	4,207	42,981	7,825	26	184	244	127
2014 January	83,248	4,833	4,219	1,013	404	12,087	631	3	19	20	10
February	75,927	1,263	1,474	167	332	4,564	521	2	18	17	9
March	71,881	1,439	1,678	279	389	5,342	529	2	19	20	11
April	58,381	578	758	77	267	2,748	524	2	15	20	10
May	63,702	766	653	76	349	3,241	621	3	16	20	11
June	74,140	665	715	45	372	3,284	693	3	19	20	11
July	81,179	634	893	85	338	3,302	813	4	19	22	11
August	80,771	687	951	69	337	3,391	867	4	19	21	11
September	68,870	648	802	87	330	3,184	743	4	18	20	11
October	61,007	595	744	92	201	2,438	676	3	18	20	10
10-Month Total	719,106	12,109	12,886	1,991	3,319	43,580	6,618	29	181	201	104
2013 10-Month Total	713,490	7,330	9,668	1,146	3,587	36,078	6,621	20	149	202	105
2012 10-Month Total	678,449	7,436	9,728	930	2,406	30,124	7,661	16	143	207	110

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

<sup>b</sup> 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.

<sup>c</sup> 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.

<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.

<sup>f</sup> Natural gas, plus a small amount of supplemental gaseous fuels.

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

<sup>h</sup> Wood and wood-derived fuels.

<sup>i</sup> 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).

<sup>j</sup> 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).

<sup>k</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.



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

	Commercial Sector <sup>a</sup>				Industrial Sector <sup>b</sup>						
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Biomass	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>g</sup>	Biomass		Other <sup>i</sup>
				Waste <sup>f</sup>					Wood <sup>h</sup>	Waste <sup>f</sup>	
	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu			
<b>1990 Total</b> .....	<b>417</b>	<b>953</b>	<b>28</b>	<b>15</b>	<b>10,740</b>	<b>13,103</b>	<b>517</b>	<b>104</b>	<b>335</b>	<b>16</b>	<b>36</b>
<b>1995 Total</b> .....	<b>569</b>	<b>649</b>	<b>43</b>	<b>21</b>	<b>12,171</b>	<b>12,265</b>	<b>601</b>	<b>114</b>	<b>373</b>	<b>13</b>	<b>40</b>
<b>2000 Total</b> .....	<b>514</b>	<b>823</b>	<b>37</b>	<b>26</b>	<b>11,706</b>	<b>10,459</b>	<b>640</b>	<b>107</b>	<b>369</b>	<b>10</b>	<b>45</b>
<b>2001 Total</b> .....	<b>532</b>	<b>1,023</b>	<b>36</b>	<b>15</b>	<b>10,636</b>	<b>10,530</b>	<b>654</b>	<b>88</b>	<b>370</b>	<b>7</b>	<b>44</b>
<b>2002 Total</b> .....	<b>477</b>	<b>834</b>	<b>33</b>	<b>18</b>	<b>11,855</b>	<b>11,608</b>	<b>685</b>	<b>106</b>	<b>464</b>	<b>15</b>	<b>43</b>
<b>2003 Total</b> .....	<b>582</b>	<b>894</b>	<b>38</b>	<b>19</b>	<b>10,440</b>	<b>10,424</b>	<b>668</b>	<b>127</b>	<b>362</b>	<b>13</b>	<b>46</b>
<b>2004 Total</b> .....	<b>377</b>	<b>766</b>	<b>33</b>	<b>19</b>	<b>7,687</b>	<b>6,919</b>	<b>566</b>	<b>108</b>	<b>194</b>	<b>5</b>	<b>41</b>
<b>2005 Total</b> .....	<b>377</b>	<b>585</b>	<b>34</b>	<b>20</b>	<b>7,504</b>	<b>6,440</b>	<b>518</b>	<b>85</b>	<b>189</b>	<b>5</b>	<b>46</b>
<b>2006 Total</b> .....	<b>347</b>	<b>333</b>	<b>35</b>	<b>21</b>	<b>7,408</b>	<b>5,066</b>	<b>536</b>	<b>87</b>	<b>187</b>	<b>3</b>	<b>45</b>
<b>2007 Total</b> .....	<b>361</b>	<b>258</b>	<b>34</b>	<b>19</b>	<b>5,089</b>	<b>5,041</b>	<b>554</b>	<b>88</b>	<b>188</b>	<b>4</b>	<b>41</b>
<b>2008 Total</b> .....	<b>369</b>	<b>166</b>	<b>33</b>	<b>20</b>	<b>5,075</b>	<b>3,617</b>	<b>520</b>	<b>73</b>	<b>179</b>	<b>5</b>	<b>39</b>
<b>2009 Total</b> .....	<b>317</b>	<b>190</b>	<b>34</b>	<b>23</b>	<b>4,674</b>	<b>3,328</b>	<b>520</b>	<b>62</b>	<b>160</b>	<b>4</b>	<b>42</b>
<b>2010 Total</b> .....	<b>314</b>	<b>172</b>	<b>39</b>	<b>24</b>	<b>8,125</b>	<b>2,422</b>	<b>555</b>	<b>70</b>	<b>172</b>	<b>8</b>	<b>55</b>
<b>2011 Total</b> .....	<b>347</b>	<b>137</b>	<b>47</b>	<b>31</b>	<b>5,735</b>	<b>2,145</b>	<b>572</b>	<b>74</b>	<b>182</b>	<b>7</b>	<b>57</b>
<b>2012</b> January .....	29	29	5	3	410	528	51	7	19	1	4
February .....	27	19	5	3	374	342	49	7	18	1	4
March .....	26	17	5	3	388	357	48	8	17	1	4
April .....	23	17	5	3	356	329	48	7	17	1	4
May .....	22	25	5	3	361	332	53	7	17	1	5
June .....	26	24	6	3	379	332	55	7	18	1	4
July .....	28	33	7	3	452	367	59	7	19	1	5
August .....	28	28	6	3	439	454	59	7	19	1	5
September .....	24	19	5	3	381	417	53	7	18	1	4
October .....	21	22	5	3	361	366	52	6	18	1	4
November .....	25	24	4	3	366	469	51	6	19	1	5
December .....	27	24	4	3	398	469	55	7	20	1	4
<b>Total</b> .....	<b>307</b>	<b>279</b>	<b>63</b>	<b>33</b>	<b>4,665</b>	<b>4,761</b>	<b>633</b>	<b>84</b>	<b>219</b>	<b>8</b>	<b>54</b>
<b>2013</b> January .....	31	54	5	3	359	355	55	7	17	1	3
February .....	28	32	5	3	347	183	50	6	16	1	3
March .....	29	15	5	3	393	368	53	7	16	1	3
April .....	23	17	4	3	342	374	48	6	15	1	3
May .....	26	19	5	3	394	408	50	7	16	1	3
June .....	28	21	5	3	410	384	52	7	17	1	3
July .....	28	42	6	3	444	397	55	8	17	1	3
August .....	26	20	6	3	404	388	55	8	17	1	4
September .....	23	18	5	3	388	357	50	7	16	1	3
October .....	20	15	5	3	371	294	50	6	16	1	3
November .....	22	17	5	3	371	185	53	7	16	1	3
December .....	25	41	5	3	401	225	56	6	17	1	3
<b>Total</b> .....	<b>309</b>	<b>312</b>	<b>60</b>	<b>33</b>	<b>4,624</b>	<b>3,921</b>	<b>628</b>	<b>84</b>	<b>195</b>	<b>8</b>	<b>37</b>
<b>2014</b> January .....	34	210	5	3	429	310	53	6	16	1	3
February .....	32	68	5	2	391	272	47	5	15	1	2
March .....	29	72	5	3	410	304	51	6	17	1	3
April .....	21	20	5	3	344	260	46	5	16	1	3
May .....	20	20	5	3	375	203	47	6	17	1	3
June .....	24	19	5	3	415	218	48	6	17	1	3
July .....	24	19	5	3	428	192	52	6	18	1	3
August .....	22	20	6	3	418	200	51	6	18	1	3
September .....	22	18	5	3	401	166	49	6	16	1	3
October .....	19	18	5	3	364	143	46	6	16	1	3
<b>10-Month Total</b> ...	<b>246</b>	<b>484</b>	<b>50</b>	<b>27</b>	<b>3,976</b>	<b>2,269</b>	<b>491</b>	<b>57</b>	<b>166</b>	<b>6</b>	<b>30</b>
<b>2013 10-Month Total</b> ...	<b>261</b>	<b>254</b>	<b>49</b>	<b>27</b>	<b>3,853</b>	<b>3,511</b>	<b>519</b>	<b>70</b>	<b>162</b>	<b>7</b>	<b>31</b>
<b>2012 10-Month Total</b> ...	<b>254</b>	<b>230</b>	<b>54</b>	<b>27</b>	<b>3,901</b>	<b>3,823</b>	<b>527</b>	<b>71</b>	<b>181</b>	<b>6</b>	<b>45</b>

<sup>a</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

<sup>b</sup> Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

<sup>c</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal syngas.

<sup>d</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

<sup>e</sup> Natural gas, plus a small amount of supplemental gaseous fuels.

<sup>f</sup> 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).

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

<sup>h</sup> Wood and wood-derived fuels.

<sup>i</sup> 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).

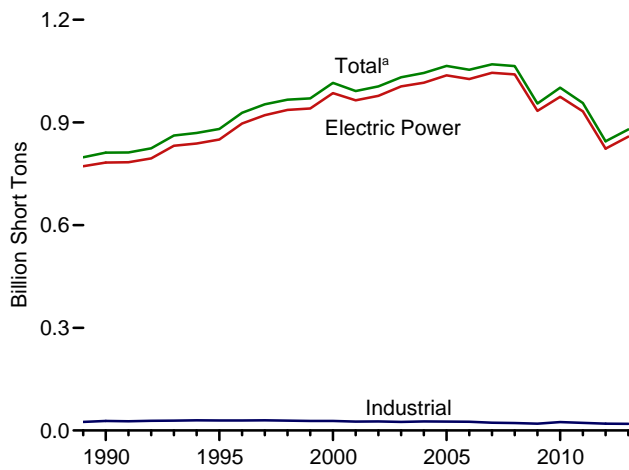
Notes: • Data are for fuels consumed to produce electricity. Through 1988, data are not available. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.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

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 1989.

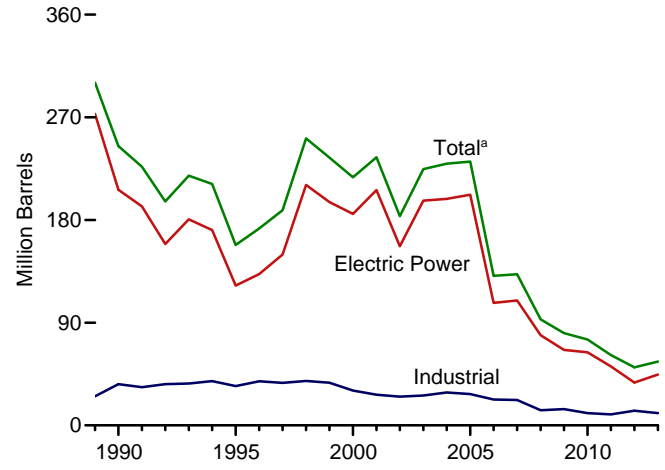
Sources: • **1989–1997:** U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003:** EIA, Form EIA-906, "Power Plant Report." • **2004–2007:** EIA, Form EIA-906,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

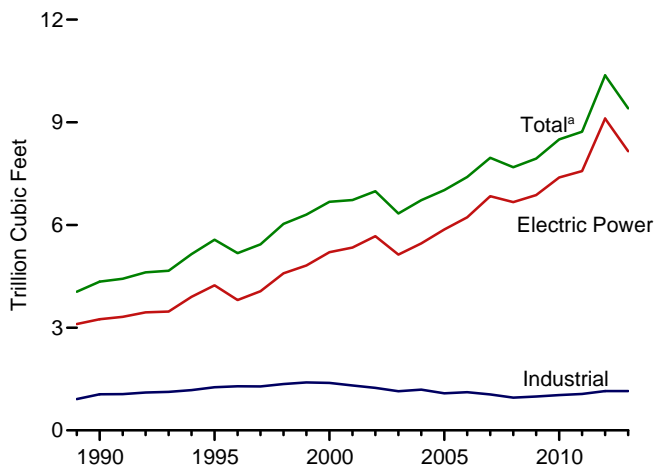
**Coal by Sector, 1989–2013**



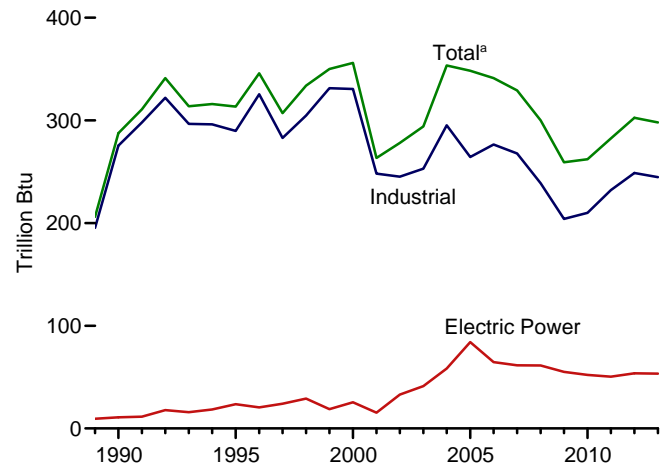
**Petroleum by Sector, 1989–2013**



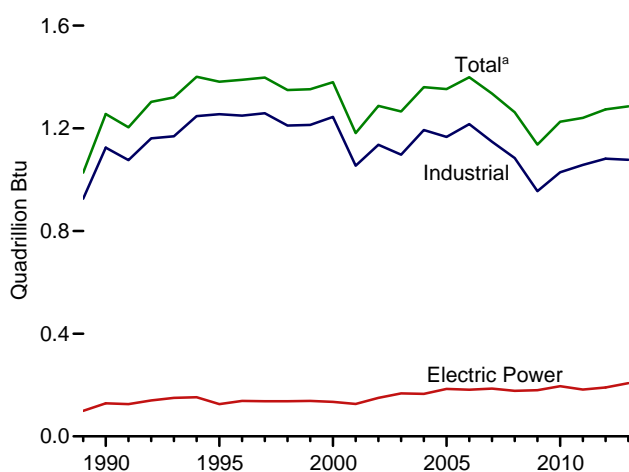
**Natural Gas by Sector, 1989–2013**



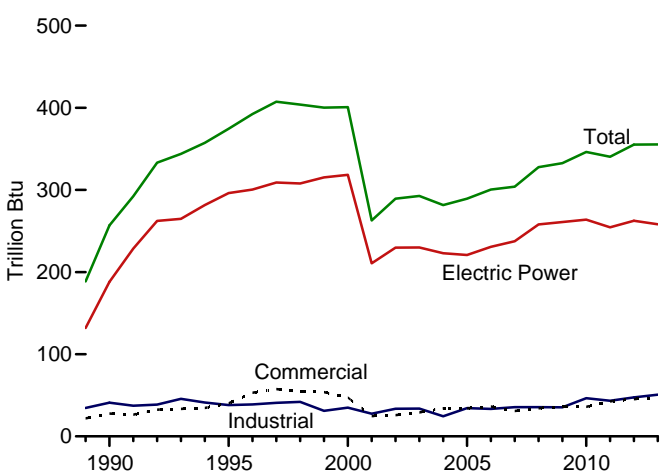
**Other Gases<sup>b</sup> by Sector, 1989–2013**



**Wood by Sector, 1989–2013**



**Waste by Sector, 1989–2013**



<sup>a</sup> Includes commercial sector.

<sup>b</sup> 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 <sup>a</sup> Thousand Short Tons	Petroleum					Natural Gas <sup>f</sup> Billion Cubic Feet	Other Gases <sup>g</sup>	Biomass		Other <sup>i</sup>
		Distillate Fuel Oil <sup>b</sup> Thousand Barrels	Residual Fuel Oil <sup>c</sup> Thousand Barrels	Other Liquids <sup>d</sup> Thousand Short Tons	Petroleum Coke <sup>e</sup> Thousand Barrels	Total <sup>e</sup> Thousand Barrels			Wood <sup>h</sup>	Waste <sup>j</sup>	
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 <sup>k</sup>	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	1,053,763	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 Total	956,470	11,735	16,877	2,540	6,092	61,610	8,724	282	1,241	340	261
2012 January	72,764	1,119	1,251	117	605	5,510	752	26	110	29	21
February	64,771	726	907	154	470	4,139	742	26	104	27	20
March	59,077	670	1,019	208	335	3,570	774	27	103	30	20
April	53,176	736	936	152	299	3,320	813	27	96	28	20
May	64,319	914	998	181	346	3,825	916	26	103	29	22
June	73,142	919	1,437	178	380	4,434	987	25	104	28	22
July	88,115	986	1,734	185	426	5,034	1,201	26	109	30	22
August	84,307	779	1,286	171	471	4,590	1,119	26	111	30	22
September	70,951	685	970	130	430	3,935	907	23	107	28	21
October	68,030	735	1,104	154	397	3,979	771	23	106	31	21
November	71,512	781	956	138	435	4,052	681	23	107	32	21
December	74,901	896	974	418	426	4,416	706	25	112	33	21
Total	845,066	9,945	13,571	2,185	5,021	50,805	10,371	302	1,273	355	252
2013 January	76,673	1,079	1,745	274	525	5,724	740	25	111	30	17
February	68,685	733	1,185	158	440	4,278	664	23	99	27	16
March	72,066	711	983	124	476	4,196	708	25	108	30	18
April	62,367	721	988	150	451	4,115	659	24	96	28	17
May	66,235	870	986	155	526	4,639	714	25	103	29	18
June	76,646	737	1,060	119	538	4,605	835	24	106	30	18
July	84,745	1,148	1,633	180	551	5,715	1,013	27	117	31	19
August	83,487	759	1,134	127	562	4,831	1,006	26	112	29	18
September	74,138	701	969	139	520	4,411	849	25	105	28	18
October	67,909	647	950	110	517	4,292	738	25	106	30	17
November	67,487	778	887	130	420	3,895	704	24	109	29	16
December	78,938	1,062	1,352	207	511	5,174	777	25	114	33	18
Total	879,377	9,946	13,871	1,872	6,037	55,874	9,407	298	1,286	355	209
2014 January	85,411	5,145	4,781	1,125	530	13,703	772	24	110	29	17
February	77,935	1,372	1,776	218	429	5,514	651	22	101	25	14
March	74,028	1,541	1,978	341	499	6,356	662	23	109	30	17
April	60,223	657	931	98	368	3,524	645	22	105	28	17
May	65,543	827	831	111	407	3,802	742	23	109	28	17
June	75,963	730	908	78	428	3,856	815	24	112	28	18
July	83,073	711	1,076	112	467	4,234	941	26	115	31	18
August	82,640	759	1,123	117	473	4,363	998	25	117	30	18
September	70,660	705	939	121	460	4,066	867	25	108	29	17
October	62,744	654	904	120	311	3,233	797	24	111	29	18
10-Month Total	738,219	13,102	15,247	2,441	4,372	52,651	7,891	238	1,097	288	171
2013 10-Month Total	732,952	8,106	11,633	1,535	5,106	46,806	7,926	249	1,062	293	175
2012 10-Month Total	698,653	8,267	11,642	1,630	4,160	42,337	8,984	254	1,055	291	210

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal syngas.

<sup>b</sup> 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.

<sup>c</sup> 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.

<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.

<sup>f</sup> Natural gas, plus a small amount of supplemental gaseous fuels.

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

<sup>h</sup> Wood and wood-derived fuels.

<sup>i</sup> 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).

<sup>j</sup> 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).

<sup>k</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

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

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

	Coal <sup>a</sup> Thousand Short Tons	Petroleum					Natural Gas <sup>f</sup> Billion Cubic Feet	Other Gases <sup>g</sup>	Biomass		Other <sup>i</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e</sup>			Wood <sup>h</sup>	Waste <sup>i</sup>	
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	NA	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	NA	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 <sup>k</sup>	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 Total	932,484	11,021	14,803	1,658	4,837	51,667	7,574	50	182	255	143
2012 January	70,594	834	1,057	38	400	3,930	649	5	17	22	12
February	62,804	667	796	80	318	3,131	645	4	16	20	11
March	57,266	610	898	93	178	2,493	674	5	16	22	12
April	51,593	686	841	82	166	2,439	714	5	13	21	11
May	62,648	873	883	112	211	2,924	812	4	14	22	12
June	71,480	856	1,364	121	228	3,481	880	4	16	22	12
July	86,283	931	1,624	127	253	3,949	1,082	5	18	23	13
August	82,484	729	1,178	110	267	3,353	1,004	5	18	23	12
September	69,309	637	884	80	250	2,852	803	4	16	21	12
October	66,343	685	951	88	229	2,866	669	4	15	22	12
November	69,740	732	850	78	238	2,851	580	4	15	23	12
December	73,009	839	877	331	236	3,226	600	5	16	24	12
Total	823,551	9,080	12,203	1,339	2,974	37,495	9,111	54	190	262	143
2013 January	74,798	997	1,547	218	333	4,429	629	4	17	22	11
February	66,944	672	1,028	129	293	3,293	565	4	15	19	10
March	70,214	644	882	88	315	3,190	601	4	17	22	11
April	60,725	646	882	101	291	3,084	561	4	12	21	11
May	64,544	803	870	99	412	3,830	613	4	16	22	12
June	74,964	668	950	86	418	3,794	734	4	17	22	12
July	82,986	1,059	1,503	148	419	4,805	906	5	19	22	13
August	81,788	673	1,033	95	436	3,980	898	5	20	21	12
September	72,493	648	895	101	395	3,618	749	5	18	21	11
October	66,163	593	866	82	366	3,370	636	5	18	22	11
November	65,688	722	799	97	288	3,060	598	5	19	21	11
December	77,043	1,005	1,207	150	351	4,117	662	5	20	24	12
Total	858,351	9,131	12,464	1,394	4,317	44,572	8,153	53	207	258	136
2014 January	83,459	4,914	4,275	1,050	413	12,302	662	4	22	21	11
February	76,144	1,280	1,549	167	339	4,690	554	3	20	18	9
March	72,127	1,449	1,765	286	397	5,487	557	3	22	21	12
April	58,592	584	837	78	276	2,878	549	3	18	21	11
May	63,896	772	737	76	357	3,371	647	4	19	21	11
June	74,343	670	798	45	372	3,372	719	4	23	21	11
July	81,379	639	983	85	343	3,421	840	5	22	23	12
August	80,951	692	1,041	70	345	3,528	895	5	22	22	12
September	69,034	652	862	87	338	3,291	769	5	20	21	11
October	61,163	601	834	92	210	2,578	702	5	20	22	11
10-Month Total	721,086	12,253	13,681	2,035	3,390	44,920	6,893	43	208	210	111
2013 10-Month Total	715,620	7,404	10,457	1,147	3,678	37,395	6,893	44	168	213	113
2012 10-Month Total	680,803	7,510	10,476	930	2,501	31,418	7,932	45	159	216	119

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

<sup>b</sup> 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.

<sup>c</sup> 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.

<sup>d</sup> Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.

<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.

<sup>f</sup> Natural gas, plus a small amount of supplemental gaseous fuels.

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

<sup>h</sup> Wood and wood-derived fuels.

<sup>i</sup> 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).

<sup>j</sup> 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).

<sup>k</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

**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 <sup>a</sup>				Industrial Sector <sup>b</sup>						
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Biomass	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>g</sup>	Biomass		Other <sup>i</sup>
				Waste <sup>f</sup>					Wood <sup>h</sup>	Waste <sup>f</sup>	
Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu				
<b>1990 Total</b> .....	1,191	2,056	46	28	27,781	36,159	1,055	275	1,125	41	86
<b>1995 Total</b> .....	1,419	1,245	78	40	29,363	34,448	1,258	290	1,255	38	95
<b>2000 Total</b> .....	1,547	1,615	85	47	28,031	30,520	1,386	331	1,244	35	108
<b>2001 Total</b> .....	1,448	1,832	79	25	25,755	26,817	1,310	248	1,054	27	101
<b>2002 Total</b> .....	1,405	1,250	74	26	26,232	25,163	1,240	245	1,136	34	92
<b>2003 Total</b> .....	1,816	1,449	58	29	24,846	26,212	1,144	253	1,097	34	103
<b>2004 Total</b> .....	1,917	2,009	72	34	26,613	28,857	1,191	295	1,193	24	94
<b>2005 Total</b> .....	1,922	1,630	68	34	25,875	27,380	1,084	264	1,166	34	94
<b>2006 Total</b> .....	1,886	935	68	36	25,262	22,706	1,115	277	1,216	33	102
<b>2007 Total</b> .....	1,927	752	70	31	22,537	22,207	1,050	268	1,148	36	98
<b>2008 Total</b> .....	2,021	671	66	34	21,902	13,222	955	239	1,084	35	60
<b>2009 Total</b> .....	1,798	521	76	36	19,766	14,228	990	204	955	35	82
<b>2010 Total</b> .....	1,720	437	86	36	24,638	10,740	1,029	210	1,029	47	91
<b>2011 Total</b> .....	1,668	333	87	43	22,319	9,610	1,063	232	1,057	43	94
<b>2012</b> January .....	155	87	9	4	2,015	1,493	94	21	94	3	7
February .....	135	29	9	4	1,832	979	89	21	88	4	7
March .....	128	31	9	4	1,684	1,047	91	22	87	5	6
April .....	102	19	9	4	1,481	863	90	22	83	4	6
May .....	108	27	9	4	1,563	873	95	22	89	3	7
June .....	109	28	10	4	1,553	925	98	21	88	3	7
July .....	120	61	12	4	1,712	1,024	107	21	92	3	7
August .....	120	41	11	4	1,703	1,197	105	22	93	3	7
September .....	107	27	9	4	1,535	1,056	96	19	91	3	6
October .....	101	31	9	4	1,587	1,082	94	18	91	5	7
November .....	124	38	8	4	1,649	1,163	93	19	92	5	7
December .....	141	39	8	4	1,751	1,151	98	21	96	5	7
<b>Total</b> .....	1,450	457	111	45	20,065	12,853	1,149	249	1,082	47	81
<b>2013</b> January .....	148	86	9	4	1,728	1,208	102	21	94	5	4
February .....	139	54	9	4	1,601	930	91	19	84	4	4
March .....	136	29	9	4	1,716	976	98	21	91	4	4
April .....	108	26	8	4	1,533	1,005	90	20	83	4	4
May .....	114	30	8	4	1,577	779	93	21	87	4	3
June .....	105	32	8	4	1,576	779	93	20	89	4	4
July .....	103	61	10	4	1,656	849	97	22	98	4	4
August .....	105	36	10	4	1,594	816	98	21	92	4	4
September .....	100	33	8	4	1,545	759	91	20	87	4	4
October .....	98	28	8	4	1,647	894	93	20	88	4	4
November .....	120	30	9	4	1,679	805	97	19	90	4	4
December .....	134	69	10	4	1,760	988	105	20	94	5	3
<b>Total</b> .....	1,412	514	107	46	19,613	10,788	1,147	245	1,077	51	46
<b>2014</b> January .....	149	318	10	4	1,803	1,083	101	20	88	4	4
February .....	147	110	9	3	1,644	714	88	18	80	4	3
March .....	142	117	9	4	1,759	752	96	20	87	4	3
April .....	111	34	8	4	1,520	611	88	18	88	4	4
May .....	94	32	8	4	1,553	398	86	19	90	4	4
June .....	90	28	9	4	1,530	456	88	20	89	4	4
July .....	100	29	9	4	1,594	784	92	21	93	4	4
August .....	92	40	10	4	1,597	795	94	20	94	4	4
September .....	92	34	9	4	1,534	741	89	20	88	4	4
October .....	89	31	9	4	1,492	623	87	19	91	4	4
<b>10-Month Total</b> ...	1,107	773	88	37	16,026	6,958	909	195	887	40	37
<b>2013 10-Month Total</b> ...	1,158	415	87	38	16,174	8,995	946	205	893	42	39
<b>2012 10-Month Total</b> ...	1,186	380	94	38	16,664	10,539	958	209	895	37	67

<sup>a</sup> Commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

<sup>b</sup> Industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

<sup>c</sup> Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.

<sup>d</sup> Distillate fuel oil, residual fuel oil, petroleum coke, jet fuel, kerosene, other petroleum, waste oil, and, beginning in 2011, propane.

<sup>e</sup> Natural gas, plus a small amount of supplemental gaseous fuels.

<sup>f</sup> 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).

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

<sup>h</sup> Wood and wood-derived fuels.

<sup>i</sup> 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).

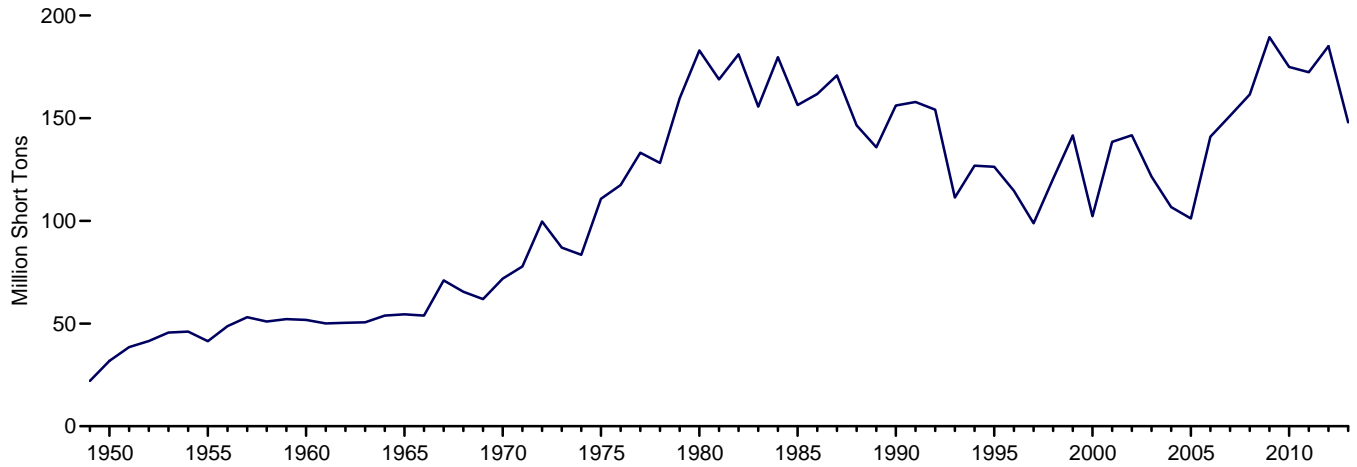
Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 1989.

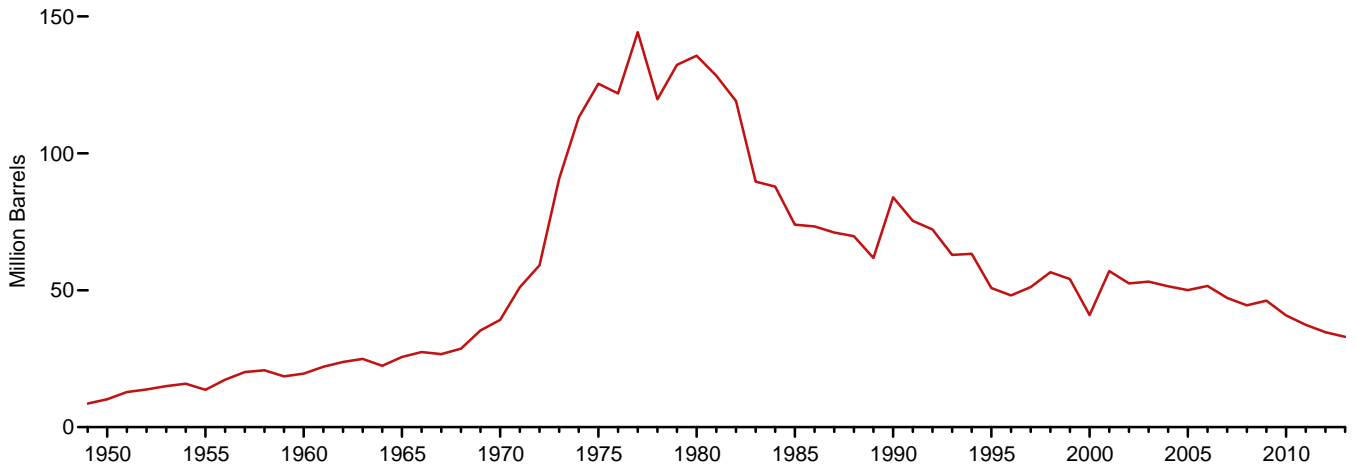
Sources: • **1989–1997:** U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003:** EIA, Form EIA-906, "Power Plant Report." • **2004–2007:** EIA, Form EIA-906,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

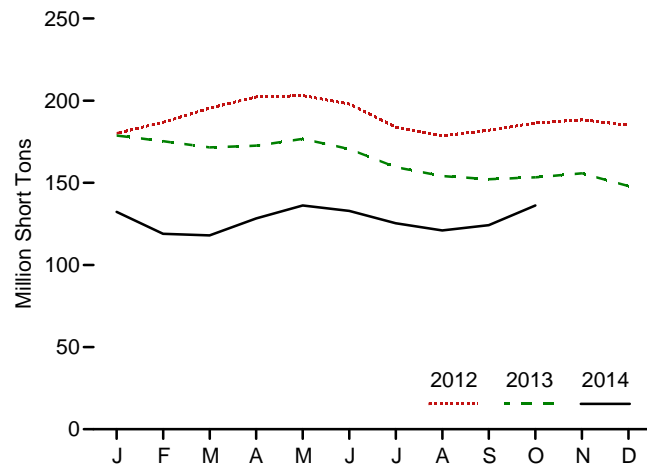
Coal, 1949–2013



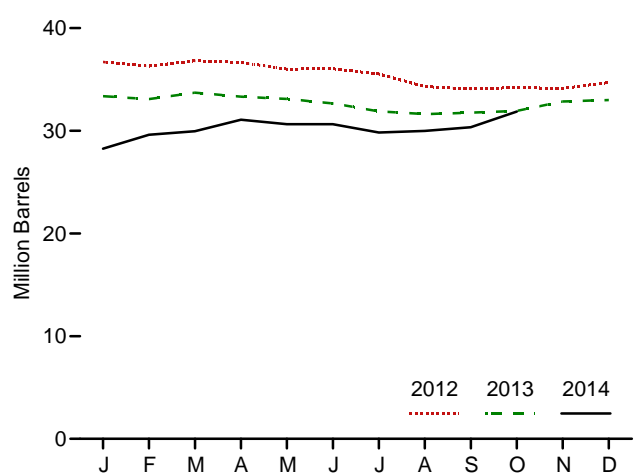
Total Petroleum, 1949–2013



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**

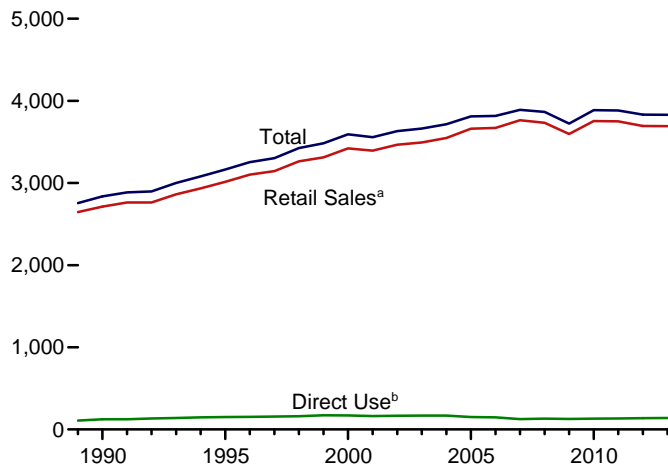
	Coal <sup>a</sup>	Petroleum				
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e,f</sup>
		Thousand Short Tons	Thousand Barrels			Thousand Short Tons
1950 Year	31,842	NA	NA	NA	NA	10,201
1955 Year	41,391	NA	NA	NA	NA	13,671
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 <sup>g</sup>	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 Year	172,387	16,649	15,491	2,707	508	37,387
2012 January	180,091	16,682	15,242	2,736	409	36,704
February	186,866	16,500	15,150	2,780	374	36,300
March	195,380	16,413	15,324	2,815	453	36,817
April	202,265	16,371	15,154	2,850	457	36,661
May	203,137	16,290	14,814	2,868	406	36,002
June	197,924	16,248	14,600	2,899	458	36,038
July	183,958	16,700	13,872	2,930	406	35,534
August	178,537	16,123	13,668	2,827	336	34,302
September	182,020	16,059	13,524	2,734	353	34,081
October	186,396	16,019	13,406	2,757	406	34,212
November	188,291	16,031	13,221	2,793	416	34,126
December	185,116	16,433	12,999	2,792	495	34,698
2013 January	178,747	16,329	12,161	2,673	442	33,373
February	175,325	16,315	11,935	2,631	442	33,090
March	171,518	16,209	12,869	2,600	406	33,710
April	172,654	16,009	12,451	2,592	455	33,326
May	176,670	15,894	12,412	2,588	442	33,105
June	170,534	15,898	12,134	2,594	407	32,663
July	159,536	15,696	11,677	2,551	394	31,895
August	154,119	15,637	12,157	2,534	260	31,628
September	152,185	15,511	12,212	2,493	309	31,760
October	153,352	15,652	12,384	2,451	291	31,941
November	155,754	15,793	12,911	2,466	338	32,858
December	147,973	15,735	12,863	2,446	390	32,994
2014 January	132,324	14,605	9,923	2,242	298	28,260
February	118,949	15,384	10,623	2,278	265	29,609
March	117,974	15,436	10,538	2,241	349	29,960
April	128,321	15,707	10,527	2,272	514	31,078
May	136,218	15,447	10,609	2,308	457	30,647
June	132,885	15,616	10,698	2,290	407	30,641
July	125,389	15,487	10,284	2,151	381	29,825
August	121,042	15,430	10,475	2,138	388	29,982
September	124,176	15,718	10,537	2,148	389	30,348
October	136,188	16,236	10,783	2,300	510	31,867

<sup>a</sup> Anthracite, bituminous coal, subbituminous coal, and lignite; excludes waste coal.  
<sup>b</sup> 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.  
<sup>c</sup> 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.  
<sup>d</sup> Jet fuel and kerosene. Through 2003, data also include a small amount of waste oil.  
<sup>e</sup> Petroleum coke is converted from short tons to barrels by multiplying by 5.  
<sup>f</sup> Distillate fuel oil and residual fuel oil. Beginning in 1970, also includes petroleum coke. Beginning in 2002, also includes other liquids.  
<sup>g</sup> 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

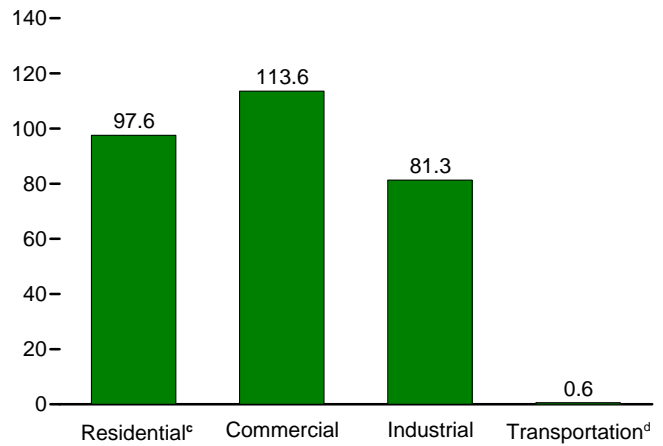
primary business is to sell electricity, or electricity and heat, to the public. • Stocks are at end of period. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding.  
 • Geographic coverage is the 50 states and the District of Columbia.  
 Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual data beginning in 1949 and monthly 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."

**Figure 7.6 Electricity End Use**  
(Billion Kilowatthours)

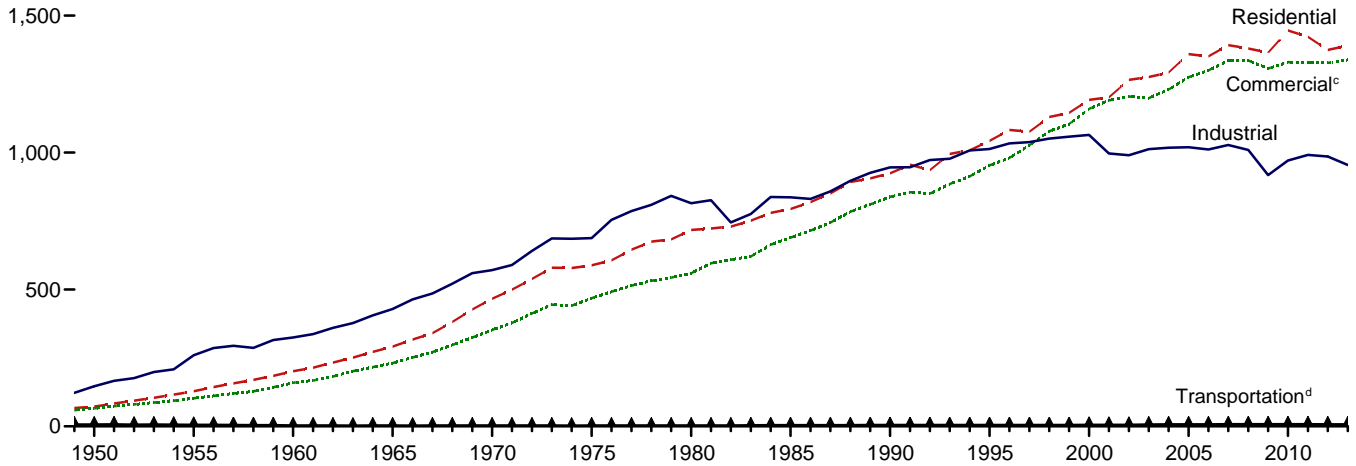
Electricity End Use Overview, 1989–2013



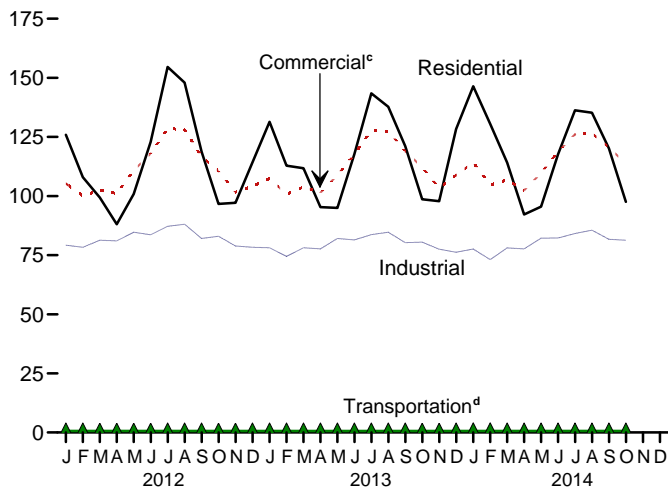
Retail Sales<sup>a</sup> by Sector, October 2014



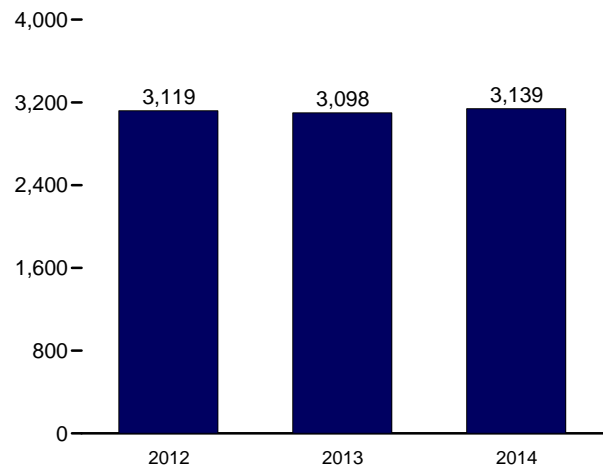
Retail Sales<sup>a</sup> by Sector, 1949–2013



Retail Sales<sup>a</sup> by Sector, Monthly



Retail Sales<sup>a</sup> Total, January–October



<sup>a</sup> Electricity retail sales to ultimate customers reported by utilities and other energy service providers.

<sup>b</sup> See "Direct Use" in Glossary.

<sup>c</sup> Commercial sector, including public street and highway lighting, inte-

departmental sales, and other sales to public authorities.

<sup>d</sup> Transportation sector, including sales to railroads and railways.

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

Source: Table 7.6.





## 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.pdf](http://www.eia.gov/survey/form/eia_860/instructions.pdf).

### 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.”

1984–2003: EIA, Form EIA-861, “Annual Electric Utility Report.”

2004 forward: EIA, *Electric Power Monthly (EPM)*, December 2014, 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](http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf).

2003: EIA, Form EIA-861, “Annual Electric Utility Report.”

2004 forward: EIA, EPM, December 2014, 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](http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf).

2003: EIA, Form EIA-861, “Annual Electric Utility Report.”

2004 forward: EIA, EPM, December 2014, 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.”

2001–2012: EIA, *Electric Power Annual 2012*, December 2013, Table 2.2.

2013: 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 2013 and 2014, the 2012 annual share is used.

#### Discontinued Retail Sales Series Commercial (Old) and Other (Old)

1949–2002: See sources for “Residential” and “Industrial.”

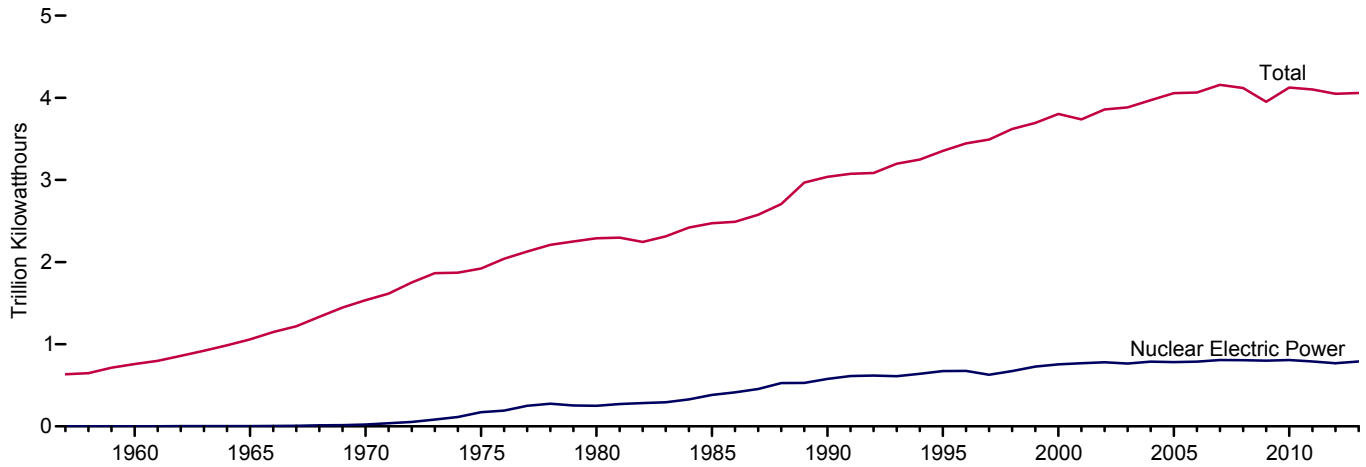
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# 8. Nuclear Energy

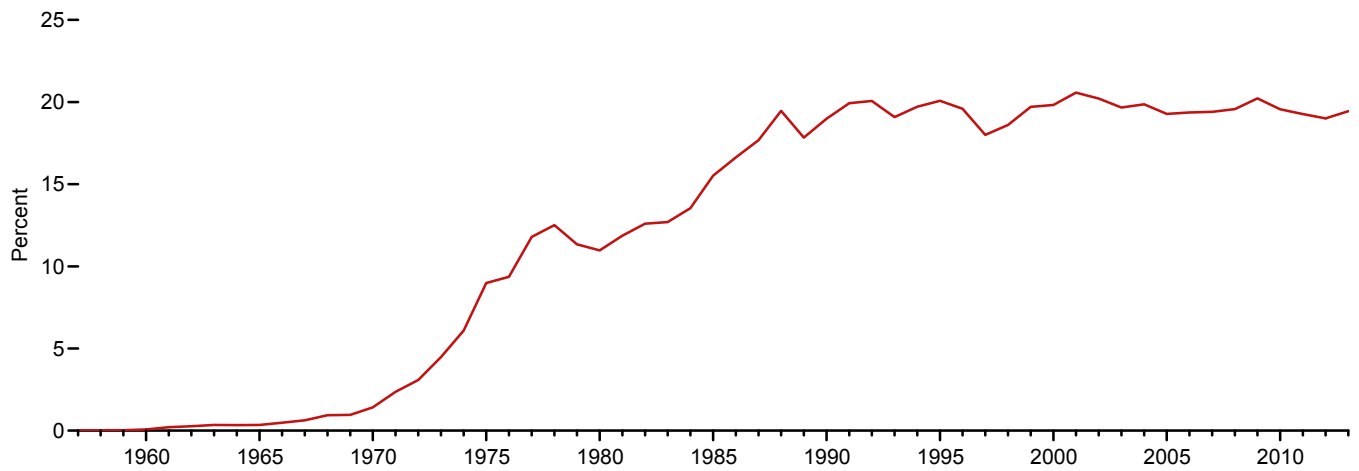
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## Figure 8.1 Nuclear Energy Overview

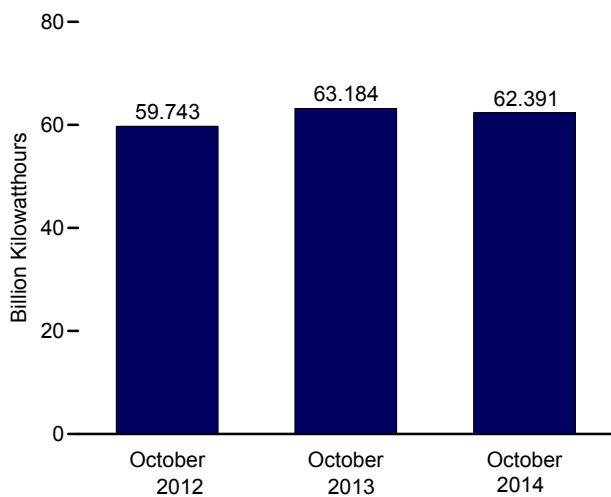
Electricity Net Generation, 1957–2013



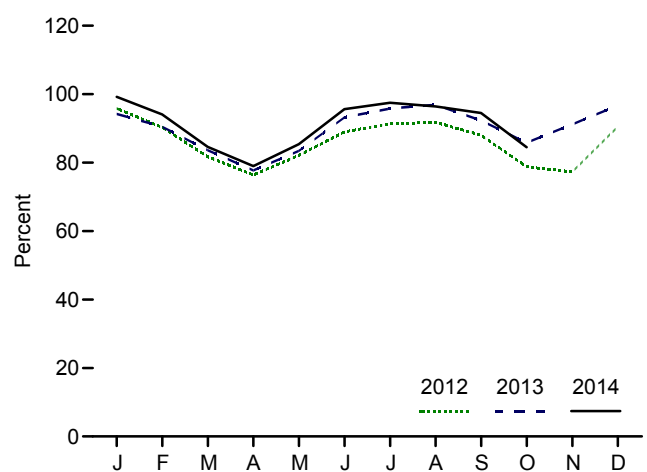
Nuclear Share of Electricity Net Generation, 1957–2013



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 <sup>a,b</sup>	Net Summer Capacity of Operable Units <sup>b,c</sup>	Nuclear Electricity Net Generation	Nuclear Share of Electricity Net Generation	Capacity Factor <sup>d</sup>
	Number	Million Kilowatts	Million Kilowatthours	Percent	
<b>1957 Total</b> .....	<b>1</b>	<b>0.055</b>	<b>10</b>	<b>(s)</b>	<b>NA</b>
<b>1960 Total</b> .....	<b>3</b>	<b>.411</b>	<b>518</b>	<b>.1</b>	<b>NA</b>
<b>1965 Total</b> .....	<b>13</b>	<b>.793</b>	<b>3,657</b>	<b>.3</b>	<b>NA</b>
<b>1970 Total</b> .....	<b>20</b>	<b>7.004</b>	<b>21,804</b>	<b>1.4</b>	<b>NA</b>
<b>1975 Total</b> .....	<b>57</b>	<b>37.267</b>	<b>172,505</b>	<b>9.0</b>	<b>55.9</b>
<b>1980 Total</b> .....	<b>71</b>	<b>51.810</b>	<b>251,116</b>	<b>11.0</b>	<b>56.3</b>
<b>1985 Total</b> .....	<b>96</b>	<b>79.397</b>	<b>383,691</b>	<b>15.5</b>	<b>58.0</b>
<b>1990 Total</b> .....	<b>112</b>	<b>99.624</b>	<b>576,862</b>	<b>19.0</b>	<b>66.0</b>
<b>1995 Total</b> .....	<b>109</b>	<b>99.515</b>	<b>673,402</b>	<b>20.1</b>	<b>77.4</b>
<b>2000 Total</b> .....	<b>104</b>	<b>97.860</b>	<b>753,893</b>	<b>19.8</b>	<b>88.1</b>
<b>2001 Total</b> .....	<b>104</b>	<b>98.159</b>	<b>768,826</b>	<b>20.6</b>	<b>89.4</b>
<b>2002 Total</b> .....	<b>104</b>	<b>98.657</b>	<b>780,064</b>	<b>20.2</b>	<b>90.3</b>
<b>2003 Total</b> .....	<b>104</b>	<b>99.209</b>	<b>763,733</b>	<b>19.7</b>	<b>87.9</b>
<b>2004 Total</b> .....	<b>104</b>	<b>99.628</b>	<b>788,528</b>	<b>19.9</b>	<b>90.1</b>
<b>2005 Total</b> .....	<b>104</b>	<b>99.988</b>	<b>781,986</b>	<b>19.3</b>	<b>89.3</b>
<b>2006 Total</b> .....	<b>104</b>	<b>100.334</b>	<b>787,219</b>	<b>19.4</b>	<b>89.6</b>
<b>2007 Total</b> .....	<b>104</b>	<b>100.266</b>	<b>806,425</b>	<b>19.4</b>	<b>91.8</b>
<b>2008 Total</b> .....	<b>104</b>	<b>100.755</b>	<b>806,208</b>	<b>19.6</b>	<sup>d</sup> <b>91.1</b>
<b>2009 Total</b> .....	<b>104</b>	<b>101.004</b>	<b>798,855</b>	<b>20.2</b>	<b>90.3</b>
<b>2010 Total</b> .....	<b>104</b>	<b>101.167</b>	<b>806,968</b>	<b>19.6</b>	<b>91.1</b>
<b>2011 Total</b> .....	<b>104</b>	<sup>c</sup> <b>101.419</b>	<b>790,204</b>	<b>19.3</b>	<b>89.1</b>
<b>2012</b> January .....	104	101.602	72,381	21.3	95.8
February .....	104	101.602	63,847	20.6	90.3
March .....	104	101.602	61,729	20.0	81.7
April .....	104	101.602	55,871	18.9	76.4
May .....	104	101.625	62,081	18.4	82.1
June .....	104	101.625	65,140	18.1	89.0
July .....	104	101.747	69,129	16.7	91.3
August .....	104	101.856	69,602	17.6	91.8
September .....	104	101.856	64,511	19.3	88.0
October .....	104	101.856	59,743	19.2	78.8
November .....	104	101.885	56,713	18.5	77.3
December .....	104	101.885	68,584	20.5	90.5
<b>Total</b> .....	<b>104</b>	<b>101.885</b>	<b>769,331</b>	<b>19.0</b>	<b>86.1</b>
<b>2013</b> January .....	104	<sup>E</sup> 101.923	71,406	20.5	<sup>E</sup> 94.2
February .....	103	<sup>E</sup> 101.063	61,483	19.9	<sup>E</sup> 90.5
March .....	103	<sup>E</sup> 101.172	62,947	19.4	<sup>E</sup> 83.6
April .....	103	<sup>E</sup> 101.468	56,767	19.0	<sup>E</sup> 77.7
May .....	102	<sup>E</sup> 101.147	62,848	19.5	<sup>E</sup> 83.4
June .....	100	<sup>E</sup> 98.997	66,430	18.6	<sup>E</sup> 93.2
July .....	100	<sup>E</sup> 98.997	70,539	17.9	<sup>E</sup> 95.8
August .....	100	<sup>E</sup> 98.997	71,344	18.6	<sup>E</sup> 96.9
September .....	100	<sup>E</sup> 98.997	65,799	19.3	<sup>E</sup> 92.3
October .....	100	<sup>E</sup> 98.997	63,184	20.1	<sup>E</sup> 85.8
November .....	100	<sup>E</sup> 98.997	64,975	20.7	<sup>E</sup> 91.2
December .....	100	<sup>E</sup> 99.105	71,294	20.2	<sup>E</sup> 96.7
<b>Total</b> .....	<b>100</b>	<sup>E</sup> <b>99.105</b>	<b>789,017</b>	<b>19.4</b>	<sup>E</sup> <b>90.1</b>
<b>2014</b> January .....	100	<sup>E</sup> 98.957	73,064	19.4	<sup>E</sup> 99.2
February .....	100	<sup>E</sup> 98.977	62,639	19.4	<sup>E</sup> 94.1
March .....	100	<sup>E</sup> 98.977	62,397	18.8	<sup>E</sup> 84.6
April .....	100	<sup>E</sup> 98.977	56,385	19.0	<sup>E</sup> 79.0
May .....	100	<sup>E</sup> 98.977	62,947	19.4	<sup>E</sup> 85.4
June .....	100	<sup>E</sup> 98.977	68,138	19.1	<sup>E</sup> 95.6
July .....	100	<sup>E</sup> 99.189	71,940	18.7	<sup>E</sup> 97.5
August .....	100	<sup>E</sup> 99.180	71,129	18.5	<sup>E</sup> 96.4
September .....	100	<sup>E</sup> 99.242	67,535	19.9	<sup>E</sup> 94.5
October .....	100	<sup>E</sup> 99.224	62,391	19.9	<sup>E</sup> 84.5
<b>10-Month Total</b> .....	<b>100</b>	<sup>E</sup> <b>99.224</b>	<b>658,565</b>	<b>19.2</b>	<sup>E</sup> <b>91.1</b>
<b>2013 10-Month Total</b> .....	<b>100</b>	<sup>E</sup> <b>98.997</b>	<b>652,747</b>	<b>19.2</b>	<sup>E</sup> <b>89.3</b>
<b>2012 10-Month Total</b> .....	<b>104</b>	<b>101.856</b>	<b>644,035</b>	<b>18.9</b>	<b>86.5</b>

<sup>a</sup> 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.

<sup>b</sup> At end of period.

<sup>c</sup> For the definition of "Net Summer Capacity," see Note 2, "Nuclear Capacity," at end of section. Beginning in 2011, monthly capacity values are estimated in two steps: 1) uprates and derates 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 allocated to the month of January.

<sup>d</sup> Beginning in 2008, capacity factor data are calculated using a new

methodology. For an explanation of the method of calculating the capacity factor, see Note 2, "Nuclear Capacity," at end of section.

<sup>E</sup>=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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#nuclear> (Excel and CSV files) for all available annual data beginning in 1957 and monthly data beginning in 1973.

Sources: See end of section.

## 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 were retired in 2013: Crystal River 3 in February; Kewaunee in May; and San Onofre 2 and 3 in June.

**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.

Through 2007, 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). For the methodology used to calculate capacity factors beginning in 2008, see U.S. Energy Information Administration, *Electric Power Monthly*, Appendix C notes on “Average Capacity Factors.”

### 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](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

1973–2007: Calculated by EIA using the method described above in Note 2.

2008 forward: EIA, Form EIA-860, “Annual Electric Generator Report”; Form EIA-860M, “Monthly Update to the Annual Electric Generator Report”; and Form EIA-923, “Power Plant Operations Report.”

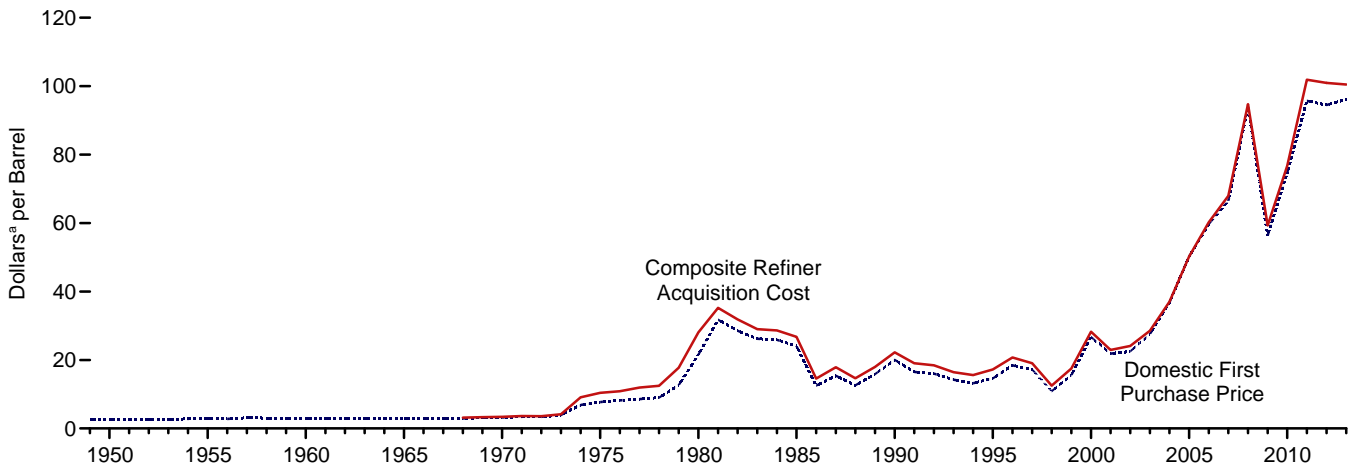


## 9. Energy Prices

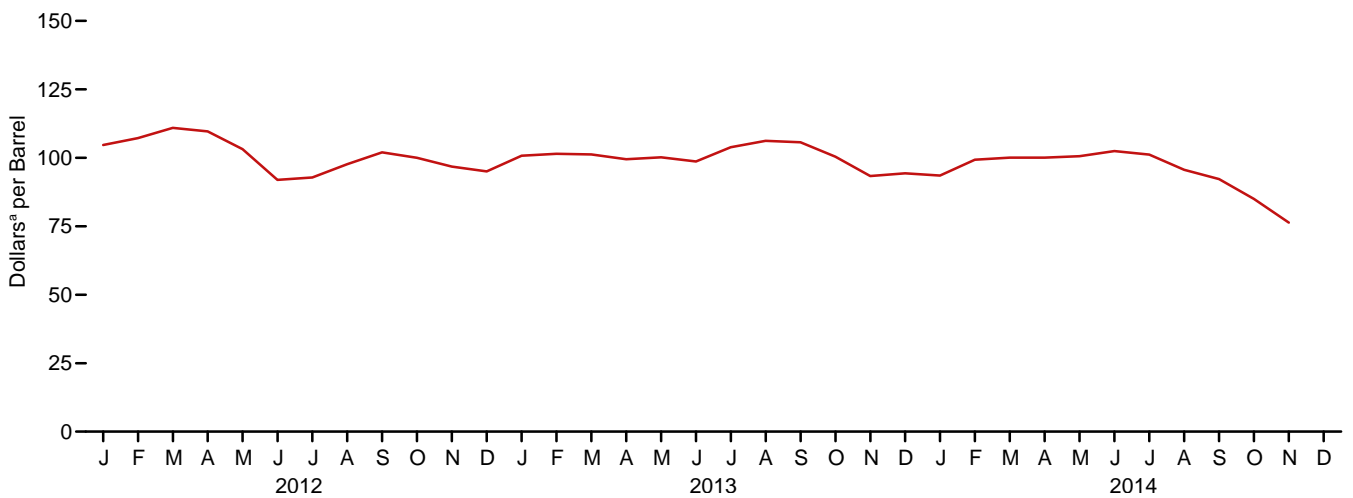
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## Figure 9.1 Petroleum Prices

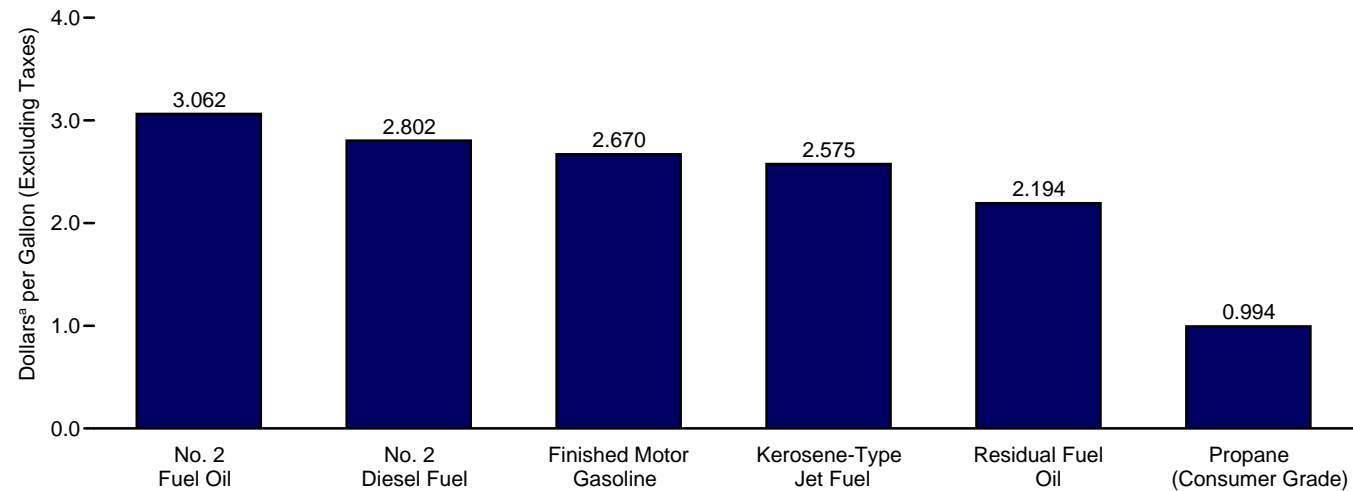
### Crude Oil Prices, 1949–2013



### Composite Refiner Acquisition Cost, Monthly



### Refiner Prices to End Users: Selected Products, October 2014



<sup>a</sup> 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<sup>a</sup> per Barrel)

	Domestic First Purchase Price <sup>c</sup>	F.O.B. Cost of Imports <sup>d</sup>	Landed Cost of Imports <sup>e</sup>	Refiner Acquisition Cost <sup>b</sup>		
				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	<sup>E</sup> 3.46	<sup>E</sup> 2.96	<sup>E</sup> 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 Average .....	95.73	101.66	102.92	100.71	102.63	101.87
<b>2012</b> 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	110.92	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
<b>Average</b> .....	<b>94.52</b>	<b>99.78</b>	<b>101.00</b>	<b>100.72</b>	<b>101.09</b>	<b>100.93</b>
<b>2013</b> January .....	95.00	94.93	95.12	103.78	97.91	100.78
February .....	95.01	100.46	98.93	103.75	99.23	101.45
March .....	95.54	99.73	98.35	103.45	99.11	101.23
April .....	94.41	95.59	95.75	102.53	96.45	99.50
May .....	94.75	96.12	97.39	101.98	98.50	100.17
June .....	93.82	96.22	96.90	100.26	97.17	98.67
July .....	101.41	101.36	101.19	106.19	101.56	103.85
August .....	102.96	101.89	103.13	108.30	104.16	106.20
September .....	102.32	100.82	101.59	107.96	103.49	105.70
October .....	96.18	92.81	94.89	103.00	97.84	100.41
November .....	88.70	88.30	89.45	96.09	90.36	93.32
December .....	91.85	89.90	90.07	97.87	90.57	94.32
<b>Average</b> .....	<b>95.99</b>	<b>96.56</b>	<b>96.99</b>	<b>102.91</b>	<b>98.11</b>	<b>100.49</b>
<b>2014</b> January .....	89.59	90.93	90.97	97.17	89.63	93.52
February .....	96.89	92.76	95.38	102.33	96.04	99.32
March .....	96.18	93.06	95.54	102.61	97.04	100.05
April .....	96.47	94.18	96.47	102.42	97.30	100.07
May .....	95.69	96.17	98.00	102.36	98.44	100.57
June .....	98.70	97.57	99.27	104.18	100.17	102.45
July .....	96.67	93.79	96.59	103.20	98.66	101.18
August .....	90.72	<sup>R</sup> 89.28	<sup>R</sup> 91.53	97.60	93.23	95.61
September .....	87.34	<sup>R</sup> 85.58	<sup>R</sup> 87.62	<sup>R</sup> 94.62	<sup>R</sup> 89.38	<sup>R</sup> 92.26
October .....	<sup>R</sup> 78.83	<sup>R</sup> 78.93	<sup>R</sup> 82.14	<sup>R</sup> 86.72	<sup>R</sup> 82.77	<sup>R</sup> 85.00
November .....	NA	NA	NA	<sup>E</sup> 78.37	<sup>E</sup> 74.29	<sup>E</sup> 76.35

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

<sup>b</sup> See Note 1, "Crude Oil Refinery Acquisition Costs," at end of section.

<sup>c</sup> See Note 2, "Crude Oil Domestic First Purchase Prices," at end of section.

<sup>d</sup> See Note 3, "Crude Oil F.O.B. Costs," at end of section.

<sup>e</sup> See Note 4, "Crude Oil Landed Costs," at end of section.

<sup>R</sup>=Revised, <sup>NA</sup>=Not available, <sup>E</sup>=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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

**Table 9.2 F.O.B. Costs of Crude Oil Imports From Selected Countries**  
(Dollars<sup>a</sup> per Barrel)

	Selected Countries							Persian Gulf Nations <sup>b</sup>	Total OPEC <sup>c</sup>	Total Non-OPEC <sup>c</sup>
	Angola	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
<b>1973 Average<sup>d</sup></b> .....	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	55.53	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 Average .....	111.82	100.21	100.90	115.35	107.08	–	97.23	106.47	105.34	98.49
<b>2012</b>										
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
<b>Average</b> .....	<b>111.23</b>	<b>106.43</b>	<b>101.84</b>	<b>114.51</b>	<b>106.65</b>	<b>–</b>	<b>100.15</b>	<b>105.45</b>	<b>104.39</b>	<b>95.71</b>
<b>2013</b>										
January .....	W	106.99	100.16	W	W	–	97.15	105.30	102.42	91.11
February .....	W	106.45	108.25	W	W	–	104.06	105.22	106.93	96.65
March .....	W	101.31	105.16	111.03	W	–	101.60	108.10	105.77	94.09
April .....	W	99.58	99.94	W	W	–	95.01	100.50	98.68	93.14
May .....	103.46	98.97	99.06	106.45	W	–	95.48	98.46	98.72	93.99
June .....	103.67	98.56	97.16	W	W	–	95.71	97.42	98.45	94.59
July .....	W	102.20	101.27	W	W	W	100.32	101.21	102.36	100.54
August .....	W	105.59	100.97	111.28	W	–	101.12	104.10	103.69	100.42
September .....	113.86	103.16	100.14	W	103.53	W	100.37	103.22	104.44	98.42
October .....	–	W	93.76	–	98.96	–	95.72	98.48	97.38	89.45
November .....	W	W	88.56	W	91.38	–	91.79	92.02	93.23	84.76
December .....	W	95.50	90.25	–	95.97	–	92.46	94.88	94.41	87.24
<b>Average</b> .....	<b>107.71</b>	<b>101.24</b>	<b>98.40</b>	<b>110.06</b>	<b>101.16</b>	<b>W</b>	<b>97.52</b>	<b>100.62</b>	<b>100.57</b>	<b>93.67</b>
<b>2014</b>										
January .....	W	95.84	89.30	–	99.21	–	89.69	98.44	94.86	87.56
February .....	W	96.04	91.77	–	102.26	–	92.88	100.70	97.51	89.73
March .....	W	W	91.38	W	101.25	–	92.27	100.67	97.19	90.59
April .....	W	98.61	93.22	W	99.76	–	95.49	99.02	99.30	90.49
May .....	W	98.75	95.35	–	100.58	–	96.67	98.89	98.29	94.59
June .....	W	99.03	98.20	–	104.95	–	98.19	102.49	100.67	95.67
July .....	W	100.11	94.65	–	105.25	–	92.45	103.81	97.43	91.37
August .....	W	92.38	91.17	–	<sup>R</sup> 99.74	–	<sup>R</sup> 89.22	<sup>R</sup> 98.95	<sup>R</sup> 93.30	<sup>R</sup> 86.68
September .....	W	<sup>R</sup> 86.08	<sup>R</sup> 88.50	–	<sup>R</sup> 94.92	–	<sup>R</sup> 83.67	<sup>R</sup> 93.57	<sup>R</sup> 88.70	<sup>R</sup> 83.41
October .....	W	72.47	80.27	–	85.73	–	75.22	85.04	80.44	77.83

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.  
<sup>b</sup> Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).  
<sup>c</sup> 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."  
<sup>d</sup> Based on October, November, and December data only.  
<sup>R</sup>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> (Excel and CSV files) for all available annual and monthly data beginning in 1973.  
Sources: See end of section.

**Table 9.3 Landed Costs of Crude Oil Imports From Selected Countries**  
(Dollars<sup>a</sup> per Barrel)

	Selected Countries								Persian Gulf Nations <sup>b</sup>	Total OPEC <sup>c</sup>	Total Non-OPEC <sup>c</sup>
	Angola	Canada	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average <sup>d</sup>	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 Average	114.05	89.92	102.57	101.21	116.43	108.83	118.45	100.14	108.01	107.84	98.64
<b>2012</b> 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
<b>Average</b>	<b>114.95</b>	<b>84.24</b>	<b>107.07</b>	<b>102.45</b>	<b>116.88</b>	<b>108.15</b>	<b>W</b>	<b>101.58</b>	<b>107.74</b>	<b>107.56</b>	<b>95.05</b>
<b>2013</b> January	115.79	75.30	106.36	101.04	120.99	108.57	–	99.04	107.02	106.84	86.31
February	115.90	76.46	109.28	108.95	117.89	108.75	W	105.54	107.96	108.86	90.59
March	110.56	79.51	105.37	106.36	113.36	107.59	W	103.35	107.94	107.50	90.13
April	105.56	83.06	101.42	100.62	106.07	102.28	W	96.19	102.30	101.76	90.88
May	106.47	86.92	100.70	99.92	108.12	101.54	W	97.44	101.35	101.63	93.52
June	106.73	88.30	99.36	97.56	108.38	101.41	W	97.44	101.26	101.21	93.48
July	110.43	94.14	102.47	101.87	W	104.13	W	101.65	103.15	103.96	98.64
August	111.88	98.63	106.04	101.52	114.47	104.62	W	102.95	104.15	104.91	101.58
September	113.92	95.02	105.76	100.70	115.21	101.16	W	102.09	101.94	104.10	99.35
October	W	85.36	102.29	94.35	–	98.68	–	97.60	99.31	99.53	91.23
November	110.50	77.34	97.30	89.19	W	96.12	–	94.42	96.57	96.32	83.89
December	113.16	75.23	97.41	91.11	W	99.29	W	94.83	98.30	98.02	84.14
<b>Average</b>	<b>110.81</b>	<b>84.41</b>	<b>103.00</b>	<b>99.06</b>	<b>112.87</b>	<b>102.60</b>	<b>111.23</b>	<b>99.34</b>	<b>102.53</b>	<b>102.98</b>	<b>91.99</b>
<b>2014</b> January	W	78.19	97.87	90.85	–	101.30	–	92.52	100.18	98.30	84.91
February	110.96	87.98	98.59	92.92	W	102.62	W	95.33	101.54	100.41	91.27
March	107.52	89.39	98.71	92.44	W	102.15	–	94.63	101.68	100.36	92.15
April	108.70	89.01	99.68	94.01	W	102.35	W	97.29	101.97	101.82	91.99
May	W	91.77	101.24	96.17	W	103.11	–	98.49	102.06	101.61	94.97
June	W	93.03	102.61	99.36	–	104.11	W	99.78	102.78	102.39	97.01
July	W	90.27	101.68	95.61	–	103.01	W	94.12	102.39	100.17	94.03
August	103.69	<sup>R</sup> 83.93	95.70	92.07	–	<sup>R</sup> 98.80	–	<sup>R</sup> 91.64	<sup>R</sup> 99.98	<sup>R</sup> 97.19	<sup>R</sup> 88.15
September	<sup>R</sup> 99.49	<sup>R</sup> 81.44	<sup>R</sup> 91.49	<sup>R</sup> 89.25	–	<sup>R</sup> 95.26	–	<sup>R</sup> 85.18	<sup>R</sup> 95.21	<sup>R</sup> 91.85	<sup>R</sup> 85.23
October	92.57	77.90	80.37	80.95	W	89.46	W	76.84	90.57	86.39	79.86

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

<sup>b</sup> Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

<sup>c</sup> 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."

<sup>d</sup> Based on October, November, and December data only.

<sup>R</sup> 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> (Excel and CSV files) for all available annual and monthly 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 2008*, Table 22. • **2008 forward:** EIA, *Petroleum Marketing Monthly*, January 2015, Table 22.

**Table 9.4 Retail Motor Gasoline and On-Highway Diesel Fuel Prices**  
(Dollars<sup>a</sup> 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 <sup>b</sup>	All Grades <sup>c</sup>	Conventional Gasoline Areas <sup>d</sup>	Reformulated Gasoline Areas <sup>e</sup>	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 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
September	--	3.556	3.881	3.616	3.474	3.656	3.532	3.961
October	--	3.375	3.702	3.434	3.285	3.468	3.344	3.885
November	--	3.251	3.585	3.310	3.186	3.362	3.243	3.839
December	--	3.277	3.604	3.333	3.209	3.418	3.276	3.882
Average	--	3.526	3.843	3.584	3.443	3.635	3.505	3.922
2014 January	--	3.320	3.651	3.378	3.252	3.438	3.313	3.893
February	--	3.364	3.694	3.422	3.305	3.464	3.356	3.984
March	--	3.532	3.858	3.590	3.474	3.658	3.533	4.001
April	--	3.659	3.986	3.717	3.590	3.809	3.661	3.964
May	--	3.691	4.020	3.745	3.601	3.824	3.673	3.943
June	--	3.695	4.027	3.750	3.626	3.831	3.692	3.906
July	--	3.633	3.976	3.690	3.539	3.763	3.611	3.884
August	--	3.481	3.835	3.540	3.425	3.616	3.487	3.838
September	--	3.403	3.758	3.463	3.354	3.516	3.406	3.792
October	--	3.182	3.547	3.241	3.120	3.277	3.171	3.681
November	--	2.887	3.262	2.945	2.875	2.990	2.912	3.647
December	--	2.560	2.940	2.618	2.488	2.657	2.543	3.411
Average	--	3.367	3.713	3.425	3.299	3.481	3.358	3.825

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.  
<sup>b</sup> The 1981 average (available in Web file) is based on September through December data only.  
<sup>c</sup> Also includes grades of motor gasoline not shown separately.  
<sup>d</sup> Any area that does not require the sale of reformulated gasoline.  
<sup>e</sup> "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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (Excel and CSV files) for all available annual data beginning in 1949 and monthly 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."

**Table 9.5 Refiner Prices of Residual Fuel Oil**  
(Dollars<sup>a</sup> 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
<b>1978 Average</b> .....	0.293	0.314	0.245	0.275	0.263	0.298
<b>1980 Average</b> .....	.608	.675	.479	.523	.528	.607
<b>1985 Average</b> .....	.610	.644	.560	.582	.577	.610
<b>1990 Average</b> .....	.472	.505	.372	.400	.413	.444
<b>1995 Average</b> .....	.383	.436	.338	.377	.363	.392
<b>2000 Average</b> .....	.627	.708	.512	.566	.566	.602
<b>2001 Average</b> .....	.523	.642	.428	.492	.476	.531
<b>2002 Average</b> .....	.546	.640	.508	.544	.530	.569
<b>2003 Average</b> .....	.728	.804	.588	.651	.661	.698
<b>2004 Average</b> .....	.764	.835	.601	.692	.681	.739
<b>2005 Average</b> .....	1.115	1.168	.842	.974	.971	1.048
<b>2006 Average</b> .....	1.202	1.342	1.085	1.173	1.136	1.218
<b>2007 Average</b> .....	1.406	1.436	1.314	1.350	1.350	1.374
<b>2008 Average</b> .....	1.918	2.144	1.843	1.889	1.866	1.964
<b>2009 Average</b> .....	1.337	1.413	1.344	1.306	1.342	1.341
<b>2010 Average</b> .....	1.756	1.920	1.679	1.619	1.697	1.713
<b>2011 Average</b> .....	2.389	2.736	2.316	2.257	2.336	2.401
<b>2012</b> 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
<b>Average</b> .....	<b>2.548</b>	<b>3.025</b>	<b>2.429</b>	<b>2.433</b>	<b>2.457</b>	<b>2.592</b>
<b>2013</b> 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 .....	2.316	2.839	2.213	2.421	2.240	2.507
June .....	2.285	2.785	2.214	2.385	2.234	2.454
July .....	2.282	2.768	2.225	2.280	2.242	2.384
August .....	2.331	2.759	2.258	2.411	2.277	2.500
September .....	2.359	2.839	2.265	2.412	2.286	2.513
October .....	2.338	NA	2.232	2.364	2.255	2.532
November .....	2.296	NA	2.190	2.328	2.224	2.492
December .....	2.315	NA	2.177	2.353	2.209	2.458
<b>Average</b> .....	<b>2.363</b>	<b>2.883</b>	<b>2.249</b>	<b>2.353</b>	<b>2.278</b>	<b>2.482</b>
<b>2014</b> January .....	2.337	NA	2.117	2.400	2.173	2.481
February .....	2.459	NA	2.139	2.459	2.207	2.532
March .....	2.470	NA	2.175	2.376	2.255	2.476
April .....	2.401	NA	2.149	2.323	2.226	2.464
May .....	2.350	2.902	2.198	2.304	2.267	2.420
June .....	2.358	2.888	2.247	2.314	2.293	2.423
July .....	2.287	2.977	2.186	2.324	2.223	2.455
August .....	2.148	W	2.130	2.350	2.136	2.471
September .....	2.100	2.756	2.068	2.255	2.077	2.362
October .....	1.939	2.573	1.858	2.099	1.879	2.194

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

NA=Not available. 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 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> (Excel and CSV files) for all available annual data beginning in 1978 and monthly data beginning in 1982.

Sources: • **1978–2007:** EIA, *Petroleum Marketing Annual 2007*, Table 17.

• **2008 forward:** EIA, *Petroleum Marketing Monthly*, January 2015, Table 16.

**Table 9.6 Refiner Prices of Petroleum Products for Resale**  
(Dollars<sup>a</sup> per Gallon, Excluding Taxes)

	Finished Motor Gasoline <sup>b</sup>	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 Average .....	2.867	3.739	3.014	3.065	2.907	3.034	1.467
<b>2012</b> 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
<b>Average .....</b>	<b>2.929</b>	<b>3.919</b>	<b>3.080</b>	<b>3.163</b>	<b>3.031</b>	<b>3.109</b>	<b>1.033</b>
<b>2013</b> 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 .....	2.951	4.068	2.763	2.793	2.708	2.958	.932
June .....	2.882	3.950	2.784	2.806	2.741	2.923	.861
July .....	2.942	4.017	2.899	2.996	2.894	3.015	.903
August .....	2.890	4.025	2.995	3.055	2.954	3.084	1.059
September .....	2.792	3.854	3.017	3.057	2.973	3.095	1.114
October .....	2.632	3.656	2.928	3.029	2.955	3.006	1.154
November .....	2.544	3.467	2.868	2.995	2.910	2.949	1.219
December .....	2.581	3.508	2.978	3.164	3.011	2.998	1.342
<b>Average .....</b>	<b>2.812</b>	<b>3.869</b>	<b>2.953</b>	<b>3.084</b>	<b>2.966</b>	<b>3.028</b>	<b>1.048</b>
<b>2014</b> January .....	2.604	3.538	2.964	3.237	3.059	2.981	1.641
February .....	2.699	3.712	2.981	3.353	3.051	3.091	1.654
March .....	2.855	3.865	2.939	3.153	2.979	3.031	1.198
April .....	2.981	3.940	2.911	2.938	2.911	3.027	1.121
May .....	2.951	3.881	2.932	2.939	2.883	2.987	1.057
June .....	3.001	4.056	2.917	2.926	2.878	2.973	1.054
July .....	2.855	3.914	2.882	2.863	2.825	2.921	1.075
August .....	2.759	3.799	2.882	2.922	2.784	2.900	1.055
September .....	2.669	3.803	2.823	2.851	2.701	2.806	1.097
October .....	2.333	3.548	2.547	2.662	2.505	2.644	1.044

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

<sup>b</sup> See Note 5, "Motor Gasoline Prices," at end of section.

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> (Excel and CSV files) for all available annual data beginning in 1978 and monthly data beginning in 1982.

Sources: • 1978–2007: EIA, *Petroleum Marketing Annual 2007*, Table 4. • 2008 forward: EIA, *Petroleum Marketing Monthly*, January 2015, Table 4.



**Table 9.7 Refiner Prices of Petroleum Products to End Users**  
(Dollars<sup>a</sup> per Gallon, Excluding Taxes)

	Finished Motor Gasoline <sup>b</sup>	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 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 .....	3.188	3.900	2.787	3.786	3.222	3.058	.953
June .....	3.184	4.191	2.813	3.634	3.172	3.028	.876
July .....	3.146	4.224	2.908	3.840	3.244	3.099	.935
August .....	3.097	4.298	3.002	3.707	3.314	3.169	1.074
September .....	3.059	3.982	3.040	3.849	3.327	3.184	1.115
October .....	2.893	3.653	2.931	3.852	NA	3.085	1.169
November .....	2.759	3.674	2.883	3.847	NA	3.030	1.222
December .....	2.759	3.678	3.008	W	3.578	3.055	1.322
Average .....	3.049	3.932	2.979	3.842	3.335	3.122	1.028
2014 January .....	2.816	W	2.987	W	3.591	3.024	1.457
February .....	2.913	4.142	2.994	W	3.687	3.139	1.513
March .....	3.104	W	2.942	4.067	3.621	3.115	1.137
April .....	3.214	W	2.931	4.108	3.572	3.109	1.122
May .....	3.245	W	2.965	4.056	3.546	3.081	1.056
June .....	3.265	W	2.945	W	3.493	3.064	1.072
July .....	3.128	W	2.906	3.965	3.428	3.030	1.063
August .....	3.016	W	2.916	3.903	3.408	3.012	1.038
September .....	2.936	W	2.834	W	3.324	2.925	1.074
October .....	2.670	W	2.575	W	3.062	2.802	.994

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

<sup>b</sup> See Note 5, "Motor Gasoline Prices," at end of section.

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

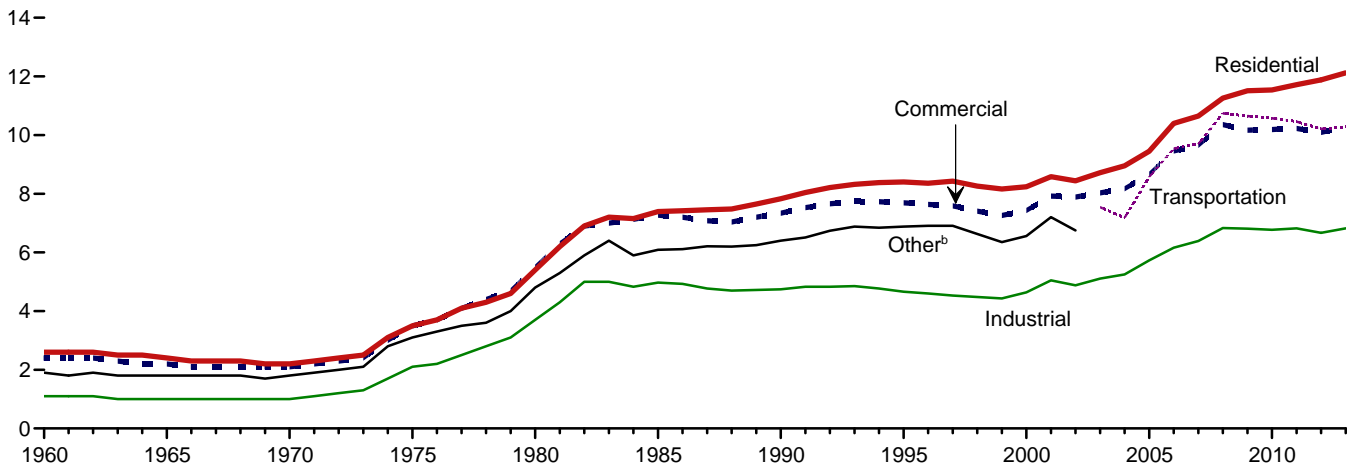
Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (Excel and CSV files) for all available annual data beginning in 1978 and monthly data beginning in 1982.

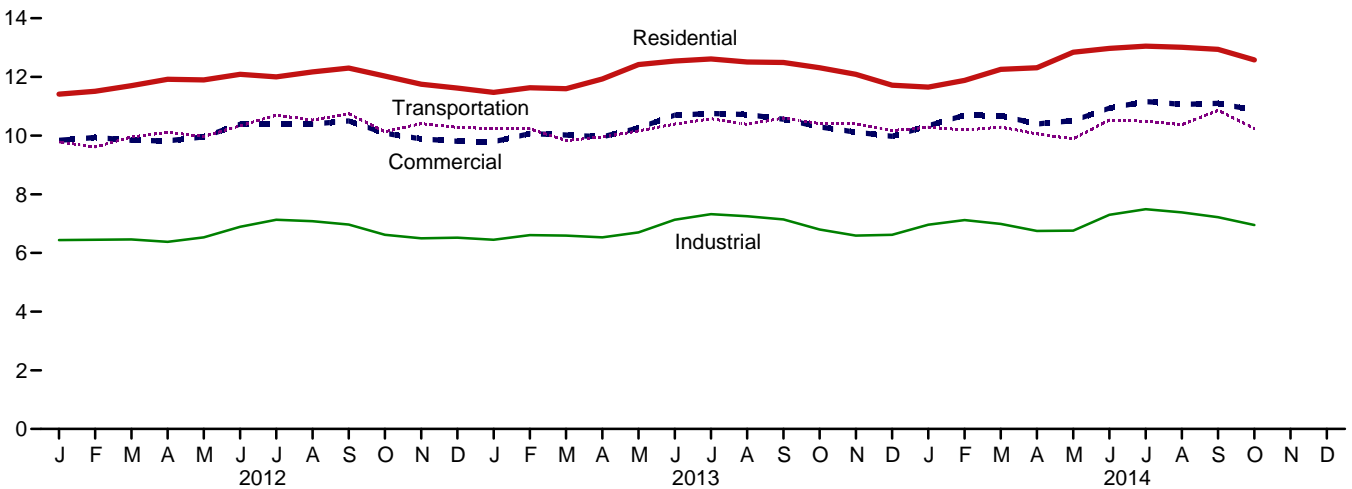
Sources: • 1978–2007: EIA, *Petroleum Marketing Annual 2007*, Table 2. • 2008 forward: EIA, *Petroleum Marketing Monthly*, January 2015, Table 2.

**Figure 9.2 Average Retail Prices of Electricity**  
(Cents<sup>a</sup> per Kilowatthour)

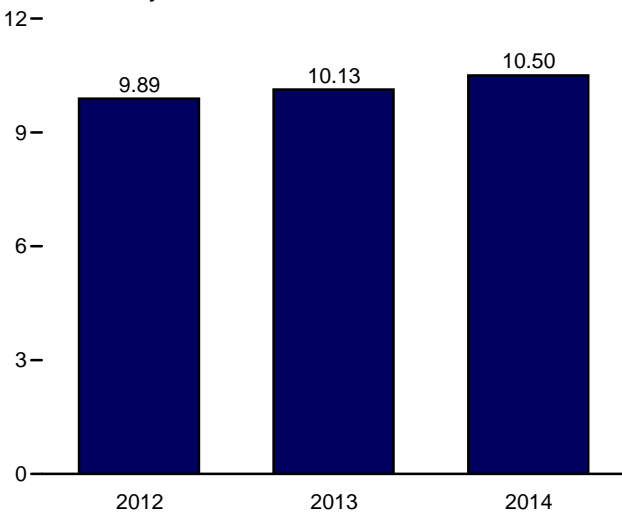
By Sector, 1960–2013



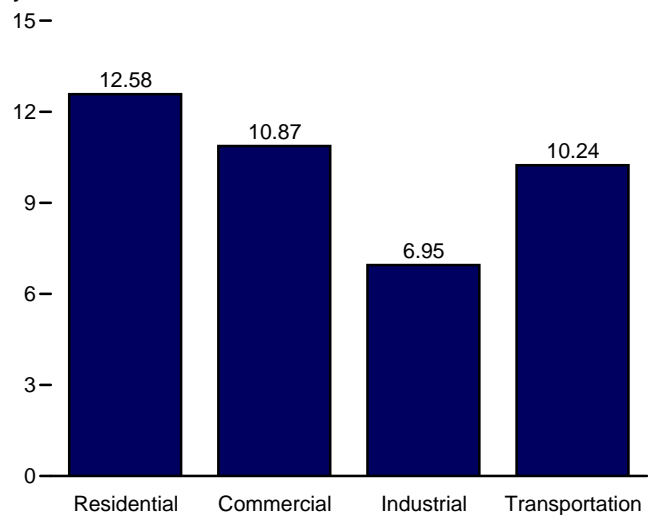
By Sector, Monthly



Total, January–October



By Sector, October 2014



<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Price" in Glossary.

<sup>b</sup> 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<sup>a</sup> per Kilowatthour, Including Taxes)

	Residential	Commercial <sup>b</sup>	Industrial <sup>c</sup>	Transportation <sup>d</sup>	Other <sup>e</sup>	Total
<b>1960 Average</b> .....	2.60	2.40	1.10	NA	1.90	1.80
<b>1965 Average</b> .....	2.40	2.20	1.00	NA	1.80	1.70
<b>1970 Average</b> .....	2.20	2.10	1.00	NA	1.80	1.70
<b>1975 Average</b> .....	3.50	3.50	2.10	NA	3.10	2.90
<b>1980 Average</b> .....	5.40	5.50	3.70	NA	4.80	4.70
<b>1985 Average</b> .....	7.39	7.27	4.97	NA	6.09	6.44
<b>1990 Average</b> .....	7.83	7.34	4.74	NA	6.40	6.57
<b>1995 Average</b> .....	8.40	7.69	4.66	NA	6.88	6.89
<b>2000 Average</b> .....	8.24	7.43	4.64	NA	6.56	6.81
<b>2001 Average</b> .....	8.58	7.92	5.05	NA	7.20	7.29
<b>2002 Average</b> .....	8.44	7.89	4.88	NA	6.75	7.20
<b>2003 Average</b> .....	8.72	8.03	5.11	7.54	--	7.44
<b>2004 Average</b> .....	8.95	8.17	5.25	7.18	--	7.61
<b>2005 Average</b> .....	9.45	8.67	5.73	8.57	--	8.14
<b>2006 Average</b> .....	10.40	9.46	6.16	9.54	--	8.90
<b>2007 Average</b> .....	10.65	9.65	6.39	9.70	--	9.13
<b>2008 Average</b> .....	11.26	10.36	6.83	10.74	--	9.74
<b>2009 Average</b> .....	11.51	10.17	6.81	10.65	--	9.82
<b>2010 Average</b> .....	11.54	10.19	6.77	10.57	--	9.83
<b>2011 Average</b> .....	11.72	10.23	6.82	10.46	--	9.90
<b>2012</b>						
January .....	11.41	9.84	6.44	9.78	--	9.61
February .....	11.51	9.94	6.45	9.61	--	9.58
March .....	11.70	9.84	6.46	9.95	--	9.52
April .....	11.92	9.82	6.38	10.11	--	9.47
May .....	11.90	9.96	6.53	9.97	--	9.64
June .....	12.09	10.39	6.89	10.33	--	10.13
July .....	12.00	10.39	7.13	10.70	--	10.30
August .....	12.17	10.39	7.08	10.53	--	10.32
September .....	12.30	10.50	6.97	10.74	--	10.26
October .....	12.03	10.08	6.62	10.13	--	9.74
November .....	11.75	9.89	6.50	10.41	--	9.58
December .....	11.62	9.81	6.52	10.28	--	9.64
<b>Average</b> .....	<b>11.88</b>	<b>10.09</b>	<b>6.67</b>	<b>10.21</b>	--	<b>9.84</b>
<b>2013</b>						
January .....	11.47	9.79	6.45	10.24	--	9.66
February .....	11.63	10.07	6.61	10.23	--	9.79
March .....	11.60	10.02	6.59	9.83	--	9.71
April .....	11.93	9.96	6.53	9.95	--	9.67
May .....	12.42	10.26	6.70	10.16	--	9.95
June .....	12.54	10.70	7.13	10.39	--	10.47
July .....	12.61	10.76	7.32	10.57	--	10.70
August .....	12.51	10.72	7.25	10.38	--	10.59
September .....	12.49	10.56	7.14	10.60	--	10.43
October .....	12.31	10.30	6.80	10.41	--	10.01
November .....	12.09	10.12	6.59	10.40	--	9.83
December .....	11.72	9.98	6.62	10.17	--	9.88
<b>Average</b> .....	<b>12.12</b>	<b>10.29</b>	<b>6.82</b>	<b>10.28</b>	--	<b>10.08</b>
<b>2014</b>						
January .....	11.65	10.34	6.96	10.29	--	10.13
February .....	11.88	10.70	7.12	10.19	--	10.35
March .....	12.26	10.68	6.99	10.29	--	10.32
April .....	12.31	10.40	6.75	10.06	--	10.01
May .....	12.84	10.51	6.76	9.89	--	10.21
June .....	12.97	10.94	7.30	10.53	--	10.75
July .....	13.05	11.16	7.49	10.49	--	11.01
August .....	13.01	11.07	7.38	10.37	--	10.92
September .....	12.94	11.10	7.22	10.86	--	10.80
October .....	12.58	10.87	6.95	10.24	--	10.35
<b>10-Month Average</b> .....	<b>12.54</b>	<b>10.79</b>	<b>7.10</b>	<b>10.32</b>	--	<b>10.50</b>
<b>2013 10-Month Average</b> .....	<b>12.16</b>	<b>10.34</b>	<b>6.86</b>	<b>10.28</b>	--	<b>10.13</b>
<b>2012 10-Month Average</b> .....	<b>11.91</b>	<b>10.13</b>	<b>6.70</b>	<b>10.18</b>	--	<b>9.89</b>

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Price" in Glossary.

<sup>b</sup> Commercial sector. For 1960–2002, prices exclude public street and highway lighting, interdepartmental sales, and other sales to public authorities.

<sup>c</sup> Industrial sector. For 1960–2002, prices exclude agriculture and irrigation.

<sup>d</sup> Transportation sector, including railroads and railways.

<sup>e</sup> 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.

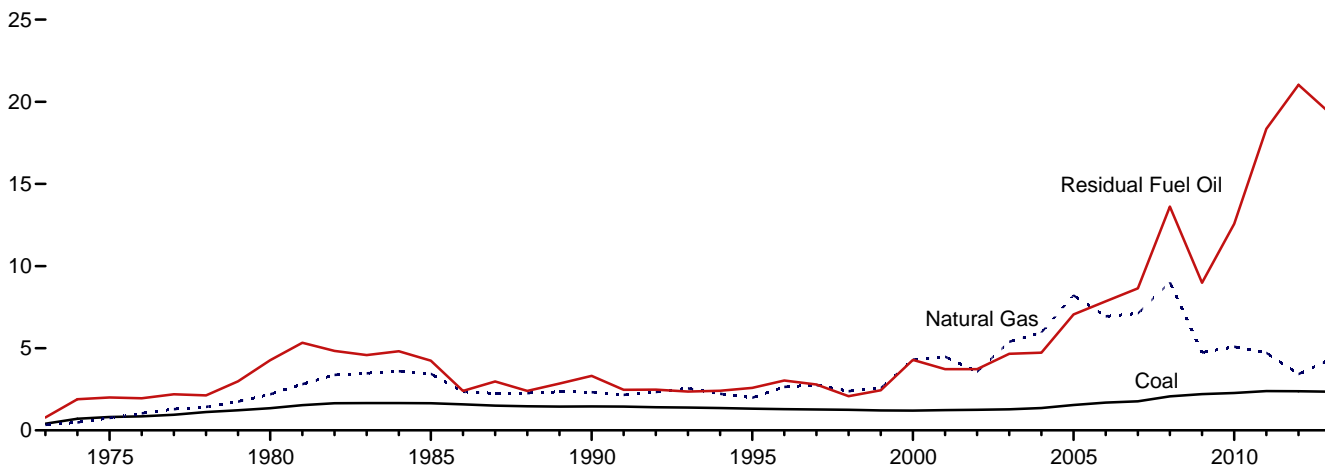
(Class A utilities are those with operating revenues of \$2.5 million or more; Class B utilities are those with operating revenues between \$1 million and \$2.5 million.) For 1980–1982, data are for selected Class A utilities whose electric operating revenues were \$100 million or more during the previous 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (Excel and CSV files) for all available annual data beginning in 1960 and monthly data beginning in 1976.

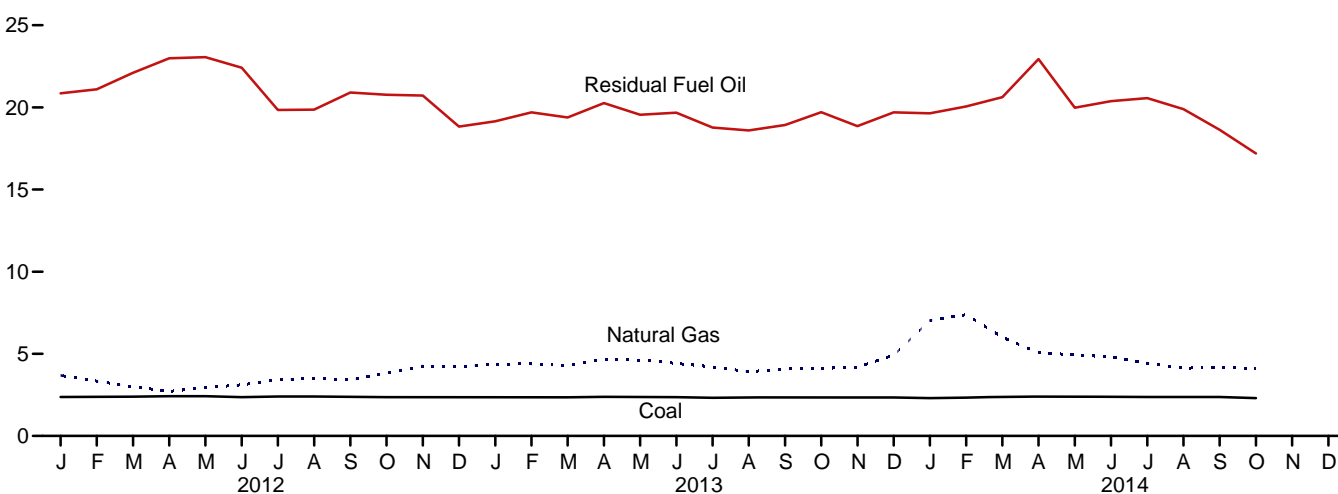
Sources: • **1960–September 1977:** Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • **October 1977–February 1980:** Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • **March 1980–1982:** FERC, Form FPC-5, "Electric Utility Company Monthly Statement." • **1983:** U.S. Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement." • **1984–2010:** EIA, Form EIA-861, "Annual Electric Power Industry Report." • **2011 forward:** EIA, *Electric Power Monthly*, December 2014, Table 5.3.

**Figure 9.3 Cost of Fossil-Fuel Receipts at Electric Generating Plants**  
(Dollars<sup>a</sup> per Million Btu, Including Taxes)

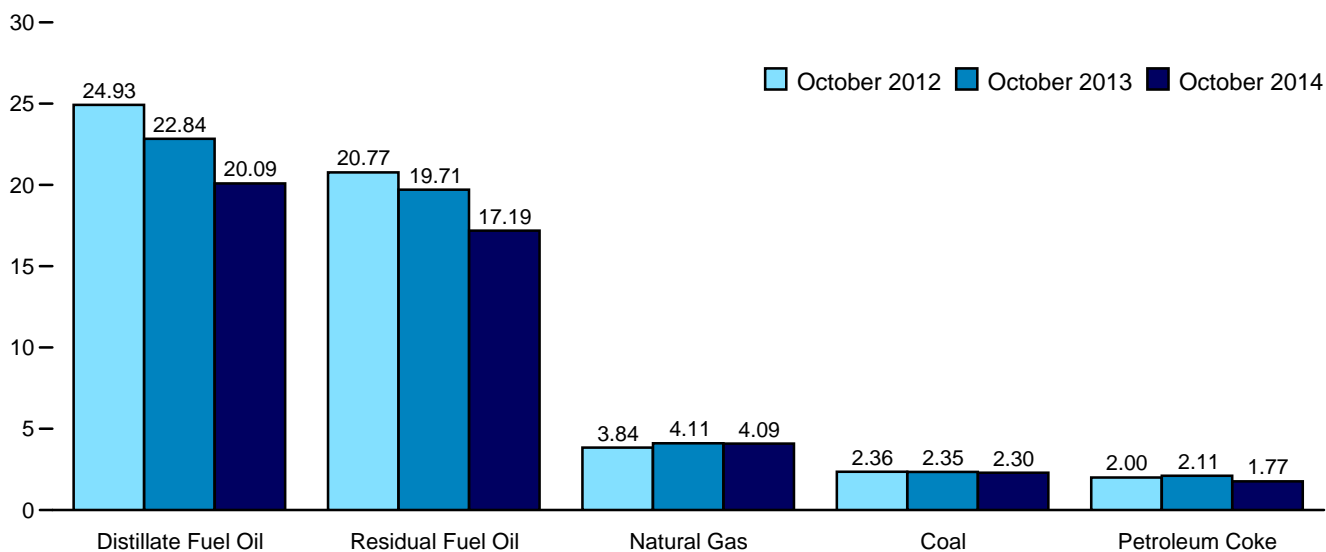
Costs, 1973–2013



Costs, Monthly



By Fuel Type



<sup>a</sup> 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<sup>a</sup> per Million Btu, Including Taxes)

	Coal	Petroleum				Natural Gas <sup>e</sup>	All Fossil Fuels <sup>f</sup>
		Residual Fuel Oil <sup>b</sup>	Distillate Fuel Oil <sup>c</sup>	Petroleum Coke	Total <sup>d</sup>		
<b>1973 Average</b> .....	0.41	0.79	NA	NA	0.80	0.34	0.48
<b>1975 Average</b> .....	.81	2.01	NA	NA	2.02	.75	1.04
<b>1980 Average</b> .....	1.35	4.27	NA	NA	4.35	2.20	1.93
<b>1985 Average</b> .....	1.65	4.24	NA	NA	4.32	3.44	2.09
<b>1990 Average</b> .....	1.45	3.32	5.38	.80	3.35	2.32	1.69
<b>1995 Average</b> .....	1.32	2.59	3.99	.65	2.57	1.98	1.45
<b>2000 Average</b> .....	1.20	4.29	6.65	.58	4.18	4.30	1.74
<b>2001 Average</b> .....	1.23	3.73	6.30	.78	3.69	4.49	1.73
<b>2002 Average<sup>g</sup></b> .....	1.25	3.73	5.34	.78	3.34	3.56	1.86
<b>2003 Average</b> .....	1.28	4.66	6.82	.72	4.33	5.39	2.28
<b>2004 Average</b> .....	1.36	4.73	8.02	.83	4.29	5.96	2.48
<b>2005 Average</b> .....	1.54	7.06	11.72	1.11	6.44	8.21	3.25
<b>2006 Average</b> .....	1.69	7.85	13.28	1.33	6.23	6.94	3.02
<b>2007 Average</b> .....	1.77	8.64	14.85	1.51	7.17	7.11	3.23
<b>2008 Average</b> .....	2.07	13.62	21.46	2.11	10.87	9.01	4.12
<b>2009 Average</b> .....	2.21	8.98	13.22	1.61	7.02	4.74	3.04
<b>2010 Average</b> .....	2.27	12.57	16.61	2.28	9.54	5.09	3.26
<b>2011 Average</b> .....	2.39	18.35	22.46	3.03	12.48	4.72	3.29
<b>2012</b> .....							
January .....	2.37	20.86	22.94	2.43	12.79	3.69	2.86
February .....	2.38	21.10	23.81	2.30	12.66	3.34	2.77
March .....	2.39	22.10	24.96	1.90	12.88	2.99	2.69
April .....	2.42	22.99	24.61	2.11	12.92	2.71	2.61
May .....	2.42	23.06	23.24	2.57	13.66	2.94	2.70
June .....	2.36	22.41	21.63	2.32	13.73	3.11	2.76
July .....	2.40	19.84	21.92	2.41	14.50	3.43	2.92
August .....	2.40	19.86	23.38	2.45	12.61	3.50	2.89
September .....	2.38	20.90	24.42	2.39	10.35	3.41	2.81
October .....	2.36	20.77	24.93	2.00	11.50	3.84	2.91
November .....	2.36	20.72	24.28	2.05	11.71	4.25	2.99
December .....	2.36	18.83	23.44	2.06	10.98	4.21	3.01
<b>Average</b> .....	2.38	21.03	23.49	2.24	12.48	3.42	2.83
<b>2013</b> .....							
January .....	2.35	19.15	22.93	2.02	12.50	4.38	3.09
February .....	2.35	19.70	23.82	W	W	4.39	W
March .....	2.35	19.39	23.85	W	W	4.29	W
April .....	2.38	20.26	22.92	2.26	9.73	4.67	3.16
May .....	2.37	19.55	22.59	2.32	10.81	4.62	3.16
June .....	2.36	19.68	22.37	2.39	10.11	4.42	3.15
July .....	2.32	18.77	23.11	2.27	11.44	4.20	3.12
August .....	2.33	18.60	23.16	2.23	11.81	3.91	3.00
September .....	2.35	18.93	23.50	2.15	10.14	4.08	3.02
October .....	2.35	19.71	22.84	2.11	11.28	4.11	3.00
November .....	2.33	18.86	22.74	1.98	12.24	4.19	3.01
December .....	2.34	19.70	23.21	1.99	10.96	4.91	3.28
<b>Average</b> .....	2.35	19.27	23.05	2.16	11.56	4.33	3.10
<b>2014</b> .....							
January .....	2.30	19.64	23.12	1.73	16.65	7.03	4.09
February .....	2.33	20.06	23.96	W	W	7.39	W
March .....	2.37	20.62	23.82	2.00	12.69	6.00	3.53
April .....	2.40	22.94	22.82	2.11	10.66	5.07	3.26
May .....	2.39	19.98	22.69	2.18	9.88	4.93	3.26
June .....	2.38	20.38	22.73	2.05	10.74	4.82	3.27
July .....	2.37	20.56	22.36	1.88	10.12	4.43	3.17
August .....	2.37	19.89	21.95	1.95	9.83	4.12	3.07
September .....	2.37	18.64	21.32	1.90	10.10	4.19	3.07
October .....	2.30	17.19	20.09	1.77	10.73	4.09	2.97
<b>10-Month Average</b> ...	2.36	19.92	22.76	1.97	12.32	5.09	3.36
<b>2013 10-Month Average</b> ...	2.35	19.29	23.07	2.19	11.55	4.28	3.09
<b>2012 10-Month Average</b> ...	2.39	21.28	23.41	2.28	12.74	3.30	2.80

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.

<sup>b</sup> For 1973–2001, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).

<sup>c</sup> For 1973–2001, electric utility data are for light oil (fuel oil nos. 1 and 2).

<sup>d</sup> 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.

<sup>e</sup> 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.

<sup>f</sup> Weighted average of costs shown under "Coal," "Petroleum," and "Natural Gas."

<sup>g</sup> 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. W=Value withheld to avoid disclosure of individual company data.

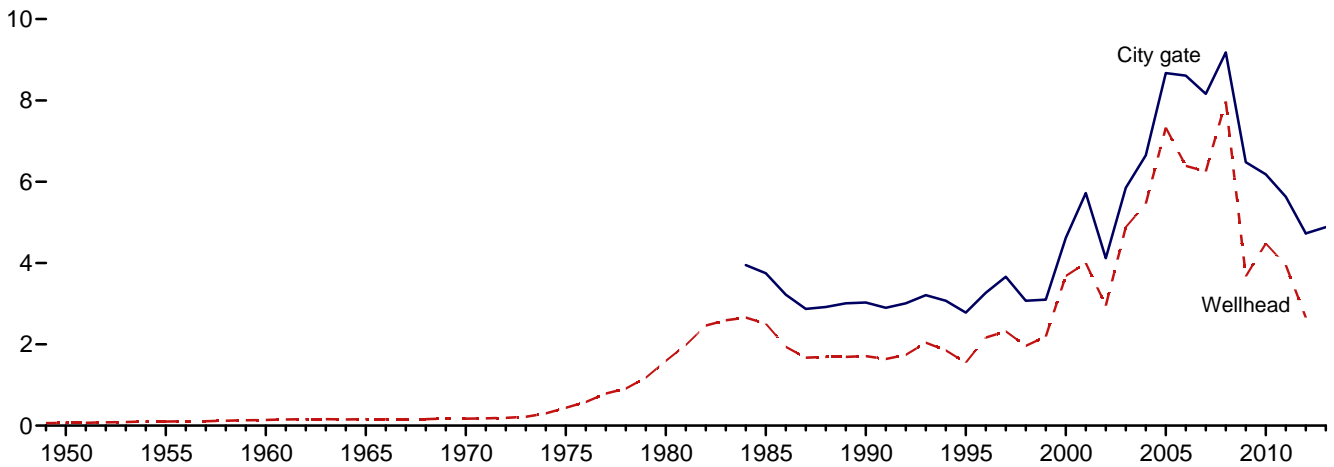
Notes: • Receipts are purchases of fuel. • Yearly costs are averages of monthly values, weighted by quantities in Btu. • For this table, there are several breaks in the data series related to what plants and fuels are covered. Beginning in 2013, data cover all regulated generating plants; plus unregulated 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> (Excel and CSV files) for all available annual and monthly data beginning in 1973.

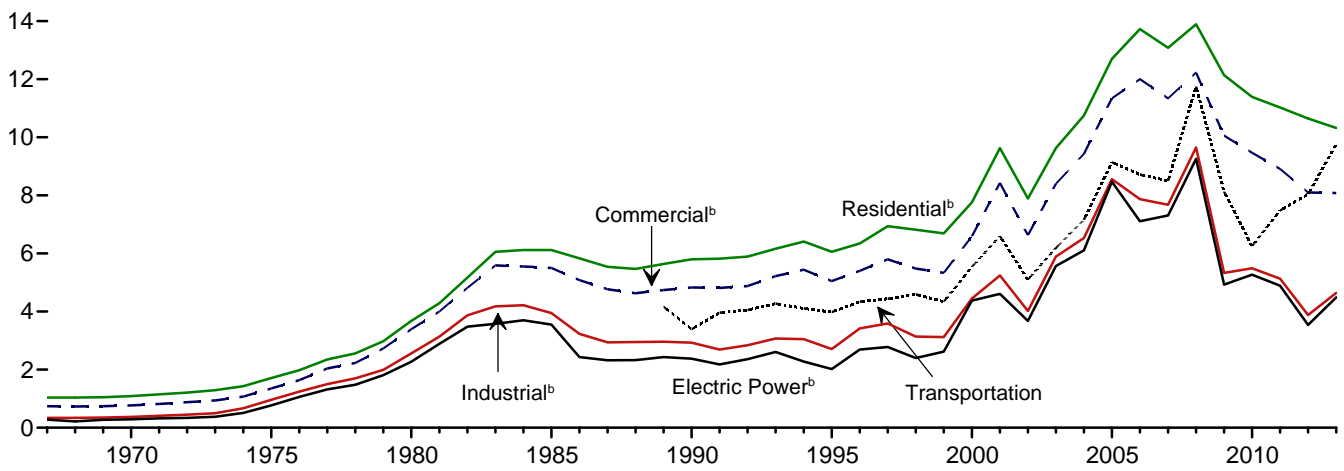
Sources: See end of section.

**Figure 9.4 Natural Gas Prices**  
(Dollars<sup>a</sup> per Thousand Cubic Feet)

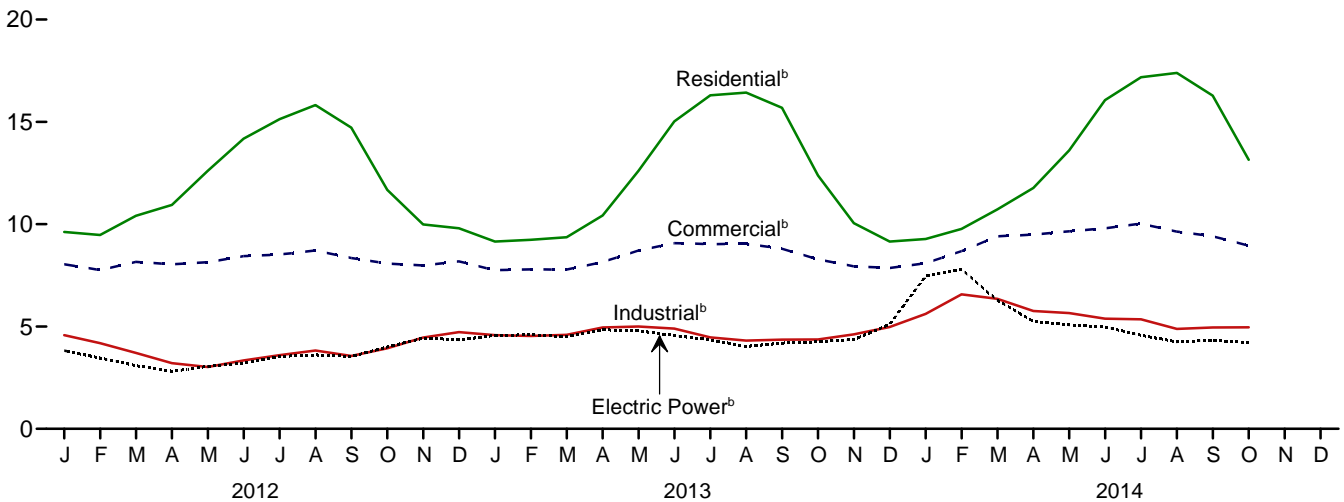
Wellhead and Citygate, 1949–2013



Consuming Sectors, 1967–2013



Consuming Sectors, Monthly



<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.  
<sup>b</sup> Includes taxes.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#prices>.  
Source: Table 9.10.

**Table 9.10 Natural Gas Prices**  
(Dollars<sup>a</sup> per Thousand Cubic Feet)

	Wellhead Price <sup>f</sup>	City-gate Price <sup>g</sup>	Consuming Sectors <sup>b</sup>									
			Residential		Commercial <sup>c</sup>		Industrial <sup>d</sup>		Transportation	Electric Power <sup>e</sup>		
			Price <sup>h</sup>	Percentage of Sector <sup>i</sup>	Price <sup>h</sup>	Percentage of Sector <sup>i</sup>	Price <sup>h</sup>	Percentage of Sector <sup>i</sup>	Vehicle Fuel Price <sup>h</sup>	Price <sup>h</sup>	Percentage of Sector <sup>i,k</sup>	
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	96.1
1980 Average	1.59	NA	3.68	NA	3.39	NA	2.56	NA	NA	2.27	96.9	96.9
1985 Average	2.51	3.75	6.12	NA	5.50	NA	3.95	68.8	NA	3.55	94.0	94.0
1990 Average	1.71	3.03	5.80	99.2	4.83	86.6	2.93	35.2	3.39	2.38	76.8	76.8
1995 Average	1.55	2.78	6.06	99.0	5.05	76.7	2.71	24.5	3.98	2.02	71.4	71.4
2000 Average	3.68	4.62	7.76	92.6	6.59	63.9	4.45	19.8	5.54	4.38	50.5	50.5
2001 Average	4.00	5.72	9.63	92.4	8.43	66.0	5.24	20.8	6.60	4.61	40.2	40.2
2002 Average	2.95	4.12	7.89	97.9	6.63	77.4	4.02	22.7	5.10	3.68	83.9	83.9
2003 Average	4.88	5.85	9.63	97.5	8.40	78.2	5.89	22.1	6.19	5.57	91.2	91.2
2004 Average	5.46	6.65	10.75	97.7	9.43	78.0	6.53	23.6	7.16	6.11	89.8	89.8
2005 Average	7.33	8.67	12.70	98.1	11.34	82.1	8.56	24.0	9.14	8.47	91.3	91.3
2006 Average	6.39	8.61	13.73	98.1	12.00	80.8	7.87	23.4	8.72	7.11	93.4	93.4
2007 Average	6.25	8.16	13.08	98.0	11.34	80.4	7.68	22.2	8.50	7.31	92.2	92.2
2008 Average	7.97	9.18	13.89	97.5	12.23	79.7	9.65	20.4	11.75	9.26	101.1	101.1
2009 Average	3.67	6.48	12.14	97.4	10.06	77.8	5.33	18.8	8.13	4.93	101.1	101.1
2010 Average	4.48	6.18	11.39	97.4	9.47	77.5	5.49	18.0	6.25	5.27	100.8	100.8
2011 Average	3.95	5.63	11.03	96.3	8.91	67.3	5.13	16.3	7.48	4.89	101.2	101.2
2012 January	E 2.89	4.85	9.62	96.3	8.04	71.5	4.58	16.1	NA	3.82	95.0	95.0
February	E 2.46	4.73	9.47	96.2	7.76	70.1	4.19	16.2	NA	3.46	95.3	95.3
March	E 2.25	4.84	10.41	96.2	8.16	68.1	3.71	16.0	NA	3.09	95.2	95.2
April	E 1.89	4.19	10.94	95.5	8.04	62.8	3.21	15.5	NA	2.81	96.4	96.4
May	E 1.94	4.30	12.61	95.4	8.14	59.2	3.02	15.6	NA	3.05	96.0	96.0
June	E 2.54	4.63	14.18	95.5	8.44	59.1	3.34	15.6	NA	3.21	95.8	95.8
July	E 2.59	4.88	15.13	95.5	8.52	57.9	3.60	16.1	NA	3.54	95.8	95.8
August	E 2.86	5.13	15.82	94.9	8.71	55.9	3.83	16.6	NA	3.61	95.2	95.2
September	E 2.71	4.76	14.72	95.0	8.35	56.4	3.56	16.5	NA	3.54	96.0	96.0
October	E 3.03	4.65	11.68	95.1	8.07	59.9	3.94	16.3	NA	4.00	95.9	95.9
November	E 3.35	4.79	9.99	95.3	7.99	65.3	4.46	16.9	NA	4.43	94.3	94.3
December	E 3.35	4.79	9.80	95.7	8.18	67.6	4.73	17.0	NA	4.35	94.4	94.4
Average	E 2.66	4.73	10.65	95.8	8.10	65.2	3.88	16.2	8.04	3.54	95.5	95.5
2013 January	NA	4.52	9.15	95.9	7.75	70.5	4.58	17.0	NA	4.56	95.2	95.2
February	NA	4.56	9.24	95.6	7.79	70.0	4.54	17.0	NA	4.59	94.5	94.5
March	NA	4.75	9.36	95.4	7.78	69.1	4.59	16.8	NA	4.50	94.9	94.9
April	NA	5.16	10.43	95.0	8.15	66.5	4.95	16.9	NA	4.84	95.3	95.3
May	NA	5.55	12.61	95.1	8.71	62.9	5.00	16.2	NA	4.79	95.4	95.4
June	NA	5.74	15.02	94.8	9.07	58.7	4.90	16.0	NA	4.56	95.1	95.1
July	NA	5.51	16.30	94.8	9.03	57.0	4.47	15.8	NA	4.34	94.6	94.6
August	NA	5.24	16.43	94.7	9.04	56.5	4.31	15.9	NA	4.03	94.6	94.6
September	NA	5.21	15.69	94.8	8.80	56.9	4.36	16.3	NA	4.19	95.1	95.1
October	NA	4.88	12.38	95.0	8.28	60.8	4.37	16.6	NA	4.26	94.9	94.9
November	NA	4.78	10.05	95.4	7.94	66.0	4.62	16.9	NA	4.36	93.9	93.9
December	NA	4.91	9.15	95.7	7.86	69.8	4.98	17.4	NA	5.11	94.9	94.9
Average	NA	4.88	10.32	95.4	8.08	66.1	4.64	16.6	9.76	4.49	94.9	94.9
2014 January	NA	5.59	R 9.28	95.6	8.10	71.1	R 5.62	16.5	NA	7.46	95.1	95.1
February	NA	6.31	9.77	95.0	8.68	71.0	6.57	17.0	NA	7.78	93.2	93.2
March	NA	R 6.56	10.72	95.1	9.41	69.5	6.35	16.9	NA	6.28	94.9	94.9
April	NA	5.63	R 11.77	R 95.0	9.49	65.5	5.76	16.0	NA	5.25	95.4	95.4
May	NA	5.88	R 13.61	R 95.1	9.65	R 61.1	R 5.66	15.9	NA	5.08	94.7	94.7
June	NA	5.99	R 16.06	95.1	9.80	58.6	5.38	15.8	NA	4.98	95.3	95.3
July	NA	5.97	R 17.18	94.3	R 10.03	R 56.3	R 5.35	15.8	NA	4.57	94.9	94.9
August	NA	5.48	17.39	95.3	R 9.64	R 55.9	R 4.88	15.6	NA	4.25	95.3	95.3
September	NA	R 5.41	R 16.28	95.3	9.41	56.3	4.95	15.1	NA	4.33	94.2	94.2
October	NA	5.17	13.15	95.3	8.95	59.0	4.96	14.8	NA	4.22	94.7	94.7
10-Month Average	NA	5.91	11.24	95.2	9.03	65.8	5.59	16.0	NA	5.29	94.8	94.8
2013 10-Month Average	NA	4.89	10.61	95.4	8.15	65.6	4.61	16.5	NA	4.44	95.0	95.0
2012 10-Month Average	E 2.52	4.71	10.90	95.9	8.10	64.9	3.72	16.0	NA	3.41	95.7	95.7

<sup>a</sup> Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.  
<sup>b</sup> See Note 8, "Natural Gas Prices," at end of section.  
<sup>c</sup> 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.  
<sup>d</sup> 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.  
<sup>e</sup> 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.  
<sup>f</sup> See "Natural Gas Wellhead Price" in Glossary.  
<sup>g</sup> See "Citygate" in Glossary.  
<sup>h</sup> Includes taxes.  
<sup>i</sup> 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.

<sup>j</sup> 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.  
<sup>k</sup> 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.  
R=Revised. 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1976.  
Sources: See end of section.

## 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.”

1978–2011: U.S. Energy Information Administration (EIA), *Petroleum Marketing Annual 2009*, Table 1.

2012 forward: EIA, *Petroleum Marketing Monthly*, January 2015, 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.”

1978–2011: EIA, *Petroleum Marketing Annual 2009*, Table 1.

2012 forward: EIA, *Petroleum Marketing Monthly*, January 2015, 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.”

1977: October–December, EIA, based on Form FEA-P110-M-1, “Refiners’ Monthly Cost Allocation Report.”

1978–2011: EIA, *Petroleum Marketing Annual 2009*, Table 1.  
2012 forward: EIA, *Petroleum Marketing Monthly*, January 2015, 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.”  
1978–2011: EIA, *Petroleum Marketing Annual 2007*, Table 21.  
2012 forward: EIA, *Petroleum Marketing Monthly*, January 2015, 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*, December 2014, Table 4.1; and Form EIA-923, “Power Plant Operations Report.”

### Table 9.10 Sources

#### All Prices Except Vehicle Fuel and Electric Power

1949–2011: U.S. Energy Information Administration (EIA), *Natural Gas Annual (NGA)*, annual reports and unpublished revisions.  
2012 forward: EIA, *Natural Gas Monthly (NGM)*, December 2014, 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.” Calculated as the total amount of natural gas delivered to residential consumers minus the amount delivered for the account of others, and then divided by the total amount delivered to residential consumers.

2012 forward: EIA, Form EIA-857, “Monthly Report of Natural Gas Purchases and Deliveries to Consumers.”

#### Percentage of Commercial Sector

1987–2011: 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.

2012 forward: EIA, NGM, December 2014, Table 3.

#### Percentage of Industrial Sector

1982–2011: 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.

2012 forward: EIA, NGM, December 2014, 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).

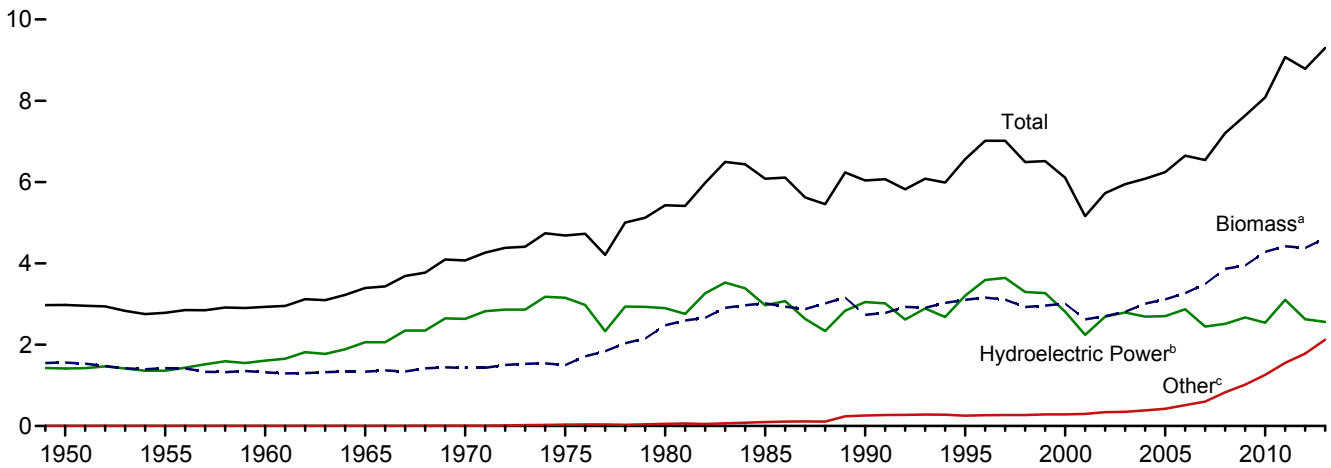
2008 forward: Calculated by EIA as the quantity of natural gas receipts by electric utilities and independent power producers reported on Form EIA-923, “Power Plant Operations Report,” divided by the quantity of natural gas consumed by the electric power sector (see MER, Table 7.4b).

# 10. Renewable Energy

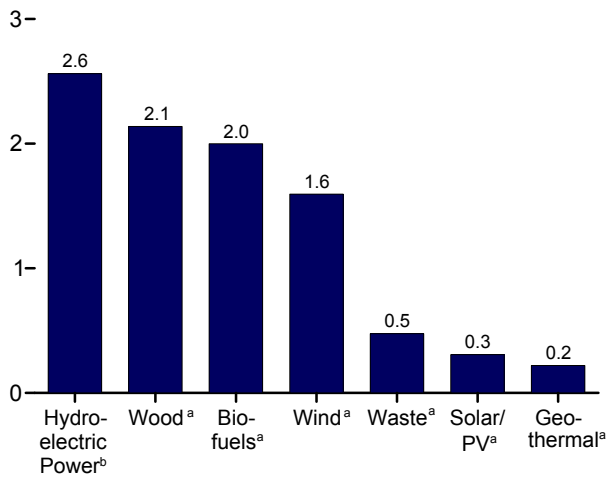
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**Figure 10.1 Renewable Energy Consumption**  
(Quadrillion Btu)

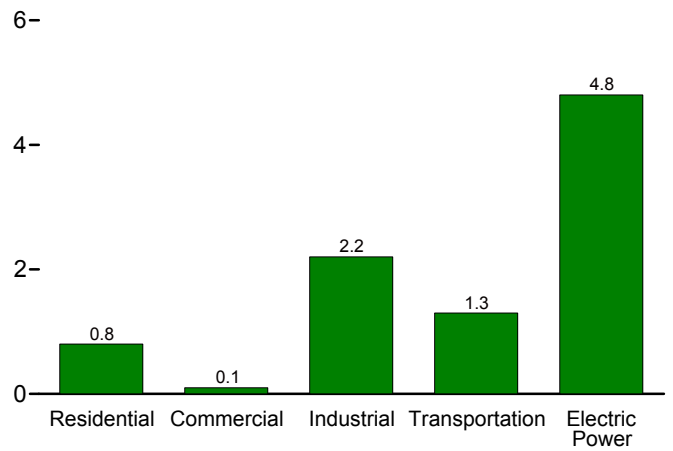
Total and Major Sources, 1949–2013



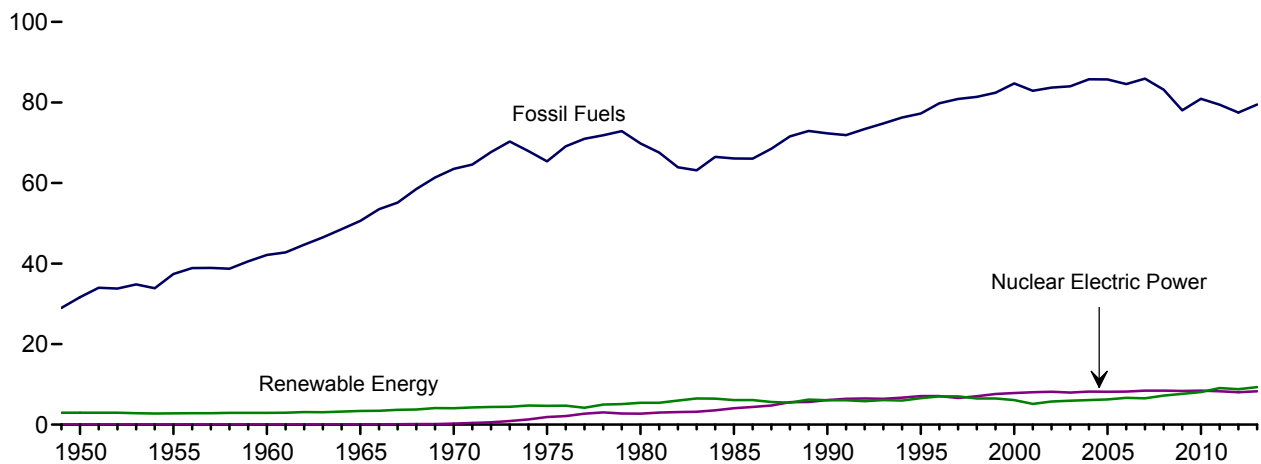
By Source, 2013



By Sector, 2013



Compared With Other Resources, 1949–2013



<sup>a</sup> See Table 10.1 for definition.  
<sup>b</sup> Conventional hydroelectric power.  
<sup>c</sup> 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 <sup>a</sup>			Consumption								
	Biomass		Total Renewable Energy <sup>d</sup>	Hydroelectric Power <sup>e</sup>	Geothermal <sup>f</sup>	Solar/PV <sup>g</sup>	Wind <sup>h</sup>	Biomass				Total Renewable Energy
	Bio-fuels <sup>b</sup>	Total <sup>c</sup>						Wood <sup>i</sup>	Waste <sup>j</sup>	Bio-fuels <sup>k</sup>	Total	
<b>1950 Total</b> .....	NA	1,562	2,978	1,415	NA	NA	NA	1,562	NA	NA	1,562	2,978
<b>1955 Total</b> .....	NA	1,424	2,784	1,360	NA	NA	NA	1,424	NA	NA	1,424	2,784
<b>1960 Total</b> .....	NA	1,320	2,928	1,608	(s)	NA	NA	1,320	NA	NA	1,320	2,928
<b>1965 Total</b> .....	NA	1,335	3,396	2,059	2	NA	NA	1,335	NA	NA	1,335	3,396
<b>1970 Total</b> .....	NA	1,431	4,070	2,634	6	NA	NA	1,429	2	NA	1,431	4,070
<b>1975 Total</b> .....	NA	1,499	4,687	3,155	34	NA	NA	1,497	2	NA	1,499	4,687
<b>1980 Total</b> .....	NA	2,475	5,428	2,900	53	NA	NA	2,474	2	NA	2,475	5,428
<b>1985 Total</b> .....	93	3,016	6,084	2,970	97	(s)	(s)	2,687	236	93	3,016	6,084
<b>1990 Total</b> .....	111	2,735	6,041	3,046	171	59	29	2,216	408	111	2,735	6,041
<b>1995 Total</b> .....	198	3,099	6,558	3,205	152	69	33	2,370	531	200	3,101	6,560
<b>2000 Total</b> .....	233	3,006	6,104	2,811	164	66	57	2,262	511	236	3,008	6,106
<b>2001 Total</b> .....	254	2,624	5,164	2,242	164	64	70	2,006	364	253	2,622	5,163
<b>2002 Total</b> .....	308	2,705	5,734	2,689	171	63	105	1,995	402	303	2,701	5,729
<b>2003 Total</b> .....	402	2,805	5,947	2,793	173	62	113	2,002	401	404	2,807	5,948
<b>2004 Total</b> .....	487	2,998	6,069	2,688	178	63	142	2,121	389	499	3,010	6,081
<b>2005 Total</b> .....	564	3,104	6,229	2,703	181	63	178	2,137	403	577	3,117	6,242
<b>2006 Total</b> .....	720	3,216	6,599	2,869	181	68	264	2,099	397	771	3,267	6,649
<b>2007 Total</b> .....	978	3,480	6,528	2,446	186	76	341	2,089	413	990	3,492	6,541
<b>2008 Total</b> .....	1,387	3,881	7,219	2,511	192	89	546	2,059	435	1,370	3,865	7,202
<b>2009 Total</b> .....	1,584	3,967	7,655	2,669	200	98	721	1,931	452	1,568	3,950	7,638
<b>2010 Total</b> .....	1,884	4,332	8,128	2,539	208	126	923	1,981	468	1,837	4,285	8,081
<b>2011 Total</b> .....	2,044	4,516	9,170	3,103	212	171	1,168	2,010	462	1,948	4,420	9,074
<b>2012</b> January .....	177	388	772	220	17	17	130	173	38	156	367	751
February .....	164	363	693	193	16	16	105	162	36	152	351	681
March .....	171	377	792	247	18	18	133	166	40	164	370	785
April .....	164	358	765	250	17	18	121	157	37	160	354	761
May .....	173	376	806	273	18	20	119	165	38	170	373	803
June .....	165	367	772	254	17	20	114	165	37	165	367	772
July .....	157	368	743	252	18	21	84	172	39	158	369	744
August .....	162	375	712	219	18	20	81	173	39	168	380	718
September .....	151	356	644	168	18	20	84	168	37	150	355	643
October .....	153	363	678	157	18	20	120	168	41	159	368	683
November .....	150	358	683	178	18	19	111	167	41	150	358	684
December .....	155	372	766	219	19	19	138	174	42	152	369	763
<b>Total</b> .....	<b>1,942</b>	<b>4,419</b>	<b>8,826</b>	<b>2,629</b>	<b>212</b>	<b>227</b>	<b>1,340</b>	<b>2,010</b>	<b>467</b>	<b>1,902</b>	<b>4,379</b>	<b>8,786</b>
<b>2013</b> January .....	152	375	794	239	19	22	139	183	41	151	374	793
February .....	139	339	705	195	17	21	132	164	36	139	340	706
March .....	161	381	770	197	19	25	149	180	40	162	382	771
April .....	161	365	808	236	18	25	165	166	38	163	367	810
May .....	171	386	857	272	18	26	155	175	40	171	386	857
June .....	169	385	821	260	18	27	131	176	40	171	387	823
July .....	172	402	813	259	19	27	106	190	41	170	401	812
August .....	168	392	737	207	19	28	91	184	40	167	391	735
September .....	164	377	695	161	18	27	111	175	38	168	381	699
October .....	179	398	740	165	19	28	131	178	40	182	401	743
November .....	178	396	759	169	18	25	151	179	39	173	391	754
December .....	187	417	799	203	19	26	134	187	43	183	413	795
<b>Total</b> .....	<b>2,000</b>	<b>4,614</b>	<b>9,298</b>	<b>2,561</b>	<b>221</b>	<b>307</b>	<b>1,595</b>	<b>2,138</b>	<b>476</b>	<b>2,000</b>	<b>4,613</b>	<b>9,298</b>
<b>2014</b> January .....	172	395	819	206	19	29	171	183	40	165	388	812
February .....	158	359	702	166	17	27	133	166	35	155	356	699
March .....	175	396	849	231	18	34	169	182	40	166	387	840
April .....	173	386	857	239	18	36	178	175	38	170	383	854
May .....	181	400	857	252	19	39	148	181	38	180	399	856
June .....	179	400	853	246	18	40	149	182	38	174	395	848
July .....	186	415	819	231	18	39	115	188	41	180	409	812
August .....	179	408	751	188	18	40	97	189	40	179	408	751
September .....	173	390	707	151	18	39	109	178	39	171	387	705
October .....	180	403	760	162	18	38	138	184	40	180	404	760
<b>10-Month Total</b> ..	<b>1,757</b>	<b>3,952</b>	<b>7,975</b>	<b>2,071</b>	<b>182</b>	<b>362</b>	<b>1,409</b>	<b>1,807</b>	<b>388</b>	<b>1,720</b>	<b>3,915</b>	<b>7,939</b>
<b>2013 10-Month Total</b> ...	<b>1,636</b>	<b>3,801</b>	<b>7,741</b>	<b>2,189</b>	<b>184</b>	<b>256</b>	<b>1,310</b>	<b>1,772</b>	<b>393</b>	<b>1,644</b>	<b>3,809</b>	<b>7,749</b>
<b>2012 10-Month Total</b> ...	<b>1,637</b>	<b>3,689</b>	<b>7,377</b>	<b>2,232</b>	<b>175</b>	<b>190</b>	<b>1,091</b>	<b>1,669</b>	<b>384</b>	<b>1,600</b>	<b>3,652</b>	<b>7,340</b>

<sup>a</sup> Production equals consumption for all renewable energy sources except biofuels.

<sup>b</sup> Total biomass inputs to the production of fuel ethanol and biodiesel.

<sup>c</sup> Wood and wood-derived fuels, biomass waste, and total biomass inputs to the production of fuel ethanol and biodiesel.

<sup>d</sup> Hydroelectric power, geothermal, solar thermal/photovoltaic, wind, and biomass.

<sup>e</sup> Conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>f</sup> Geothermal electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6), and geothermal heat pump and direct use energy.

<sup>g</sup> 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.

<sup>h</sup> Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>i</sup> Wood and wood-derived fuels.

<sup>j</sup> 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).

<sup>k</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#renewable> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: Tables 10.2a–10.4.

**Table 10.2a Renewable Energy Consumption: Residential and Commercial Sectors**  
(Trillion Btu)

	Residential Sector				Commercial Sector <sup>a</sup>									Total
	Geo-thermal <sup>b</sup>	Solar/ PV <sup>c</sup>	Biomass	Total	Hydro- electric Power <sup>e</sup>	Geo- thermal <sup>b</sup>	Solar/ PV <sup>f</sup>	Wind <sup>g</sup>	Biomass				Total	
			Wood <sup>d</sup>						Wood <sup>d</sup>	Waste <sup>h</sup>	Fuel Ethanol <sup>i</sup>	Total		
<b>1950 Total</b> .....	NA	NA	1,006	1,006	NA	NA	NA	NA	19	NA	NA	19	19	
<b>1955 Total</b> .....	NA	NA	775	775	NA	NA	NA	NA	15	NA	NA	15	15	
<b>1960 Total</b> .....	NA	NA	627	627	NA	NA	NA	NA	12	NA	NA	12	12	
<b>1965 Total</b> .....	NA	NA	468	468	NA	NA	NA	NA	9	NA	NA	9	9	
<b>1970 Total</b> .....	NA	NA	401	401	NA	NA	NA	NA	8	NA	NA	8	8	
<b>1975 Total</b> .....	NA	NA	425	425	NA	NA	NA	NA	8	NA	NA	8	8	
<b>1980 Total</b> .....	NA	NA	850	850	NA	NA	NA	NA	21	NA	NA	21	21	
<b>1985 Total</b> .....	NA	NA	1,010	1,010	NA	NA	NA	NA	24	NA	(s)	24	24	
<b>1990 Total</b> .....	6	56	580	641	1	3	-	-	66	28	(s)	94	98	
<b>1995 Total</b> .....	7	64	520	591	1	5	-	-	72	40	(s)	113	118	
<b>2000 Total</b> .....	9	61	420	489	1	8	-	-	71	47	(s)	119	128	
<b>2001 Total</b> .....	9	59	370	438	1	8	-	-	67	25	(s)	92	101	
<b>2002 Total</b> .....	10	57	380	448	(s)	9	-	-	69	26	(s)	95	104	
<b>2003 Total</b> .....	13	57	400	470	1	11	-	-	71	29	1	101	113	
<b>2004 Total</b> .....	14	57	410	481	1	12	-	-	70	34	1	105	118	
<b>2005 Total</b> .....	16	58	430	504	1	14	-	-	70	34	1	105	120	
<b>2006 Total</b> .....	18	63	380	462	1	14	-	-	65	36	1	103	118	
<b>2007 Total</b> .....	22	70	420	512	1	14	-	-	70	31	2	103	118	
<b>2008 Total</b> .....	26	80	470	577	1	15	(s)	-	73	34	2	109	125	
<b>2009 Total</b> .....	33	89	500	622	1	17	(s)	(s)	73	36	3	112	129	
<b>2010 Total</b> .....	37	114	440	591	1	19	(s)	(s)	72	36	3	111	130	
<b>2011 Total</b> .....	40	153	450	643	(s)	20	1	(s)	69	43	3	115	136	
<b>2012</b> .....														
<b>January</b> .....	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>February</b> .....	3	15	33	51	(s)	2	(s)	(s)	5	4	(s)	9	10	
<b>March</b> .....	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>April</b> .....	3	15	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>May</b> .....	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>June</b> .....	3	15	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>July</b> .....	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>August</b> .....	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>September</b> .....	3	15	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>October</b> .....	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>November</b> .....	3	15	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>December</b> .....	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>Total</b> .....	40	186	420	646	(s)	20	1	1	61	45	3	109	131	
<b>2013</b> .....														
<b>January</b> .....	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>February</b> .....	3	17	44	64	(s)	2	(s)	(s)	5	4	(s)	9	11	
<b>March</b> .....	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>April</b> .....	3	18	48	69	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>May</b> .....	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>June</b> .....	3	18	48	69	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>July</b> .....	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>August</b> .....	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>September</b> .....	3	18	48	69	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>October</b> .....	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>November</b> .....	3	18	48	69	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>December</b> .....	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>Total</b> .....	40	219	580	839	(s)	20	3	1	70	46	3	119	143	
<b>2014</b> .....														
<b>January</b> .....	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>February</b> .....	3	19	44	67	(s)	2	(s)	(s)	5	3	(s)	9	11	
<b>March</b> .....	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>April</b> .....	3	21	48	72	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>May</b> .....	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>June</b> .....	3	21	48	72	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>July</b> .....	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>August</b> .....	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>September</b> .....	3	21	48	72	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>October</b> .....	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12	
<b>10-Month Total</b> .....	33	210	483	726	(s)	16	4	1	59	37	2	99	120	
<b>2013 10-Month Total</b> .....	33	182	483	698	(s)	16	3	(s)	58	38	2	99	119	
<b>2012 10-Month Total</b> .....	33	155	350	538	(s)	16	1	(s)	51	38	2	91	109	

<sup>a</sup> 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.

<sup>b</sup> Geothermal heat pump and direct use energy.

<sup>c</sup> 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.

<sup>d</sup> Wood and wood-derived fuels.

<sup>e</sup> Conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>f</sup> 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.

<sup>g</sup> Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>h</sup> 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).

<sup>i</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#renewable> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

**Table 10.2b Renewable Energy Consumption: Industrial and Transportation Sectors**  
(Trillion Btu)

	Industrial Sector <sup>a</sup>										Transportation Sector		
	Hydro-electric Power <sup>b</sup>	Geo-thermal <sup>c</sup>	Solar/PV <sup>d</sup>	Wind <sup>e</sup>	Biomass					Total	Biomass		
					Wood <sup>f</sup>	Waste <sup>g</sup>	Fuel Ethanol <sup>h</sup>	Losses and Co-products <sup>i</sup>	Total		Fuel Ethanol <sup>j</sup>	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	45	602
2008 Total	17	5	—	—	1,339	143	12	532	2,026	2,047	786	39	825
2009 Total	18	4	—	—	1,178	154	13	617	1,963	1,985	894	41	935
2010 Total	16	4	(s)	—	1,273	168	17	742	2,201	2,221	1,041	33	1,075
2011 Total	17	4	(s)	(s)	1,309	165	17	771	2,261	2,283	1,045	113	1,158
2012 January	3	(s)	(s)	(s)	115	13	1	67	196	199	82	6	87
February	2	(s)	(s)	(s)	108	13	1	61	184	186	82	8	89
March	2	(s)	(s)	(s)	109	14	1	63	188	191	88	11	99
April	2	(s)	(s)	(s)	105	13	1	61	180	182	86	12	98
May	2	(s)	(s)	(s)	111	13	1	64	188	191	92	12	104
June	2	(s)	(s)	(s)	109	12	1	61	183	185	90	12	102
July	1	(s)	(s)	(s)	113	13	1	58	186	187	88	10	98
August	1	(s)	(s)	(s)	115	13	1	60	189	191	95	11	106
September	2	(s)	(s)	(s)	112	12	1	56	181	183	83	9	92
October	2	(s)	(s)	(s)	113	14	1	57	186	188	91	8	100
November	2	(s)	(s)	(s)	113	14	1	57	185	188	83	9	92
December	2	(s)	(s)	(s)	117	15	1	59	192	194	86	6	92
Total	22	4	(s)	(s)	1,339	159	16	724	2,238	2,265	1,045	114	1,159
2013 January	3	(s)	(s)	(s)	111	15	1	57	184	187	83	9	92
February	3	(s)	(s)	(s)	99	13	1	52	165	169	77	9	86
March	3	(s)	(s)	(s)	108	14	1	59	182	186	89	12	101
April	2	(s)	(s)	(s)	100	14	1	59	174	177	89	13	102
May	3	(s)	(s)	(s)	104	14	1	63	182	186	93	13	107
June	3	(s)	(s)	(s)	106	14	1	62	183	186	93	15	108
July	3	(s)	(s)	(s)	116	15	1	62	194	197	92	15	107
August	2	(s)	(s)	(s)	110	15	1	61	186	189	91	13	105
September	2	(s)	(s)	(s)	103	14	1	59	178	180	90	18	108
October	2	(s)	(s)	(s)	105	15	1	65	186	189	94	22	116
November	2	(s)	(s)	(s)	107	14	1	64	187	189	89	17	107
December	3	(s)	(s)	(s)	111	15	1	68	196	199	92	22	114
Total	32	4	(s)	(s)	1,281	171	16	729	2,197	2,234	1,073	179	1,252
2014 January	3	(s)	(s)	(s)	105	15	1	65	186	190	87	11	98
February	2	(s)	(s)	(s)	96	13	1	58	168	171	82	13	95
March	2	(s)	(s)	(s)	104	14	1	65	184	187	87	13	100
April	2	(s)	(s)	(s)	104	14	1	64	184	186	91	13	104
May	2	(s)	(s)	(s)	107	14	1	67	189	192	94	17	111
June	2	(s)	(s)	(s)	106	14	1	66	188	190	92	15	106
July	2	(s)	(s)	(s)	110	15	1	68	194	196	95	16	111
August	2	(s)	(s)	(s)	112	14	1	66	193	195	94	17	111
September	2	(s)	(s)	(s)	104	14	1	64	183	185	89	17	106
October	2	(s)	(s)	(s)	108	14	1	66	190	192	96	16	113
10-Month Total	21	3	(s)	(s)	1,056	140	14	649	1,859	1,884	908	147	1,055
2013 10-Month Total	27	3	(s)	(s)	1,062	142	13	597	1,815	1,846	891	140	1,031
2012 10-Month Total	19	4	(s)	(s)	1,109	130	13	608	1,861	1,883	877	100	976

<sup>a</sup> 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.

<sup>b</sup> Conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>c</sup> Geothermal heat pump and direct use energy.

<sup>d</sup> 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.

<sup>e</sup> Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>f</sup> Wood and wood-derived fuels.

<sup>g</sup> 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).

<sup>h</sup> The fuel ethanol (minus denaturant) portion of motor fuels, such as E10,

consumed by the industrial sector.

<sup>i</sup> 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.

<sup>j</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#renewable> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

**Table 10.2c Renewable Energy Consumption: Electric Power Sector**  
(Trillion Btu)

	Hydro-electric Power <sup>a</sup>	Geo-thermal <sup>b</sup>	Solar/PV <sup>c</sup>	Wind <sup>d</sup>	Biomass			Total
					Wood <sup>e</sup>	Waste <sup>f</sup>	Total	
<b>1950 Total</b> .....	1,346	NA	NA	NA	5	NA	5	1,351
<b>1955 Total</b> .....	1,322	NA	NA	NA	3	NA	3	1,325
<b>1960 Total</b> .....	1,569	(s)	NA	NA	2	NA	2	1,571
<b>1965 Total</b> .....	2,026	2	NA	NA	3	NA	3	2,031
<b>1970 Total</b> .....	2,600	6	NA	NA	1	2	4	2,609
<b>1975 Total</b> .....	3,122	34	NA	NA	(s)	2	2	3,158
<b>1980 Total</b> .....	2,867	53	NA	NA	3	2	4	2,925
<b>1985 Total</b> .....	2,937	97	(s)	(s)	8	7	14	3,049
<b>1990 Total</b> <sup>g</sup> .....	3,014	161	4	29	129	188	317	3,524
<b>1995 Total</b> .....	3,149	138	5	33	125	296	422	3,747
<b>2000 Total</b> .....	2,768	144	5	57	134	318	453	3,427
<b>2001 Total</b> .....	2,209	142	6	70	126	211	337	2,763
<b>2002 Total</b> .....	2,650	147	6	105	150	230	380	3,288
<b>2003 Total</b> .....	2,749	146	5	113	167	230	397	3,411
<b>2004 Total</b> .....	2,655	148	6	142	165	223	388	3,339
<b>2005 Total</b> .....	2,670	147	6	178	185	221	406	3,406
<b>2006 Total</b> .....	2,839	145	5	264	182	231	412	3,665
<b>2007 Total</b> .....	2,430	145	6	341	186	237	423	3,345
<b>2008 Total</b> .....	2,494	146	9	546	177	258	435	3,630
<b>2009 Total</b> .....	2,650	146	9	721	180	261	441	3,967
<b>2010 Total</b> .....	2,521	148	12	923	196	264	459	4,064
<b>2011 Total</b> .....	3,085	149	17	1,167	182	255	437	4,855
<b>2012</b> January .....	217	12	1	130	17	22	39	398
February .....	191	11	1	105	16	20	36	344
March .....	244	12	2	133	16	22	37	429
April .....	248	12	3	121	13	21	33	417
May .....	271	12	4	119	14	22	36	442
June .....	252	12	5	114	16	22	38	421
July .....	251	13	5	84	18	23	40	392
August .....	218	12	4	81	18	23	40	355
September .....	166	12	4	84	16	21	38	304
October .....	155	13	4	120	15	22	38	330
November .....	176	13	3	111	15	23	38	341
December .....	217	13	3	138	16	24	40	412
<b>Total</b> .....	<b>2,606</b>	<b>148</b>	<b>40</b>	<b>1,339</b>	<b>190</b>	<b>262</b>	<b>453</b>	<b>4,586</b>
<b>2013</b> January .....	236	14	3	139	17	22	38	430
February .....	192	12	4	132	15	19	34	375
March .....	194	14	6	149	17	22	39	401
April .....	233	13	7	164	12	21	33	450
May .....	269	13	8	155	16	22	38	481
June .....	257	13	9	131	17	22	39	449
July .....	256	13	8	106	19	22	41	425
August .....	204	13	9	91	20	21	41	359
September .....	159	13	9	111	18	21	39	331
October .....	163	14	9	130	18	22	39	355
November .....	167	12	7	151	19	21	40	377
December .....	200	14	7	134	20	24	44	398
<b>Total</b> .....	<b>2,529</b>	<b>157</b>	<b>85</b>	<b>1,595</b>	<b>207</b>	<b>258</b>	<b>465</b>	<b>4,831</b>
<b>2014</b> January .....	202	13	7	171	22	21	43	437
February .....	163	12	8	133	20	18	39	355
March .....	229	13	13	169	22	21	44	467
April .....	237	13	15	178	18	21	38	481
May .....	250	13	17	148	19	21	40	468
June .....	244	13	19	149	23	21	43	468
July .....	229	13	17	115	22	23	45	419
August .....	186	13	18	97	22	22	44	358
September .....	149	13	18	109	20	21	41	330
October .....	160	13	16	138	20	22	42	369
<b>10-Month Total</b> ...	<b>2,050</b>	<b>129</b>	<b>148</b>	<b>1,408</b>	<b>208</b>	<b>210</b>	<b>419</b>	<b>4,154</b>
<b>2013 10-Month Total</b> ...	<b>2,162</b>	<b>131</b>	<b>71</b>	<b>1,309</b>	<b>168</b>	<b>213</b>	<b>381</b>	<b>4,055</b>
<b>2012 10-Month Total</b> ...	<b>2,213</b>	<b>122</b>	<b>33</b>	<b>1,090</b>	<b>159</b>	<b>216</b>	<b>375</b>	<b>3,834</b>

<sup>a</sup> Conventional hydroelectricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>b</sup> Geothermal electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>c</sup> Solar thermal and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>d</sup> Wind electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6).

<sup>e</sup> Wood and wood-derived fuels.

<sup>f</sup> 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).

<sup>g</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#renewable> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: Tables 7.2b, 7.4b, and A6.





**Table 10.4 Biodiesel Overview**

	Feed-stock <sup>a</sup>	Losses and Co-products <sup>b</sup>	Production			Trade			Stocks <sup>d</sup>	Stock Change <sup>e</sup>	Balancing Item <sup>f</sup>	Consumption		
						Imports	Exports	Net Imports <sup>c</sup>						
			TBtu	TBtu	Mbbl	MMgal	TBtu	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl
<b>2001 Total</b> .....	1	(s)	204	9	1	81	41	40	NA	NA	NA	244	10	1
<b>2002 Total</b> .....	1	(s)	250	10	1	197	57	140	NA	NA	NA	390	16	2
<b>2003 Total</b> .....	2	(s)	338	14	2	97	113	-17	NA	NA	NA	322	14	2
<b>2004 Total</b> .....	4	(s)	666	28	4	101	128	-27	NA	NA	NA	639	27	3
<b>2005 Total</b> .....	12	(s)	2,162	91	12	214	213	1	NA	NA	NA	2,163	91	12
<b>2006 Total</b> .....	32	(s)	5,963	250	32	1,105	856	250	NA	NA	NA	6,213	261	33
<b>2007 Total</b> .....	63	1	11,662	490	62	3,455	6,696	-3,241	NA	NA	NA	8,422	354	45
<b>2008 Total</b> .....	88	1	16,145	678	87	7,755	16,673	-8,918	NA	NA	NA	7,228	304	39
<b>2009 Total</b> .....	67	1	12,281	516	66	1,906	6,546	-4,640	711	711	733	7,663	322	41
<b>2010 Total</b> .....	44	1	8,177	343	44	564	2,588	-2,024	672	-39	0	6,192	260	33
<b>2011 Total</b> .....	125	2	23,035	967	123	890	1,799	-908	2,012	<sup>g</sup> 1,035	0	21,092	886	113
<b>2012 January</b> .....	10	(s)	1,751	74	9	48	258	-210	2,510	499	0	1,042	44	6
February .....	10	(s)	1,887	79	10	72	125	-53	2,895	384	0	1,450	61	8
March .....	12	(s)	2,251	95	12	25	189	-164	2,893	-1	0	2,088	88	11
April .....	12	(s)	2,237	94	12	32	230	-198	2,783	-111	0	2,149	90	12
May .....	13	(s)	2,428	102	13	75	320	-245	2,710	-73	0	2,256	95	12
June .....	12	(s)	2,223	93	12	132	392	-260	2,348	-362	0	2,325	98	12
July .....	12	(s)	2,127	89	11	166	426	-260	2,262	-86	0	1,953	82	10
August .....	12	(s)	2,176	91	12	55	403	-348	2,011	-250	0	2,079	87	11
September .....	11	(s)	1,949	82	10	108	295	-187	2,059	47	0	1,715	72	9
October .....	10	(s)	1,792	75	10	60	209	-149	2,183	124	0	1,519	64	8
November .....	7	(s)	1,363	57	7	9	65	-56	1,865	-318	0	1,624	68	9
December .....	8	(s)	1,406	59	8	71	143	-72	2,083	219	0	1,114	47	6
<b>Total</b> .....	128	2	23,588	991	126	853	3,056	-2,203	2,083	72	0	21,314	895	114
<b>2013 January</b> .....	9	(s)	1,640	69	9	38	16	22	2,090	7	0	1,655	70	9
February .....	9	(s)	1,672	70	9	88	37	51	2,093	3	0	1,720	72	9
March .....	13	(s)	2,412	101	13	439	176	263	2,491	398	0	2,276	96	12
April .....	14	(s)	2,548	107	14	372	371	1	2,588	97	0	2,452	103	13
May .....	14	(s)	2,645	111	14	410	563	-153	2,598	10	0	2,482	104	13
June .....	15	(s)	2,699	113	14	698	587	111	2,565	-33	0	2,843	119	15
July .....	17	(s)	3,072	129	16	358	429	-71	2,793	228	0	2,773	116	15
August .....	17	(s)	3,086	130	17	385	687	-302	3,099	306	0	2,478	104	13
September .....	16	(s)	3,025	127	16	781	511	270	3,051	-48	0	3,344	140	18
October .....	18	(s)	3,272	137	18	1,177	415	762	2,970	-81	0	4,116	173	22
November .....	17	(s)	3,080	129	17	1,641	408	1,233	4,029	1,059	0	3,254	137	17
December .....	17	(s)	3,217	135	17	1,765	476	1,289	4,506	477	0	4,029	169	22
<b>Total</b> .....	176	2	32,368	1,359	173	8,152	4,675	3,477	4,506	2,422	0	33,423	1,404	179
<b>2014 January</b> .....	9	(s)	1,612	68	9	233	135	98	4,171	<sup>h</sup> -338	0	2,048	86	11
February .....	12	(s)	2,183	92	12	175	141	34	3,928	-243	0	2,461	103	13
March .....	13	(s)	2,325	98	12	257	91	166	4,074	146	0	2,345	98	13
April .....	12	(s)	2,219	93	12	146	261	-115	3,764	-310	0	2,414	101	13
May .....	13	(s)	2,409	101	13	563	208	355	3,334	-431	0	3,195	134	17
June .....	13	(s)	2,454	103	13	233	263	-30	2,995	-339	0	2,763	116	15
July .....	17	(s)	3,119	131	17	493	320	173	3,358	363	0	2,929	123	16
August .....	14	(s)	2,510	105	13	571	264	307	2,998	-360	0	3,177	133	17
September .....	14	(s)	2,631	111	14	352	136	216	2,743	-255	0	3,102	130	17
October .....	15	(s)	2,715	114	15	507	40	467	2,867	124	0	3,058	128	16
<b>10-Month Total</b> ...	131	2	24,177	1,015	130	3,530	1,859	1,671	2,867	-1,643	0	27,491	1,155	147
<b>2013 10-Month Total</b> ...	142	2	26,072	1,095	140	4,746	3,791	955	2,970	886	0	26,140	1,098	140
<b>2012 10-Month Total</b> ...	113	2	20,820	874	112	773	2,847	-2,074	2,183	171	0	18,575	780	100

<sup>a</sup> Total vegetable oil and other biomass inputs to the production of biodiesel—calculated by multiplying biodiesel production by 5.433 million Btu per barrel. See "Biodiesel Feedstock" entry in the "Thermal Conversion Factor Source Documentation" at the end of Appendix A.

<sup>b</sup> 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.

<sup>c</sup> Net imports equal imports minus exports.

<sup>d</sup> 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.

<sup>e</sup> A negative value indicates a decrease in stocks and a positive value indicates an increase.

<sup>f</sup> Beginning in 2009, because of incomplete data coverage and different data sources, "Balancing Item" is used to balance biodiesel supply and disposition.

<sup>g</sup> 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."

<sup>h</sup> Derived from the preliminary 2013 stocks value (4,509 thousand barrels), not the final 2013 value (4,506 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 A1). • Through 2000, data are not available. Beginning in 2001, data not from U.S. Energy Information Administration (EIA) surveys are estimates. Beginning in 2014, biodiesel production data are estimated by EIA, and are only partially based on survey data. • 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> (Excel and CSV files) for all available annual and monthly 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 2012–2014 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 2014 is 15.0% higher than that of 2013, based on the growth rate for residential/commercial solar/PV in EIA’s *Annual Energy Outlook*, Table 17.)

#### 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 2014 is set equal to that of 2013.)

#### 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 2012–2014 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 2014 is set equal to that of 2013); 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 2012–2014 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 2014 is set equal to

that of 2013); 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 2014 is set equal to that of 2013); 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).

2009–2013: 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.

2014: 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."

2009–2013: EIA, PSA, annual reports, Table 1, data for net production of fuel ethanol at renewable fuels and oxygenate plants.

2014: EIA, PSM, monthly reports, Table 1, data for net production of fuel ethanol at renewable fuels and oxygenate plants.

#### Trade, Stocks, and Stock Change

1992–2013: EIA, PSA, annual reports, Table 1.

2014: 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).

2009–2013: EIA, PSA, annual reports, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments.

2014: 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 and 2010: EIA, *Monthly Biodiesel Production Report*, monthly reports, Table 1.

2011–2013: EIA, *Petroleum Supply Annual (PSA)*, annual reports, Table 1, data for renewable fuels except fuel ethanol.

2014: EIA, *Petroleum Supply Monthly (PSM)*, monthly reports, Table 1, data for renewable fuels except fuel ethanol.

### **Trade**

2001–2011: 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); and 3824.90.40.30,

"Biodiesel/Mixes" (data for July 2010–2011). 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); and 3824.90.40.30, "Biodiesel <70%" (data for 2011). (The data above are converted from pounds to gallons by dividing by 7.4.) 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.

2012 and 2013: EIA, PSA, annual reports, Tables 25 and 31, data for biomass-based diesel fuel.

2014: EIA, PSM, monthly reports, Tables 37 and 49, data for biomass-based diesel fuel.

### **Stocks and Stock Change**

2009–2013: EIA, PSA, annual reports, Table 1, data for renewable fuels except fuel ethanol.

2014: 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.

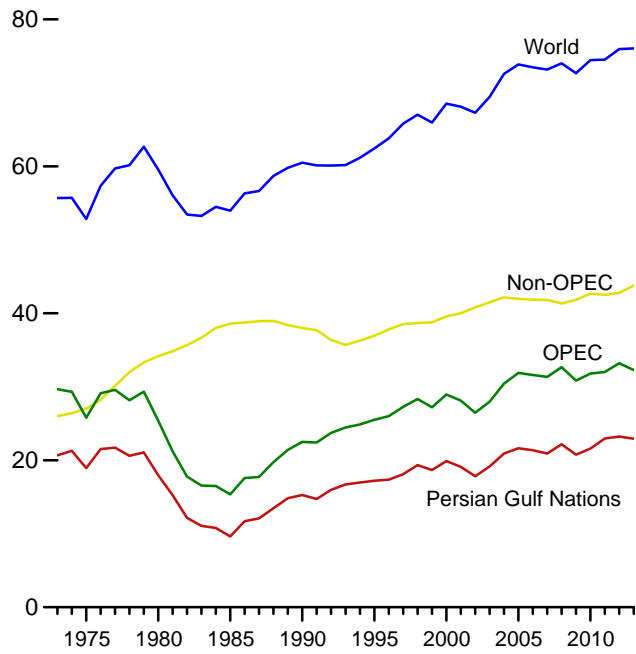
March 2009 forward: Calculated as biodiesel production plus biodiesel net imports minus biodiesel stock change.

# 11. International Petroleum

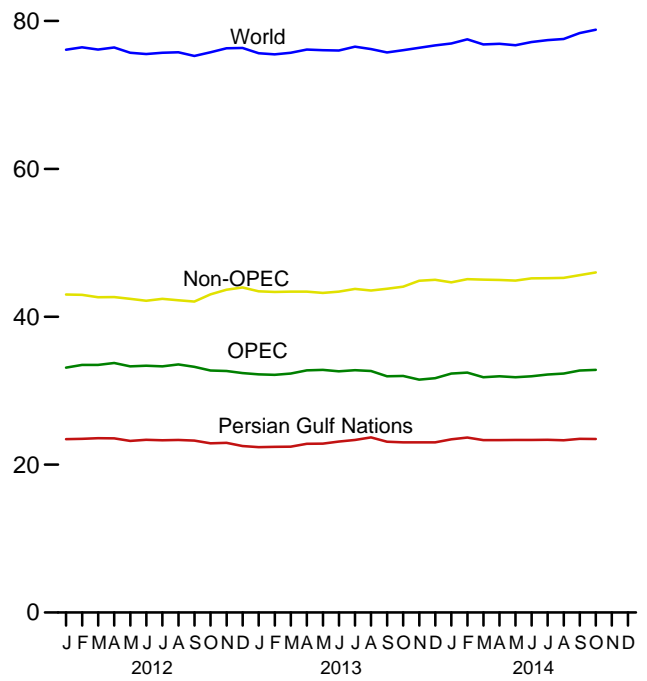
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**Figure 11.1a World Crude Oil Production Overview**  
(Million Barrels per Day)

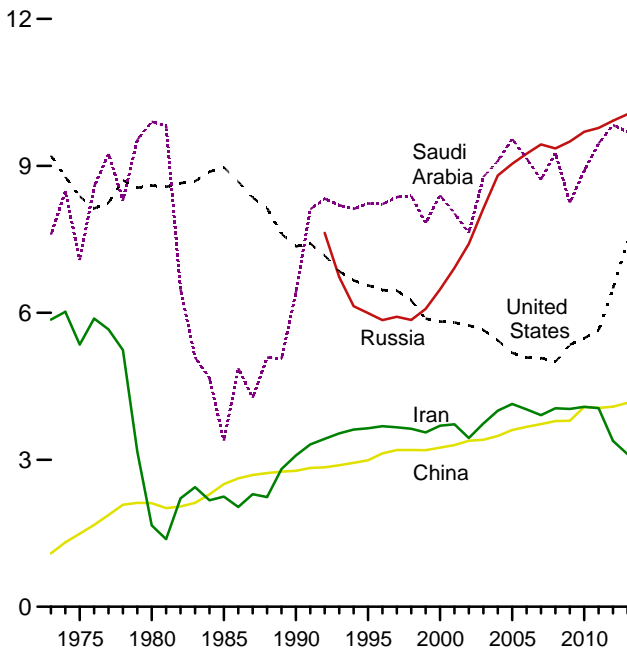
World Production, 1973–2013



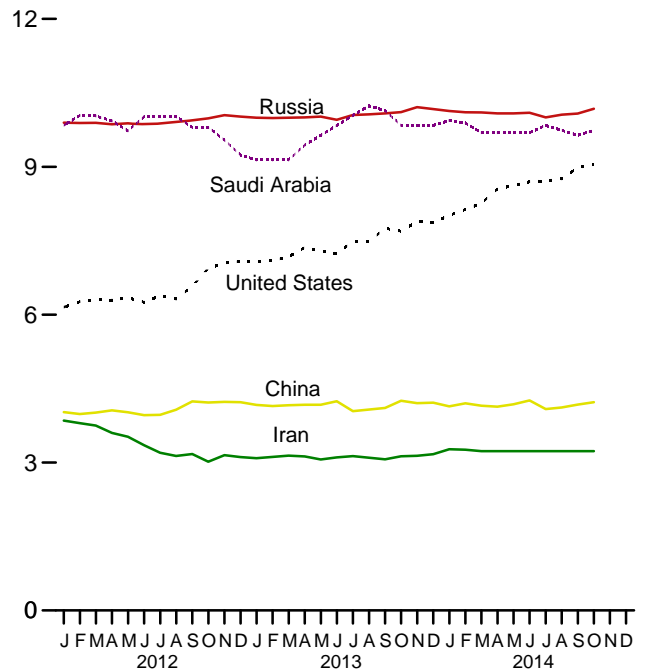
World Production, Monthly



Selected Producers, 1973–2013



Selected Producers, Monthly

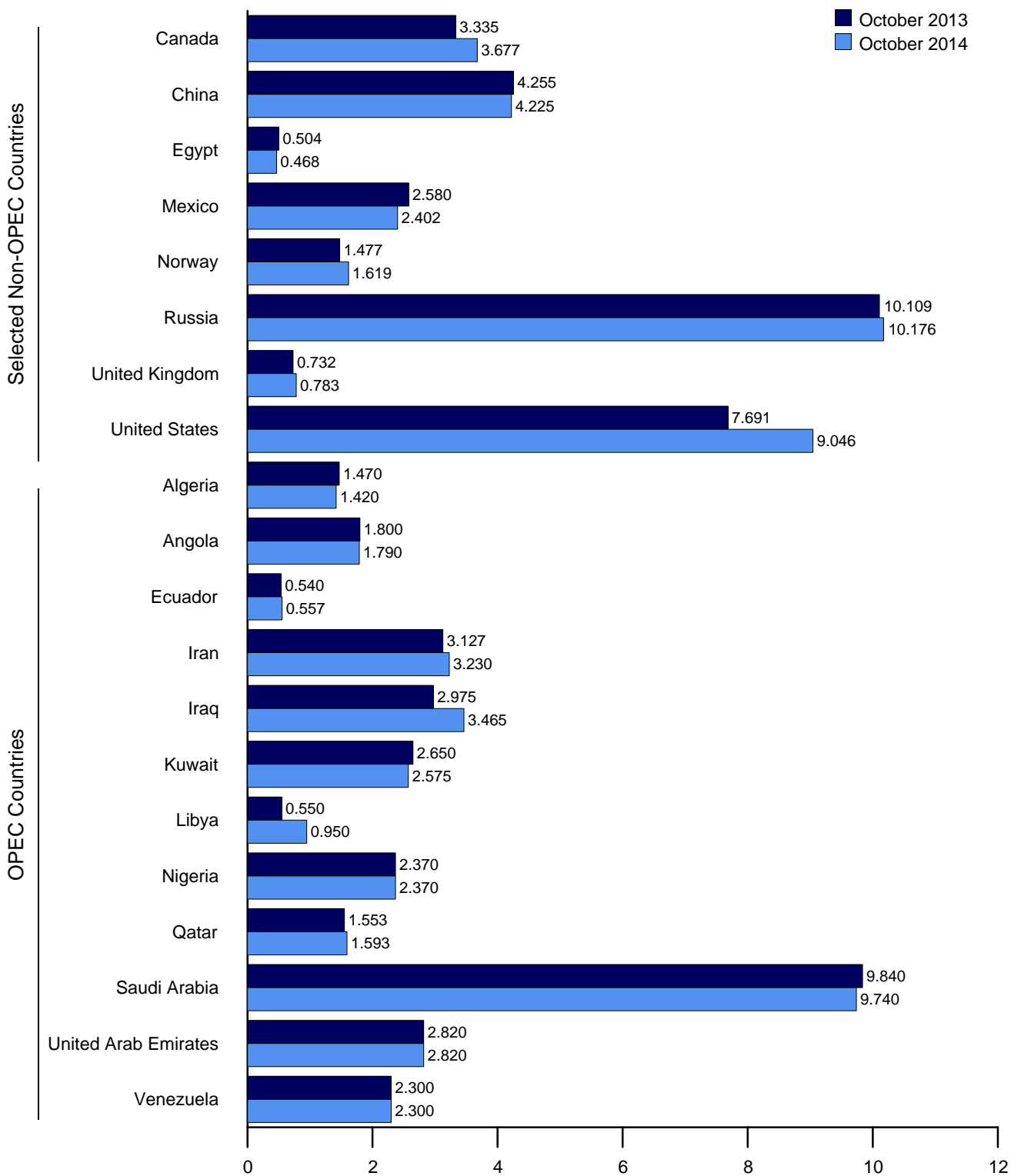


Notes: • OPEC is the Organization of the Petroleum Exporting Countries. • The Persian Gulf Nations are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in “Per-

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 11.1b World Crude Oil Production: Persian Gulf Nations, Non-OPEC, and World**  
(Thousand Barrels per Day)

	Persian Gulf Nations <sup>b</sup>	Selected Non-OPEC <sup>a</sup> Producers									Total Non-OPEC <sup>a</sup>	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 .....	19,897	1,977	3,249	768	3,104	3,222	---	6,479	2,275	5,822	39,583	68,527
2001 Average .....	19,114	2,029	3,300	720	3,218	3,226	---	6,917	2,282	5,801	40,003	68,132
2002 Average .....	17,824	2,171	3,390	715	3,263	3,131	---	7,408	2,292	5,744	40,825	67,290
2003 Average .....	19,154	2,306	3,409	713	3,459	3,042	---	8,132	2,093	5,649	41,483	69,460
2004 Average .....	20,906	2,398	3,485	673	3,476	2,954	---	8,805	1,845	5,441	42,163	72,595
2005 Average .....	21,644	2,369	3,609	623	3,423	2,698	---	9,043	1,649	5,181	41,969	73,866
2006 Average .....	21,377	2,525	3,673	535	3,345	2,491	---	9,247	1,490	5,088	41,871	73,478
2007 Average .....	20,904	2,628	3,729	530	3,143	2,270	---	9,437	1,498	5,077	41,810	73,164
2008 Average .....	22,186	2,579	3,790	566	2,839	2,182	---	9,357	1,391	5,000	41,344	74,016
2009 Average .....	20,754	2,579	3,796	587	2,646	2,067	---	9,495	1,328	5,350	41,836	72,670
2010 Average .....	21,589	2,741	4,078	568	2,621	1,869	---	9,694	1,233	5,482	42,660	74,459
2011 Average .....	22,953	2,901	4,059	551	2,600	1,752	---	9,774	1,026	5,645	42,514	74,534
<b>2012</b> January .....	23,436	3,108	4,022	544	2,566	1,761	---	9,894	1,021	6,153	43,004	76,123
February .....	23,486	3,249	3,986	544	2,591	1,745	---	9,889	1,034	6,262	42,957	76,435
March .....	23,566	3,037	4,015	544	2,600	1,715	---	9,891	977	6,297	42,640	76,134
April .....	23,546	3,155	4,060	541	2,590	1,720	---	9,861	975	6,296	42,670	76,415
May .....	23,201	3,035	4,021	541	2,591	1,699	---	9,882	899	6,342	42,424	75,712
June .....	23,351	3,014	3,963	541	2,588	1,583	---	9,861	950	6,252	42,156	75,542
July .....	23,302	3,114	3,968	538	2,571	1,553	---	9,882	946	6,391	42,415	75,710
August .....	23,336	3,064	4,071	538	2,600	1,570	---	9,907	792	6,318	42,233	75,778
September .....	23,245	3,011	4,242	538	2,602	1,309	---	9,941	601	6,574	42,047	75,267
October .....	22,890	3,173	4,217	535	2,584	1,549	---	9,984	682	6,941	43,036	75,760
November .....	22,952	3,271	4,232	535	2,622	1,517	---	10,048	864	7,044	43,657	76,315
December .....	22,512	3,427	4,224	535	2,606	1,558	---	10,018	923	7,081	43,967	76,346
<b>Average</b> .....	<b>23,233</b>	<b>3,138</b>	<b>4,085</b>	<b>539</b>	<b>2,593</b>	<b>1,607</b>	<b>---</b>	<b>9,922</b>	<b>888</b>	<b>6,497</b>	<b>42,768</b>	<b>75,960</b>
<b>2013</b> January .....	22,374	3,329	4,168	531	2,602	1,545	---	9,995	825	R 7,082	R 43,442	R 75,643
February .....	22,401	3,259	4,146	528	2,595	1,502	---	9,990	823	R 7,098	R 43,355	R 75,494
March .....	22,425	3,429	4,164	525	2,555	1,498	---	9,995	812	R 7,171	R 43,393	R 75,704
April .....	22,810	3,237	4,174	522	2,557	1,567	---	10,002	830	R 7,364	R 43,389	R 76,142
May .....	22,850	3,026	4,174	519	2,548	1,563	---	10,018	861	R 7,286	R 43,224	R 76,048
June .....	23,116	3,146	4,244	516	2,559	1,386	---	9,955	781	R 7,244	R 43,389	R 76,011
July .....	23,341	3,306	4,043	513	2,522	1,648	---	10,052	792	R 7,480	R 43,758	R 76,531
August .....	23,683	3,471	4,075	510	2,554	1,546	---	10,064	630	R 7,477	R 43,539	R 76,210
September .....	23,101	3,352	4,107	507	2,563	1,395	---	10,082	744	7,751	43,789	75,738
October .....	23,013	3,335	4,255	504	2,580	1,477	---	10,109	732	R 7,691	R 44,060	R 76,055
November .....	23,022	3,468	4,205	501	2,553	1,613	---	10,209	833	R 7,888	R 44,867	R 76,366
December .....	23,005	3,534	4,215	498	2,557	1,611	---	10,170	955	R 7,870	R 45,006	R 76,701
<b>Average</b> .....	<b>22,932</b>	<b>3,325</b>	<b>4,164</b>	<b>514</b>	<b>2,562</b>	<b>1,530</b>	<b>---</b>	<b>10,054</b>	<b>801</b>	<b>R 7,452</b>	<b>R 43,770</b>	<b>R 76,058</b>
<b>2014</b> January .....	23,417	3,487	4,141	495	2,545	1,633	---	10,131	825	RE 8,017	R 44,644	R 76,952
February .....	23,657	3,507	4,201	492	2,541	1,621	---	10,106	R 929	RE 8,136	R 45,094	R 77,533
March .....	23,327	3,605	4,153	489	2,511	1,586	---	10,103	R 909	RE 8,262	R 45,013	R 76,838
April .....	23,312	3,476	4,132	486	2,518	1,603	---	10,083	820	RE 8,544	R 44,976	R 76,919
May .....	23,337	3,397	4,181	483	2,530	1,376	---	10,083	869	RE 8,623	R 44,900	R 76,722
June .....	23,337	3,457	4,259	480	2,476	1,452	---	10,095	R 752	RE 8,696	R 45,204	R 77,162
July .....	23,368	R 3,629	4,084	477	2,427	1,605	---	10,003	R 705	RE 8,716	R 45,213	R 77,404
August .....	R 23,298	R 3,697	4,118	474	2,455	1,541	---	10,056	468	RE 8,756	R 45,258	R 77,574
September .....	23,488	R 3,657	4,175	471	2,430	1,548	---	10,079	748	RE 8,981	R 45,632	R 78,366
October .....	23,473	3,677	4,225	468	2,402	1,619	---	10,176	783	E 9,046	46,002	78,812
<b>10-Month Average</b> ...	<b>23,399</b>	<b>3,560</b>	<b>4,166</b>	<b>481</b>	<b>2,483</b>	<b>1,558</b>	<b>---</b>	<b>10,091</b>	<b>779</b>	<b>E 8,581</b>	<b>45,194</b>	<b>77,427</b>
<b>2013 10-Month Average</b> ...	<b>22,915</b>	<b>3,290</b>	<b>4,155</b>	<b>517</b>	<b>2,563</b>	<b>1,513</b>	<b>---</b>	<b>10,027</b>	<b>782</b>	<b>7,366</b>	<b>43,536</b>	<b>75,962</b>
<b>2012 10-Month Average</b> ...	<b>23,334</b>	<b>3,095</b>	<b>4,057</b>	<b>540</b>	<b>2,588</b>	<b>1,620</b>	<b>---</b>	<b>9,899</b>	<b>887</b>	<b>6,383</b>	<b>42,558</b>	<b>75,885</b>

<sup>a</sup> 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.

<sup>b</sup> 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.

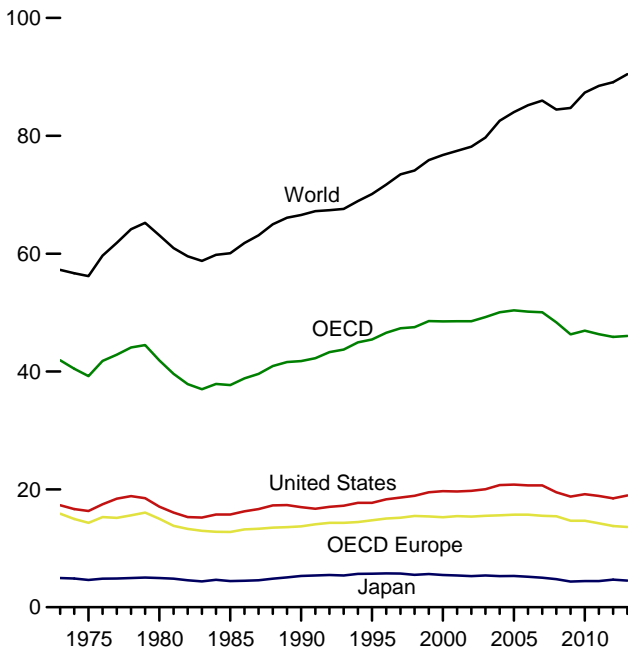
Notes: • Data are for crude oil and lease condensate; they exclude natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available. • Data for countries may not sum 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> (Excel and CSV files) for all available annual and monthly data beginning in 1973.

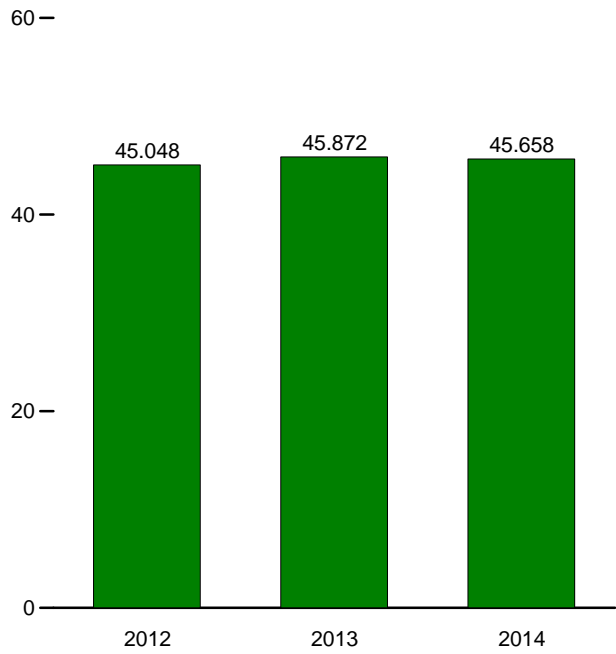
Sources: See end of section.

**Figure 11.2 Petroleum Consumption in OECD Countries**  
(Million Barrels per Day)

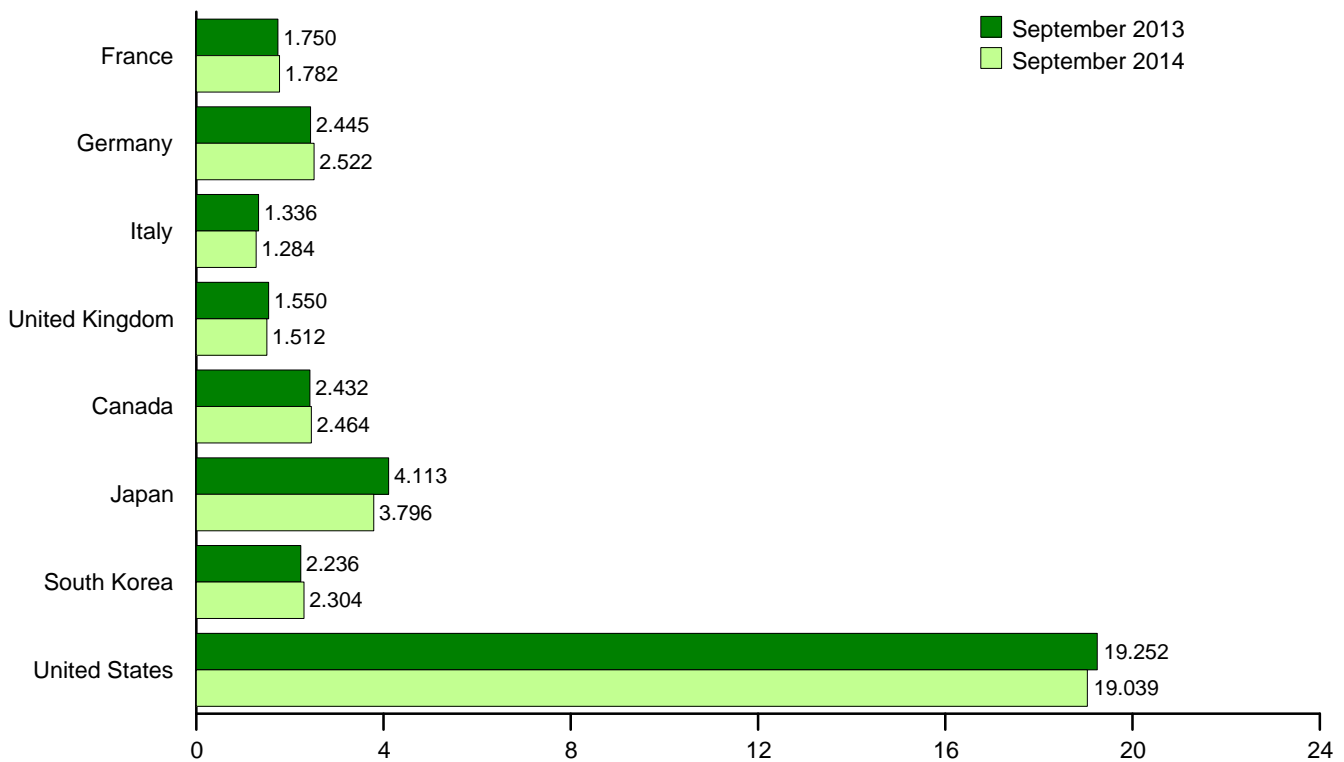
Overview, 1973–2013



OECD Total, September



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)

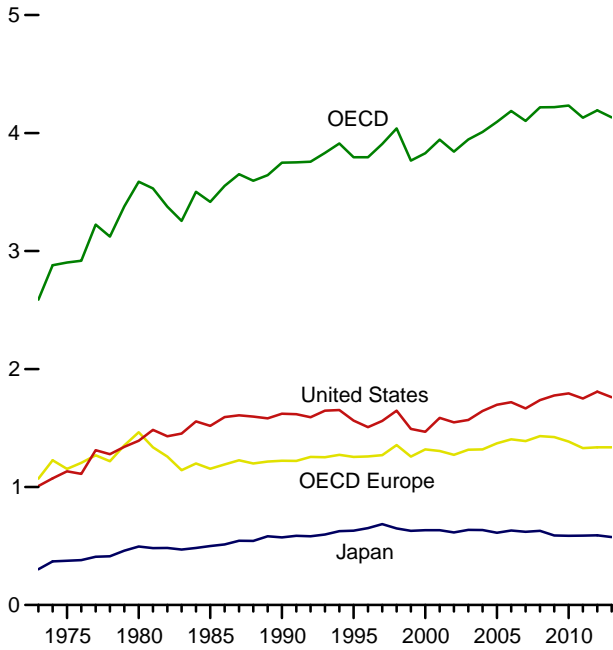
	France	Germany <sup>a</sup>	Italy	United Kingdom	OECD Europe <sup>b</sup>	Canada	Japan	South Korea	United States	Other OECD <sup>c</sup>	OECD <sup>d</sup>	World
1973 Average	2,601	3,324	2,068	2,341	15,879	1,729	4,949	281	17,308	1,768	41,913	57,237
1975 Average	2,252	2,957	1,855	1,911	14,314	1,779	4,621	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	60,085
1990 Average	1,826	2,682	1,868	1,776	13,726	1,722	5,315	1,048	16,988	2,976	41,775	66,550
1995 Average	1,920	2,882	1,942	1,816	14,762	1,799	5,693	2,008	17,725	3,452	45,439	70,132
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	3,892	48,562	75,880
2000 Average	2,001	2,767	1,854	1,765	15,277	2,008	5,480	2,135	19,701	3,905	48,506	76,751
2001 Average	2,054	2,807	1,835	1,747	15,453	2,029	5,380	2,132	19,649	3,903	48,546	77,452
2002 Average	1,991	2,710	1,870	1,739	15,393	2,040	5,287	2,149	19,761	3,891	48,522	78,144
2003 Average	2,001	2,679	1,860	1,759	15,515	2,155	5,397	2,175	20,034	3,960	49,235	79,715
2004 Average	2,008	2,648	1,829	1,789	15,603	2,233	5,288	2,155	20,314	4,054	50,064	82,547
2005 Average	1,990	2,624	1,781	1,819	15,711	2,269	5,298	2,191	20,802	4,114	50,387	84,030
2006 Average	1,991	2,636	1,777	1,806	15,719	2,266	5,168	2,180	20,687	4,150	50,171	85,182
2007 Average	1,979	2,407	1,729	1,751	15,515	2,344	5,009	2,240	20,680	4,268	50,057	85,964
2008 Average	1,944	2,533	1,667	1,722	15,427	2,267	4,770	2,142	19,498	4,228	48,332	84,452
2009 Average	1,868	2,434	1,544	1,634	14,681	2,184	4,363	2,188	18,771	4,121	46,309	84,719
2010 Average	1,833	2,467	1,544	1,620	14,669	2,283	4,429	2,269	19,180	4,109	46,939	87,331
2011 Average	1,793	2,392	1,494	1,578	14,235	2,310	4,442	2,259	18,882	4,193	46,323	88,474
<b>2012 January</b>	1,778	2,135	1,322	1,450	13,007	2,189	5,132	2,418	18,304	4,100	45,150	NA
February	1,985	2,568	1,369	1,575	14,491	2,264	5,517	2,466	18,643	4,265	47,646	NA
March	1,758	2,264	1,376	1,623	13,713	2,317	5,120	2,206	18,164	4,306	45,826	NA
April	1,720	2,292	1,354	1,610	13,648	2,252	4,345	2,153	18,211	4,119	44,727	NA
May	1,704	2,351	1,363	1,527	13,661	2,356	4,339	2,234	18,589	4,212	45,392	NA
June	1,814	2,521	1,428	1,536	14,171	2,220	4,081	2,358	18,857	4,229	45,915	NA
July	1,832	2,497	1,440	1,517	14,057	2,379	4,341	2,248	18,515	4,199	45,740	NA
August	1,696	2,334	1,387	1,485	13,716	2,513	4,598	2,288	19,156	4,304	46,575	NA
September	1,760	2,389	1,376	1,535	13,785	2,350	4,412	2,319	18,092	4,092	45,048	NA
October	1,840	2,574	1,416	1,431	14,215	2,398	4,392	2,252	18,705	4,350	46,311	NA
November	1,743	2,549	1,317	1,516	13,846	2,563	4,608	2,477	18,528	4,370	46,392	NA
December	1,644	2,213	1,294	1,542	13,013	2,415	5,462	2,452	18,120	4,302	45,764	NA
<b>Average</b>	<b>1,772</b>	<b>2,389</b>	<b>1,370</b>	<b>1,528</b>	<b>13,772</b>	<b>2,352</b>	<b>4,695</b>	<b>2,322</b>	<b>18,490</b>	<b>4,237</b>	<b>45,868</b>	<b>89,111</b>
<b>2013 January</b>	1,718	2,230	1,244	1,454	12,872	2,499	5,164	2,421	18,749	4,142	45,848	NA
February	1,850	2,317	1,341	1,526	13,437	2,466	5,279	2,407	18,643	4,214	46,446	NA
March	1,780	2,338	1,298	1,497	13,233	2,397	4,729	2,177	18,531	4,109	45,176	NA
April	1,842	2,585	1,316	1,548	14,004	2,371	4,287	2,286	18,584	4,253	45,785	NA
May	1,771	2,458	1,282	1,482	13,672	2,457	4,085	2,275	18,779	4,181	45,449	NA
June	1,751	2,489	1,287	1,594	13,718	2,406	3,860	2,320	18,806	4,212	45,321	NA
July	1,891	2,450	1,423	1,497	14,192	2,447	4,358	2,263	19,257	4,172	46,689	NA
August	1,727	2,420	1,281	1,515	13,809	2,429	4,374	2,325	19,125	4,265	46,326	NA
September	1,750	2,445	1,336	1,550	13,872	2,432	4,113	2,236	19,252	3,968	45,872	NA
October	1,800	2,538	1,394	1,449	14,007	2,378	4,166	2,249	19,312	4,191	46,303	NA
November	1,661	2,419	1,275	1,538	13,577	2,497	4,803	2,455	19,491	4,104	46,926	NA
December	1,673	2,152	1,306	1,452	13,027	2,400	5,191	2,484	18,983	4,170	46,255	NA
<b>Average</b>	<b>1,767</b>	<b>2,403</b>	<b>1,315</b>	<b>1,508</b>	<b>13,618</b>	<b>2,431</b>	<b>4,531</b>	<b>2,324</b>	<b>18,961</b>	<b>4,165</b>	<b>46,030</b>	<b>90,443</b>
<b>2014 January</b>	1,644	2,269	1,189	1,416	12,625	2,412	4,986	2,363	18,921	3,938	45,245	NA
February	1,749	2,282	1,234	1,577	13,231	2,530	5,231	2,385	18,994	4,142	46,512	NA
March	1,677	2,432	1,196	1,439	13,147	2,345	4,852	2,337	18,526	4,072	45,280	NA
April	1,741	2,387	1,204	1,523	13,463	2,271	4,064	2,289	18,783	4,012	44,882	NA
May	1,587	2,314	1,241	1,472	13,147	2,357	3,788	2,338	18,516	4,088	44,234	NA
June	1,735	2,267	1,229	1,538	13,510	2,413	3,774	2,330	18,833	4,014	44,874	NA
July	1,839	2,501	1,317	1,496	14,023	2,464	3,929	2,313	19,164	4,115	46,007	NA
August	1,675	2,457	1,187	1,533	13,539	2,415	3,900	2,380	19,276	3,963	45,473	NA
September	1,782	2,522	1,284	1,512	14,048	2,464	3,796	2,304	19,039	4,008	45,658	NA
<b>9-Month Average</b>	<b>1,714</b>	<b>2,382</b>	<b>1,231</b>	<b>1,499</b>	<b>13,414</b>	<b>2,407</b>	<b>4,251</b>	<b>2,337</b>	<b>18,894</b>	<b>4,038</b>	<b>45,341</b>	<b>NA</b>
<b>2013 9-Month Average</b>	<b>1,786</b>	<b>2,415</b>	<b>1,312</b>	<b>1,518</b>	<b>13,645</b>	<b>2,434</b>	<b>4,467</b>	<b>2,300</b>	<b>18,861</b>	<b>4,168</b>	<b>45,875</b>	<b>NA</b>
<b>2012 9-Month Average</b>	<b>1,782</b>	<b>2,371</b>	<b>1,379</b>	<b>1,539</b>	<b>13,800</b>	<b>2,316</b>	<b>4,652</b>	<b>2,298</b>	<b>18,504</b>	<b>4,203</b>	<b>45,772</b>	<b>NA</b>

<sup>a</sup> Data are for unified Germany, i.e., the former East Germany and West Germany.  
<sup>b</sup> "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.  
<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories; for 1984 forward, Mexico; and, for 2000 forward, Chile, Estonia, and Israel.  
<sup>d</sup> 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

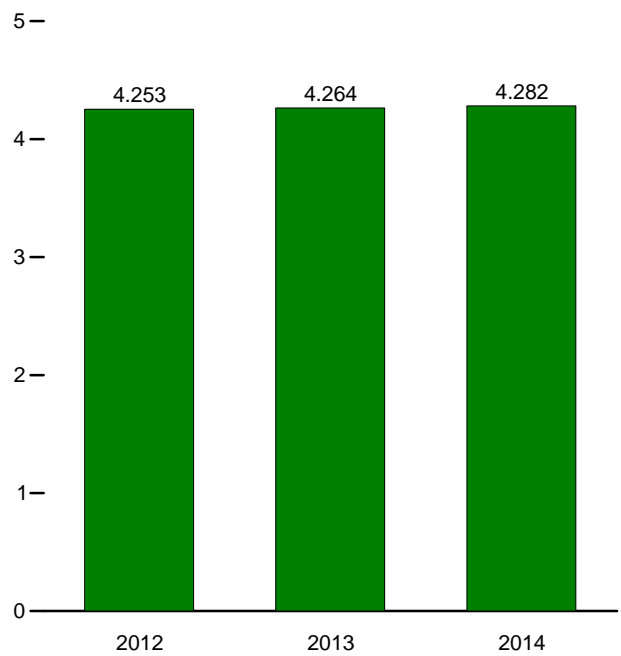
rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.  
 Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> (Excel and CSV files) for all available annual and monthly data beginning in 1973.  
 Sources: • United States: Table 3.1. • Chile, East Germany, 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*, January 2015, 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)

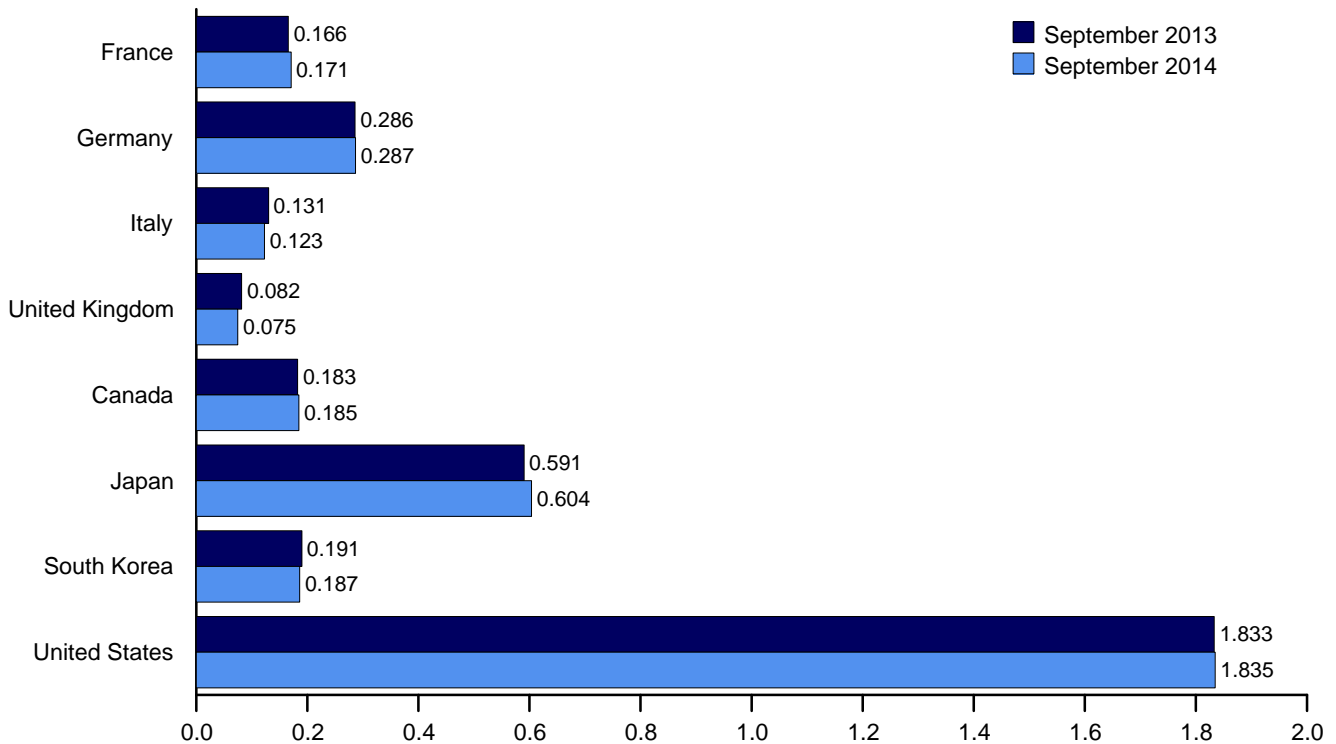
Overview, End of Year, 1973–2013



OECD Stocks, End of Month, September



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 <sup>a</sup>	Italy	United Kingdom	OECD Europe <sup>b</sup>	Canada	Japan	South Korea	United States	Other OECD <sup>c</sup>	OECD <sup>d</sup>
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	119	4,234
2011 Year .....	165	281	135	80	1,330	178	589	167	1,750	117	4,131
<b>2012</b> January .....	166	288	138	84	1,359	178	594	164	1,773	120	4,188
February .....	165	286	138	84	1,356	180	583	171	1,767	113	4,172
March .....	165	284	139	82	1,367	171	580	164	1,783	112	4,177
April .....	163	284	137	85	1,359	170	592	174	1,784	114	4,194
May .....	162	281	137	82	1,338	172	597	183	1,796	116	4,201
June .....	164	280	134	82	1,340	170	601	177	1,810	111	4,210
July .....	163	285	132	80	1,350	173	608	181	1,813	116	4,240
August .....	168	284	138	82	1,367	177	603	179	1,801	114	4,240
September .....	164	283	143	75	1,349	180	606	184	1,819	115	4,253
October .....	160	282	141	75	1,330	175	614	180	1,810	109	4,218
November .....	160	287	138	85	1,345	174	604	177	1,810	105	4,216
December .....	162	287	126	81	1,336	174	591	175	1,808	107	4,192
<b>2013</b> January .....	162	292	129	86	1,374	172	593	179	1,811	105	4,233
February .....	162	289	130	81	1,376	174	583	176	1,790	110	4,210
March .....	161	291	131	80	1,374	171	591	188	1,793	114	4,231
April .....	159	289	132	85	1,369	172	598	176	1,808	113	4,237
May .....	163	291	121	80	1,342	169	594	177	1,817	110	4,210
June .....	166	288	126	84	1,342	174	588	182	1,819	115	4,220
July .....	166	289	126	83	1,357	178	579	189	1,818	113	4,233
August .....	167	288	127	84	1,349	185	579	188	1,823	113	4,237
September .....	166	286	131	82	1,354	183	591	191	1,833	112	4,264
October .....	167	288	130	81	1,352	176	587	190	1,810	114	4,228
November .....	167	287	131	75	1,333	174	587	181	1,789	113	4,178
December .....	167	290	125	78	1,337	170	575	178	1,761	111	4,133
<b>2014</b> January .....	171	291	128	77	<sup>R</sup> 1,361	170	579	178	1,743	111	<sup>R</sup> 4,141
February .....	167	296	124	77	<sup>R</sup> 1,355	176	576	182	1,743	114	<sup>R</sup> 4,146
March .....	167	289	123	77	<sup>R</sup> 1,344	174	586	187	1,753	110	<sup>R</sup> 4,153
April .....	167	291	122	76	<sup>R</sup> 1,339	178	576	180	1,780	112	<sup>R</sup> 4,166
May .....	172	294	128	76	<sup>R</sup> 1,362	176	584	184	1,809	114	<sup>R</sup> 4,230
June .....	168	292	122	75	<sup>R</sup> 1,347	179	585	180	1,814	112	<sup>R</sup> 4,217
July .....	170	287	120	73	<sup>R</sup> 1,341	187	591	180	1,818	113	<sup>R</sup> 4,230
August .....	173	<sup>R</sup> 288	125	76	<sup>R</sup> 1,361	<sup>R</sup> 187	601	188	1,822	117	<sup>R</sup> 4,275
September .....	171	287	123	75	1,356	185	604	187	1,835	114	4,282

<sup>a</sup> 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.

<sup>b</sup> "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.

<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories; for 1984 forward, Mexico; and, for 2000 forward, Chile, Estonia, and Israel.

<sup>d</sup> 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> (Excel and CSV files) for all available annual and monthly 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, January 16, 2015.

# 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, January 2015.

### 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, January 2015.

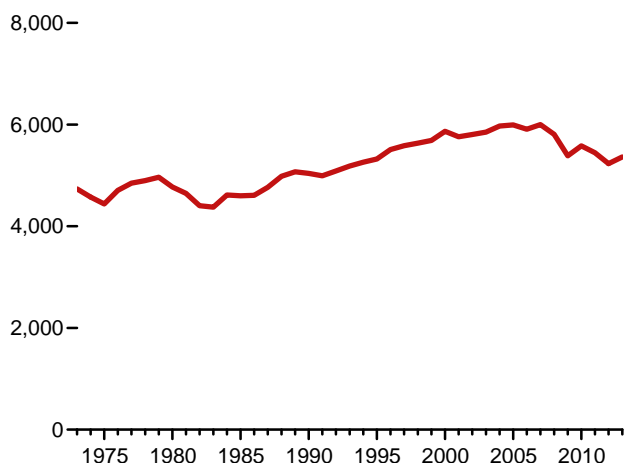


## **12. Environment**

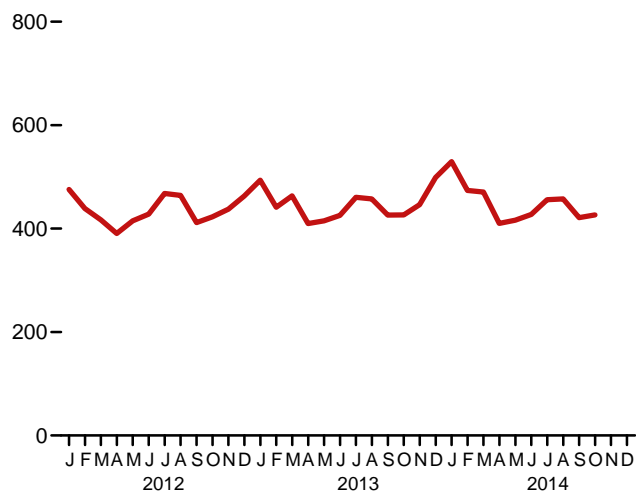
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**Figure 12.1 Carbon Dioxide Emissions From Energy Consumption by Source**  
(Million Metric Tons of Carbon Dioxide)

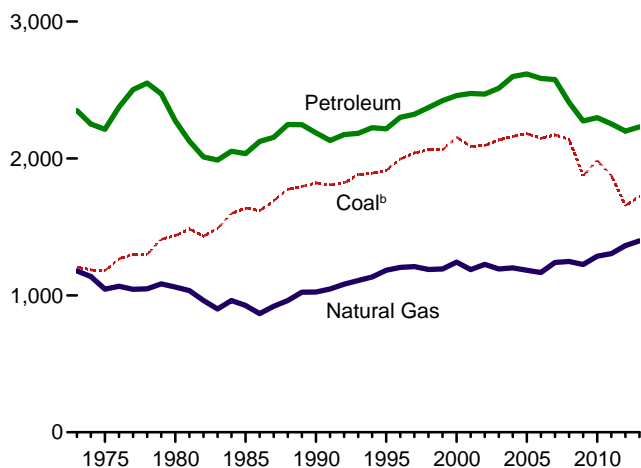
Total,<sup>a</sup> 1973–2013



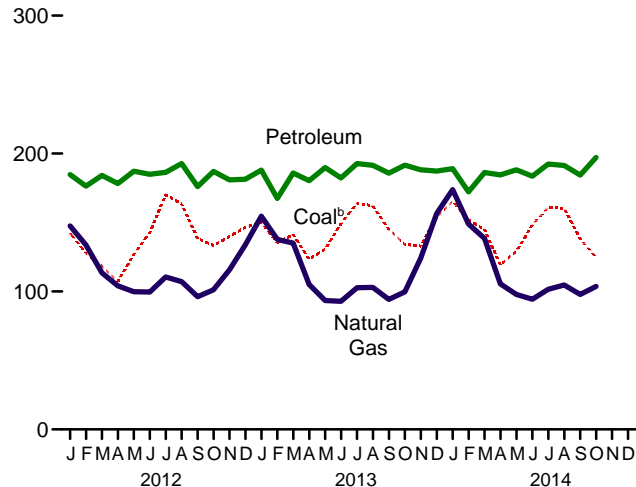
Total,<sup>a</sup> Monthly



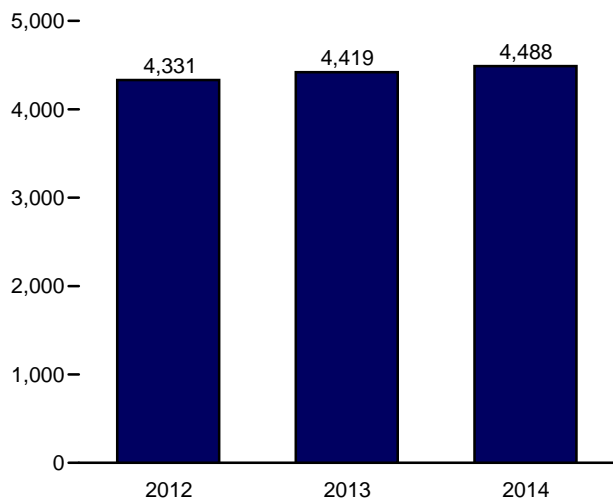
By Major Source, 1973–2013



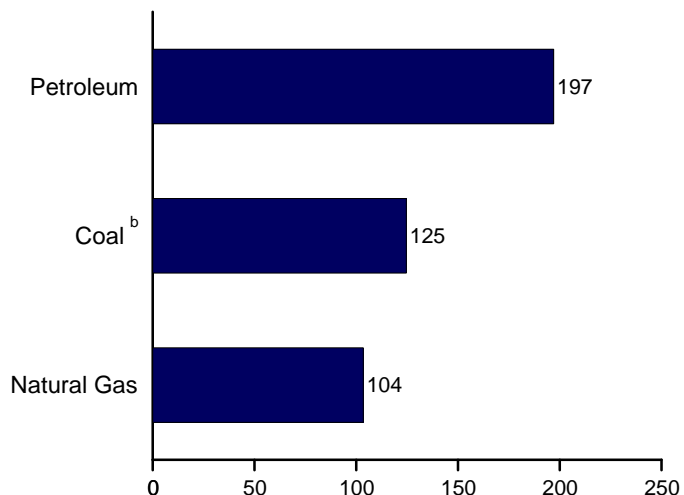
By Major Source, Monthly



Total,<sup>a</sup> January–October



By Major Source, October 2014



<sup>a</sup>Excludes emissions from biomass energy consumption.

<sup>b</sup>Includes 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<sup>a</sup>)

	Coal <sup>b</sup>	Natural Gas <sup>c</sup>	Petroleum										Total <sup>h,i</sup>	
			Aviation Gasoline	Distillate Fuel Oil <sup>d</sup>	Jet Fuel	Kero-sene	LPG <sup>e</sup>	Lubri-cants	Motor Gasoline <sup>f</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>g</sup>		Total
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	1,045	76	152	121	2,216	5,323
1996 Total	1,995	1,204	3	524	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	537	238	12	82	14	1,107	93	158	128	2,372	5,636
1999 Total	2,062	1,193	3	555	245	11	90	14	1,128	96	148	133	2,422	5,688
2000 Total	2,155	1,243	3	579	254	10	97	14	1,136	86	163	118	2,459	5,868
2001 Total	2,088	1,188	2	597	243	11	88	13	1,152	89	144	135	2,474	5,761
2002 Total	2,095	1,227	2	586	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	1,187	96	138	142	2,513	5,853
2004 Total	2,160	1,200	2	632	240	10	87	12	1,210	107	155	144	2,598	5,970
2005 Total	2,182	1,183	2	639	246	10	84	12	1,209	106	165	143	2,617	5,993
2006 Total	2,147	1,167	2	645	240	8	80	11	1,217	106	122	152	2,584	5,910
2007 Total	2,172	1,241	2	647	238	5	83	12	1,211	100	128	150	2,576	6,001
2008 Total	2,140	1,248	2	610	226	2	79	11	1,143	93	110	132	2,409	5,809
2009 Total	1,876	1,225	2	559	204	3	78	10	1,129	87	90	112	2,273	5,386
2010 Total	1,986	1,286	2	585	210	3	79	11	1,112	82	93	122	2,459	5,582
2011 Total	1,876	1,305	2	599	209	2	78	10	1,078	79	79	117	2,299	5,445
2012 January	142	147	(s)	50	16	(s)	8	1	86	7	7	9	185	476
February	128	134	(s)	48	16	(s)	7	1	84	5	5	10	176	439
March	118	114	(s)	48	17	(s)	7	1	90	6	6	9	184	417
April	107	104	(s)	47	16	(s)	6	1	88	6	6	8	178	390
May	127	100	(s)	49	18	(s)	6	1	94	7	5	8	187	415
June	143	100	(s)	47	19	(s)	6	1	91	7	5	10	185	428
July	170	110	(s)	46	18	(s)	6	1	92	6	7	10	186	468
August	163	107	(s)	49	18	(s)	6	1	96	8	6	10	193	464
September	138	96	(s)	46	17	(s)	6	1	87	7	5	7	176	412
October	133	101	(s)	50	17	(s)	7	1	91	6	5	11	187	423
November	140	116	(s)	48	17	(s)	7	1	86	7	5	11	181	438
December	147	134	(s)	46	17	(s)	8	1	88	7	3	12	181	463
Total	1,657	1,363	2	574	206	1	81	9	1,071	79	65	113	2,200	5,232
2013 January	150	155	(s)	53	16	(s)	9	1	87	7	5	9	188	494
February	135	138	(s)	47	15	(s)	8	1	79	5	4	9	167	441
March	141	135	(s)	49	17	(s)	8	1	90	5	7	8	186	463
April	123	105	(s)	48	17	(s)	7	1	89	5	4	9	180	410
May	131	93	(s)	48	18	(s)	6	1	94	7	4	11	190	415
June	149	93	(s)	46	18	(s)	6	1	92	7	4	9	182	425
July	164	103	(s)	47	19	(s)	7	1	96	7	5	11	193	460
August	162	103	(s)	47	19	(s)	6	1	95	7	6	9	192	458
September	145	94	(s)	46	17	(s)	6	1	90	7	5	12	186	426
October	134	100	(s)	52	18	(s)	8	1	93	6	4	9	192	426
November	133	124	(s)	48	17	(s)	8	1	90	7	5	11	188	446
December	154	157	(s)	50	18	(s)	9	1	90	6	3	11	187	499
Total	1,722	1,399	2	581	210	1	88	10	1,087	77	56	119	2,231	5,364
2014 January	165	174	(s)	55	17	(s)	10	1	85	8	4	9	189	529
February	152	149	(s)	49	15	(s)	7	1	82	5	3	10	172	474
March	145	138	(s)	52	18	(s)	7	1	91	4	3	9	186	471
April	119	105	(s)	50	17	(s)	6	1	91	6	4	10	185	410
May	129	98	(s)	51	17	(s)	5	1	94	7	4	9	188	416
June	148	94	(s)	48	19	(s)	6	1	91	6	4	9	184	427
July	161	102	(s)	50	19	(s)	6	1	96	7	4	9	192	456
August	160	105	(s)	49	19	(s)	6	1	97	7	3	9	191	457
September	138	98	(s)	49	18	(s)	6	1	89	7	4	11	184	421
October	125	104	(s)	55	18	(s)	7	1	96	7	4	9	197	426
10-Month Total	1,443	1,167	1	508	178	1	66	8	911	65	36	94	1,869	4,488
2013 10-Month Total	1,435	1,118	1	483	175	1	71	8	906	65	48	96	1,855	4,419
2012 10-Month Total	1,371	1,113	2	480	172	1	66	8	897	65	57	91	1,838	4,331

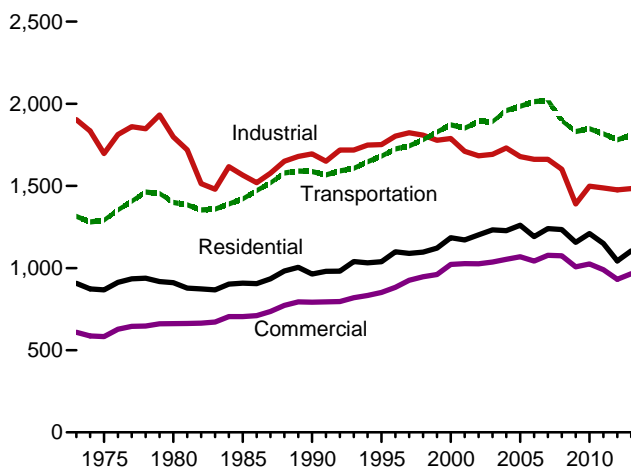
<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.  
<sup>b</sup> Includes coal coke net imports.  
<sup>c</sup> Natural gas, excluding supplemental gaseous fuels.  
<sup>d</sup> Distillate fuel oil, excluding biodiesel.  
<sup>e</sup> Liquefied petroleum gases.  
<sup>f</sup> Finished motor gasoline, excluding fuel ethanol.  
<sup>g</sup> 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.  
<sup>h</sup> Includes electric power sector use of geothermal energy and non-biomass waste. See Table 12.6.  
<sup>i</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

R=Revised. (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> (Excel and CSV files) for all available annual and monthly data beginning in 1973.  
 Sources: See end of section.

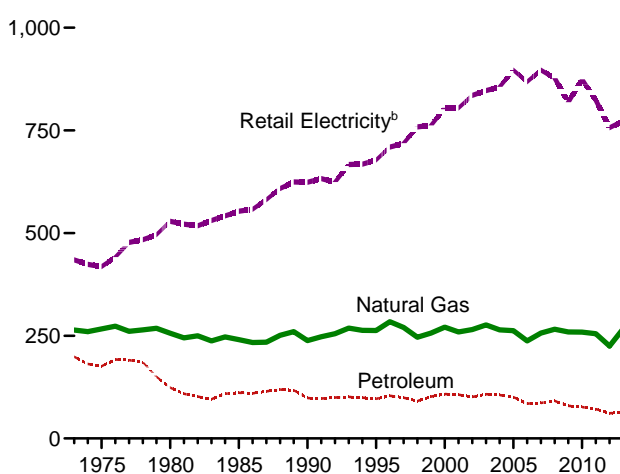
Petroleum revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Figure 12.2 Carbon Dioxide Emissions From Energy Consumption by Sector**  
(Million Metric Tons of Carbon Dioxide)

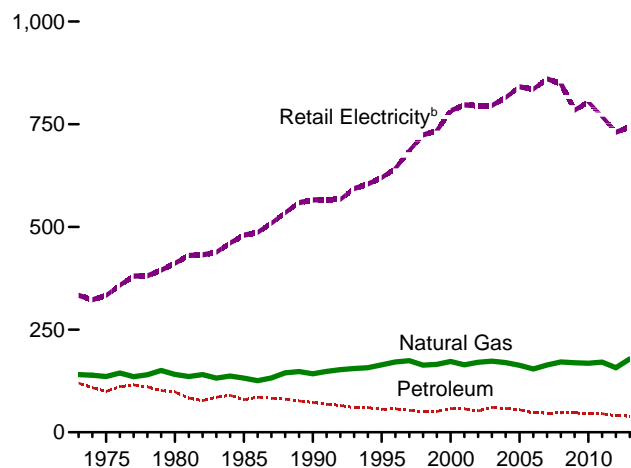
Total<sup>a</sup> by End-Use Sector,<sup>b</sup> 1973–2013



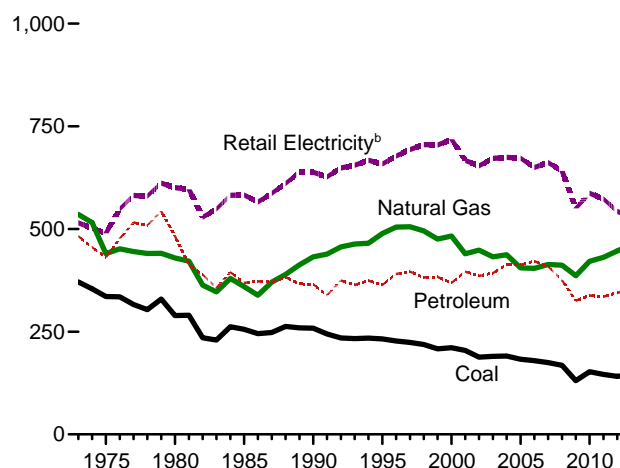
Residential Sector by Major Source, 1973–2013



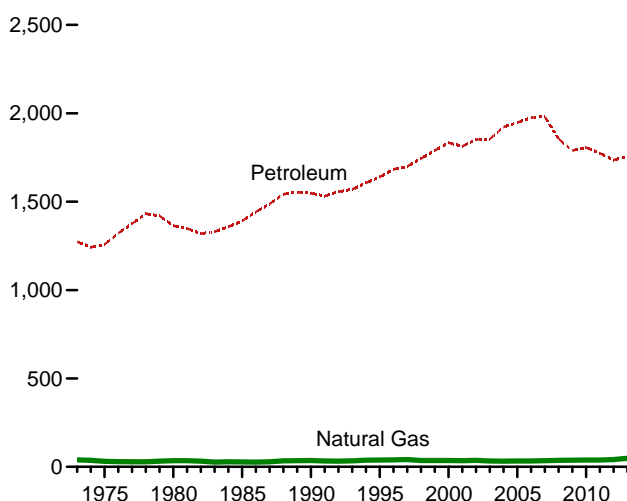
Commercial Sector by Major Source, 1973–2013



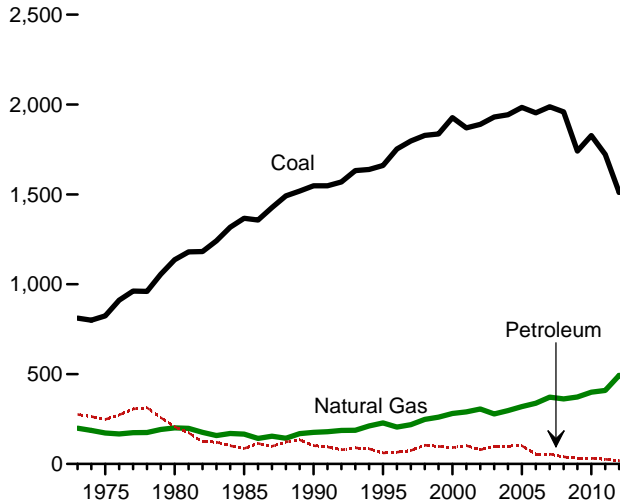
Industrial Sector by Major Source, 1973–2013



Transportation Sector by Major Source, 1973–2013



Electric Power Sector by Major Source, 1973–2013



<sup>a</sup> Excludes emissions from biomass energy consumption.

<sup>b</sup> 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<sup>a</sup>)

	Coal	Natural Gas <sup>b</sup>	Petroleum				Retail Electricity <sup>e</sup>	Total <sup>f</sup>
			Distillate Fuel Oil <sup>c</sup>	Kerosene	LPG <sup>d</sup>	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	R 60	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	R 1,171
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	R 67	6	32	106	856	R 1,227
2005 Total	1	262	62	6	32	101	897	1,261
2006 Total	1	237	52	5	28	85	869	R 1,191
2007 Total	1	257	53	3	31	R 86	897	R 1,241
2008 Total	NA	266	55	2	35	R 91	R 877	R 1,234
2009 Total	NA	259	43	2	35	79	819	1,157
2010 Total	NA	259	41	2	33	77	R 874	1,210
2011 Total	NA	255	R 38	1	32	72	R 823	1,150
2012 January	NA	43	5	(s)	2	7	68	118
February	NA	36	4	(s)	2	6	57	100
March	NA	22	3	(s)	2	6	50	78
April	NA	15	2	(s)	2	4	44	64
May	NA	9	2	(s)	2	5	55	68
June	NA	7	2	(s)	2	4	69	80
July	NA	6	2	(s)	2	4	92	102
August	NA	6	3	(s)	2	5	R 84	95
September	NA	6	2	(s)	2	4	65	75
October	NA	13	2	(s)	2	4	53	71
November	NA	26	3	(s)	2	5	56	88
December	NA	36	3	(s)	2	6	65	107
Total	NA	225	R 35	1	25	61	757	R 1,043
2013 January	NA	48	6	(s)	3	8	72	128
February	NA	41	5	(s)	2	8	61	110
March	NA	36	5	(s)	2	7	62	106
April	NA	20	3	(s)	2	6	50	76
May	NA	11	2	(s)	2	4	51	66
June	NA	7	2	(s)	2	3	67	77
July	NA	6	2	(s)	2	4	83	93
August	NA	6	2	(s)	2	4	79	89
September	NA	6	2	(s)	2	4	67	77
October	NA	12	2	(s)	2	4	54	70
November	NA	28	3	(s)	2	5	54	88
December	NA	46	3	(s)	3	6	74	126
Total	NA	267	36	1	27	64	773	R 1,104
2014 January	NA	R 56	4	(s)	3	R 6	84	R 147
February	NA	46	4	(s)	2	6	73	126
March	NA	38	4	(s)	2	6	63	107
April	NA	19	2	(s)	2	4	47	70
May	NA	11	2	(s)	2	4	51	R 67
June	NA	7	2	(s)	2	4	66	76
July	NA	6	2	(s)	2	4	78	87
August	NA	6	2	(s)	2	4	78	87
September	NA	7	2	(s)	2	5	64	75
October	NA	12	2	(s)	2	5	51	67
10-Month Total	NA	208	25	1	22	47	655	910
2013 10-Month Total	NA	193	30	(s)	22	53	646	892
2012 10-Month Total	NA	163	29	1	21	51	637	850

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Liquefied petroleum gases.

<sup>e</sup> 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.

<sup>f</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

R=Revised. 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> (Excel and CSV files) for all available annual and monthly data beginning in 1973. Sources: See end of section.

Petroleum revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Table 12.3 Carbon Dioxide Emissions From Energy Consumption: Commercial Sector**  
(Million Metric Tons of Carbon Dioxide<sup>a</sup>)

	Coal	Natural Gas <sup>b</sup>	Petroleum						Retail Electricity <sup>f</sup>	Total <sup>g</sup>	
			Distillate Fuel Oil <sup>c</sup>	Kerosene	LPG <sup>d</sup>	Motor Gasoline <sup>e</sup>	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	<sup>R</sup> 50	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	<sup>R</sup> 60	796	1,037
2004 Total	10	170	34	1	10	3	(s)	10	58	<sup>R</sup> 815	<sup>R</sup> 1,053
2005 Total	9	163	33	2	8	3	(s)	9	55	<sup>R</sup> 841	1,069
2006 Total	6	154	29	1	8	3	(s)	6	<sup>R</sup> 47	<sup>R</sup> 835	1,043
2007 Total	7	164	28	1	8	4	(s)	6	<sup>R</sup> 46	861	1,078
2008 Total	8	171	28	(s)	10	3	(s)	6	47	<sup>R</sup> 849	<sup>R</sup> 1,075
2009 Total	7	169	29	(s)	9	4	(s)	6	47	<sup>R</sup> 784	<sup>R</sup> 1,007
2010 Total	7	168	29	(s)	9	<sup>R</sup> 3	(s)	5	46	<sup>R</sup> 804	<sup>R</sup> 1,025
2011 Total	6	171	29	(s)	9	3	(s)	4	<sup>R</sup> 45	<sup>R</sup> 768	<sup>R</sup> 990
<b>2012</b> January	1	24	4	(s)	1	(s)	(s)	(s)	5	57	87
February	(s)	21	3	(s)	1	(s)	(s)	(s)	4	53	79
March	(s)	14	<sup>R</sup> 2	(s)	1	(s)	(s)	(s)	4	52	70
April	(s)	11	2	(s)	1	(s)	(s)	(s)	3	51	65
May	(s)	8	2	(s)	1	(s)	0	(s)	3	60	<sup>R</sup> 71
June	(s)	7	2	(s)	1	(s)	0	(s)	3	66	76
July	(s)	7	2	(s)	1	(s)	(s)	(s)	3	76	86
August	(s)	7	2	(s)	1	(s)	(s)	(s)	3	73	84
September	(s)	8	2	(s)	1	(s)	(s)	(s)	3	63	74
October	(s)	12	2	(s)	1	(s)	(s)	(s)	3	61	76
November	(s)	17	2	(s)	1	(s)	(s)	(s)	3	59	79
December	(s)	21	2	(s)	1	(s)	(s)	(s)	4	59	84
<b>Total</b>	<b>4</b>	<b>157</b>	<b>26</b>	<b>(s)</b>	<b>9</b>	<b>3</b>	<b>(s)</b>	<b>2</b>	<b>40</b>	<b>731</b>	<sup>R</sup> <b>932</b>
<b>2013</b> January	(s)	26	4	(s)	1	(s)	(s)	(s)	5	59	91
February	(s)	23	4	(s)	1	(s)	(s)	(s)	5	54	83
March	(s)	21	3	(s)	1	(s)	(s)	(s)	5	58	84
April	(s)	13	2	(s)	1	(s)	(s)	(s)	4	53	71
May	(s)	9	2	(s)	1	(s)	0	(s)	3	59	71
June	(s)	7	1	(s)	1	(s)	0	(s)	2	67	77
July	(s)	7	1	(s)	1	(s)	(s)	(s)	2	74	83
August	(s)	7	1	(s)	1	(s)	(s)	(s)	3	73	84
September	(s)	8	2	(s)	1	(s)	(s)	(s)	3	65	76
October	(s)	11	1	(s)	1	(s)	(s)	(s)	2	61	75
November	(s)	19	2	(s)	1	(s)	(s)	(s)	3	58	80
December	(s)	26	2	(s)	1	(s)	(s)	(s)	4	63	92
<b>Total</b>	<b>4</b>	<b>178</b>	<b>25</b>	<b>(s)</b>	<b>9</b>	<b>3</b>	<b>(s)</b>	<b>2</b>	<sup>R</sup> <b>39</b>	<b>744</b>	<b>966</b>
<b>2014</b> January	(s)	31	<sup>R</sup> 2	(s)	1	(s)	(s)	(s)	4	66	101
February	(s)	27	3	(s)	1	(s)	(s)	(s)	4	59	90
March	(s)	23	2	(s)	1	(s)	(s)	(s)	4	59	86
April	(s)	13	1	(s)	1	(s)	(s)	(s)	2	52	68
May	(s)	9	2	(s)	1	(s)	(s)	(s)	3	59	71
June	(s)	8	1	(s)	1	(s)	0	(s)	2	66	<sup>R</sup> 76
July	(s)	7	1	(s)	1	(s)	(s)	(s)	2	72	82
August	(s)	7	1	(s)	1	(s)	(s)	(s)	2	73	83
September	(s)	8	2	(s)	1	(s)	(s)	(s)	3	64	75
October	(s)	11	2	(s)	1	(s)	(s)	(s)	3	59	73
<b>10-Month Total</b>	<b>4</b>	<b>145</b>	<b>18</b>	<b>(s)</b>	<b>7</b>	<b>2</b>	<b>(s)</b>	<b>1</b>	<b>29</b>	<b>629</b>	<b>806</b>
<b>2013 10-Month Total</b>	<b>3</b>	<b>134</b>	<b>21</b>	<b>(s)</b>	<b>8</b>	<b>2</b>	<b>(s)</b>	<b>2</b>	<b>33</b>	<b>624</b>	<b>794</b>
<b>2012 10-Month Total</b>	<b>3</b>	<b>119</b>	<b>22</b>	<b>(s)</b>	<b>7</b>	<b>2</b>	<b>(s)</b>	<b>2</b>	<b>33</b>	<b>612</b>	<b>768</b>

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Liquefied petroleum gases.

<sup>e</sup> Finished motor gasoline, excluding fuel ethanol.

<sup>f</sup> 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.

<sup>g</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

R=Revised. 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> (Excel and CSV files) for all available annual and monthly data beginning in 1973.

Sources: See end of section.

Petroleum revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Table 12.4 Carbon Dioxide Emissions From Energy Consumption: Industrial Sector**  
(Million Metric Tons of Carbon Dioxide<sup>a</sup>)

	Coal	Coal Coke Net Imports	Natural Gas <sup>b</sup>	Petroleum									Retail Elec- tricity <sup>g</sup>	Total <sup>h</sup>
				Distillate Fuel Oil <sup>c</sup>	Kero- sene	LPG <sup>d</sup>	Lubri- cants	Motor Gasoline <sup>e</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>f</sup>	Total		
<b>1973 Total</b> .....	371	-1	536	106	11	44	7	18	52	144	100	483	515	1,904
<b>1975 Total</b> .....	336	2	440	97	9	39	6	16	51	117	97	431	490	1,697
<b>1980 Total</b> .....	289	-4	429	96	13	61	7	11	48	105	142	483	601	1,798
<b>1985 Total</b> .....	256	-2	360	81	3	59	6	15	54	57	93	369	583	1,566
<b>1990 Total</b> .....	258	1	432	84	1	37	7	13	67	31	127	366	638	1,695
<b>1995 Total</b> .....	233	7	489	82	1	47	7	14	67	25	121	364	659	1,751
<b>1996 Total</b> .....	227	3	505	<sup>R</sup> 86	1	48	6	14	71	24	139	391	678	1,803
<b>1997 Total</b> .....	224	5	505	88	1	50	7	15	70	21	145	396	694	1,824
<b>1998 Total</b> .....	219	8	495	88	2	47	7	14	80	16	128	382	706	1,809
<b>1999 Total</b> .....	208	7	475	86	1	47	7	11	85	14	133	383	704	1,778
<b>2000 Total</b> .....	211	7	483	87	1	52	7	11	76	17	118	369	719	1,788
<b>2001 Total</b> .....	204	3	440	95	2	45	6	21	79	14	135	396	667	1,711
<b>2002 Total</b> .....	188	7	448	88	1	47	6	22	79	13	130	386	654	1,683
<b>2003 Total</b> .....	190	6	432	85	2	41	6	23	78	16	142	<sup>R</sup> 392	672	1,692
<b>2004 Total</b> .....	191	16	437	88	2	44	6	26	<sup>R</sup> 85	18	144	413	<sup>R</sup> 674	1,731
<b>2005 Total</b> .....	183	5	405	92	3	42	6	25	<sup>R</sup> 82	20	143	<sup>R</sup> 413	<sup>R</sup> 672	1,678
<b>2006 Total</b> .....	179	7	404	<sup>R</sup> 91	2	43	6	26	<sup>R</sup> 85	16	152	<sup>R</sup> 422	650	1,662
<b>2007 Total</b> .....	175	3	414	<sup>R</sup> 91	1	43	6	21	<sup>R</sup> 83	13	150	408	662	<sup>R</sup> 1,661
<b>2008 Total</b> .....	168	5	412	<sup>R</sup> 98	(s)	32	6	17	<sup>R</sup> 78	13	132	376	642	1,602
<b>2009 Total</b> .....	131	-3	386	78	(s)	33	5	16	<sup>R</sup> 73	8	112	325	<sup>R</sup> 550	1,390
<b>2010 Total</b> .....	153	-1	421	<sup>R</sup> 84	1	35	6	<sup>R</sup> 17	<sup>R</sup> 68	6	122	338	587	1,498
<b>2011 Total</b> .....	146	1	431	<sup>R</sup> 90	(s)	34	5	17	<sup>R</sup> 65	6	117	335	574	1,487
<b>2012</b> January .....	12	(s)	41	9	(s)	5	(s)	1	6	(s)	9	32	43	127
February .....	12	(s)	38	10	(s)	4	(s)	1	4	(s)	10	30	42	122
March .....	12	(s)	38	8	(s)	4	(s)	1	5	(s)	9	29	41	120
April .....	12	1	36	8	(s)	3	(s)	1	6	(s)	8	26	41	115
May .....	12	(s)	36	8	(s)	3	(s)	1	<sup>R</sup> 7	(s)	8	28	46	121
June .....	11	(s)	35	<sup>R</sup> 6	(s)	3	(s)	1	6	(s)	10	27	47	120
July .....	11	(s)	36	5	(s)	3	(s)	1	6	(s)	10	<sup>R</sup> 26	52	125
August .....	12	(s)	37	6	(s)	3	(s)	1	7	(s)	10	28	50	126
September .....	11	(s)	36	7	(s)	3	(s)	1	6	(s)	7	26	45	117
October .....	12	(s)	37	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	7	(s)	5	(s)	1	6	(s)	12	31	45	128
<b>Total</b> .....	141	(s)	447	<sup>R</sup> 93	(s)	45	5	16	<sup>R</sup> 70	3	113	345	543	1,476
<b>2013</b> January .....	12	(s)	41	10	(s)	6	(s)	1	<sup>R</sup> 7	(s)	9	<sup>R</sup> 33	43	129
February .....	12	(s)	38	7	(s)	5	(s)	1	4	(s)	9	26	40	117
March .....	12	(s)	40	7	(s)	5	(s)	1	4	(s)	8	26	44	122
April .....	12	(s)	37	7	(s)	4	(s)	1	4	(s)	9	26	41	115
May .....	12	(s)	37	7	(s)	3	(s)	1	6	(s)	11	<sup>R</sup> 30	44	123
June .....	12	(s)	36	6	(s)	3	(s)	1	6	(s)	9	27	46	120
July .....	12	(s)	37	6	(s)	4	(s)	1	6	(s)	11	28	48	125
August .....	12	(s)	37	6	(s)	3	(s)	1	6	(s)	9	26	49	124
September .....	12	(s)	36	7	(s)	3	(s)	1	6	(s)	12	30	44	123
October .....	13	(s)	38	11	(s)	4	(s)	1	5	(s)	9	31	44	126
November .....	12	(s)	40	9	(s)	4	(s)	1	6	(s)	11	33	43	129
December .....	12	(s)	43	9	(s)	5	(s)	1	5	(s)	11	32	44	131
<b>Total</b> .....	145	-2	462	<sup>R</sup> 92	(s)	49	5	<sup>R</sup> 16	<sup>R</sup> 65	2	119	348	531	1,484
<b>2014</b> January .....	12	(s)	45	13	(s)	6	(s)	1	7	(s)	9	36	45	137
February .....	12	(s)	41	10	(s)	4	(s)	1	4	(s)	10	30	41	123
March .....	12	(s)	43	10	(s)	4	(s)	1	3	(s)	9	29	43	127
April .....	12	(s)	40	10	(s)	3	(s)	1	5	(s)	10	30	40	121
May .....	12	(s)	39	9	(s)	2	(s)	1	6	(s)	9	29	44	123
June .....	12	(s)	38	8	(s)	3	(s)	1	5	(s)	9	26	46	122
July .....	11	(s)	39	8	(s)	3	(s)	1	6	(s)	9	28	48	126
August .....	12	(s)	39	7	(s)	3	(s)	1	6	(s)	9	27	49	127
September .....	11	(s)	38	8	(s)	3	(s)	1	6	(s)	11	30	43	123
October .....	12	(s)	39	12	(s)	4	(s)	1	6	(s)	9	32	42	126
<b>10-Month Total</b> ...	118	-2	400	94	(s)	35	4	14	55	1	94	297	442	1,255
<b>2013 10-Month Total</b> ...	120	-1	378	74	(s)	39	4	13	54	2	96	284	443	1,224
<b>2012 10-Month Total</b> ...	117	1	369	77	(s)	36	4	13	58	3	91	282	451	1,220

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.  
<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.  
<sup>c</sup> Distillate fuel oil, excluding biodiesel.  
<sup>d</sup> Liquefied petroleum gases.  
<sup>e</sup> Finished motor gasoline, excluding fuel ethanol.  
<sup>f</sup> 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.  
<sup>g</sup> 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.  
<sup>h</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

<sup>R</sup>=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> (Excel and CSV files) for all available annual and monthly data beginning in 1973.  
Sources: See end of section.

Petroleum revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Table 12.5 Carbon Dioxide Emissions From Energy Consumption: Transportation Sector**  
(Million Metric Tons of Carbon Dioxide<sup>a</sup>)

	Coal	Natural Gas <sup>b</sup>	Petroleum							Retail Electricity <sup>f</sup>	Total <sup>g</sup>	
			Aviation Gasoline	Distillate Fuel Oil <sup>c</sup>	Jet Fuel	LPG <sup>d</sup>	Lubricants	Motor Gasoline <sup>e</sup>	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	R 1,640	3	1,681
1996 Total	(h)	39	3	327	232	1	6	1,047	67	R 1,683	3	1,725
1997 Total	(h)	41	3	R 341	234	1	6	1,057	56	R 1,700	3	1,744
1998 Total	(h)	35	2	352	238	1	7	1,090	53	R 1,743	3	1,782
1999 Total	(h)	36	3	R 365	245	1	7	1,115	52	R 1,789	3	1,828
2000 Total	(h)	36	3	R 377	254	1	7	R 1,122	70	R 1,833	4	R 1,873
2001 Total	(h)	35	2	R 424	243	1	6	R 1,128	46	R 1,813	4	R 1,852
2002 Total	(h)	37	2	394	237	1	6	1,158	53	R 1,852	4	1,892
2003 Total	(h)	33	2	R 408	231	1	6	1,161	45	R 1,854	5	R 1,892
2004 Total	(h)	32	2	R 433	240	1	6	R 1,181	58	R 1,922	5	R 1,959
2005 Total	(h)	33	2	444	246	2	6	R 1,182	66	R 1,948	5	R 1,986
2006 Total	(h)	33	2	R 467	240	2	5	R 1,188	71	R 1,976	5	R 2,014
2007 Total	(h)	35	2	R 469	238	1	6	R 1,186	78	R 1,981	5	R 2,021
2008 Total	(h)	37	2	R 424	226	3	5	R 1,124	73	R 1,856	5	R 1,898
2009 Total	(h)	38	2	R 405	204	2	5	R 1,109	62	R 1,789	5	R 1,832
2010 Total	(h)	38	2	R 426	210	2	5	R 1,091	70	R 1,806	5	R 1,849
2011 Total	(h)	39	2	R 437	209	2	5	R 1,058	61	R 1,774	4	R 1,818
2012 January	(h)	4	(s)	32	16	(s)	(s)	R 84	5	R 139	(s)	R 143
February	(h)	4	(s)	31	16	(s)	(s)	R 83	5	R 134	(s)	R 139
March	(h)	3	(s)	34	17	(s)	(s)	R 88	5	R 145	(s)	R 149
April	(h)	3	(s)	R 34	16	(s)	(s)	R 87	5	R 143	(s)	R 147
May	(h)	3	(s)	R 36	18	(s)	(s)	R 92	4	R 151	(s)	R 154
June	(h)	3	(s)	36	19	(s)	(s)	R 89	4	R 148	(s)	R 152
July	(h)	3	(s)	37	18	(s)	(s)	R 91	6	R 152	(s)	R 155
August	(h)	3	(s)	R 37	18	(s)	(s)	R 94	5	R 155	(s)	R 159
September	(h)	3	(s)	35	17	(s)	(s)	R 85	5	R 142	(s)	R 145
October	(h)	3	(s)	37	17	(s)	(s)	R 89	4	R 147	(s)	R 151
November	(h)	4	(s)	R 34	17	(s)	(s)	R 84	4	R 140	(s)	R 144
December	(h)	4	(s)	R 33	17	(s)	(s)	R 86	2	R 139	(s)	R 144
Total	(h)	41	2	R 416	206	2	5	R 1,052	53	R 1,735	4	R 1,781
2013 January	(h)	5	(s)	33	16	(s)	(s)	R 86	4	R 140	(s)	R 145
February	(h)	5	(s)	30	15	(s)	(s)	R 78	3	R 127	(s)	R 132
March	(h)	5	(s)	34	17	(s)	(s)	R 89	6	R 146	(s)	R 151
April	(h)	4	(s)	35	17	(s)	(s)	R 88	3	R 144	(s)	R 148
May	(h)	3	(s)	37	18	(s)	(s)	R 93	3	R 151	(s)	R 155
June	(h)	3	(s)	R 36	18	(s)	(s)	R 90	3	R 148	(s)	R 152
July	(h)	4	(s)	38	19	(s)	(s)	R 94	4	R 156	(s)	R 160
August	(h)	4	(s)	38	19	(s)	(s)	R 94	5	R 156	(s)	R 160
September	(h)	3	(s)	R 35	17	(s)	(s)	R 89	5	R 146	(s)	R 150
October	(h)	3	(s)	R 38	18	(s)	(s)	R 92	3	R 152	(s)	R 156
November	(h)	4	(s)	35	17	(s)	(s)	R 89	4	R 146	(s)	R 150
December	(h)	5	(s)	35	18	(s)	(s)	R 89	2	R 144	(s)	R 150
Total	(h)	49	2	R 424	210	3	5	R 1,067	46	R 1,757	4	R 1,810
2014 January	(h)	6	(s)	R 34	17	(s)	(s)	R 84	2	R 138	(s)	R 144
February	(h)	5	(s)	32	15	(s)	(s)	R 80	2	R 130	(s)	R 135
March	(h)	5	(s)	36	18	(s)	(s)	R 89	2	R 146	(s)	R 151
April	(h)	4	(s)	R 36	17	(s)	(s)	R 89	3	R 147	(s)	R 151
May	(h)	3	(s)	38	17	(s)	(s)	R 92	3	R 151	(s)	R 155
June	(h)	3	(s)	R 37	19	(s)	(s)	R 90	3	R 149	(s)	R 153
July	(h)	4	(s)	39	19	(s)	(s)	R 95	3	R 156	(s)	R 160
August	(h)	4	(s)	39	19	(s)	(s)	R 95	2	R 156	(s)	R 160
September	(h)	3	(s)	R 36	18	(s)	(s)	R 87	3	R 145	(s)	R 149
October	(h)	4	(s)	39	18	(s)	(s)	94	4	156	(s)	160
10-Month Total	(h)	41	1	366	178	2	4	895	27	1,474	4	1,518
2013 10-Month Total	(h)	39	1	354	175	2	4	890	40	1,467	3	1,510
2012 10-Month Total	(h)	34	2	349	172	2	4	882	47	1,456	3	1,493

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Liquefied petroleum gases.

<sup>e</sup> Finished motor gasoline, excluding fuel ethanol.

<sup>f</sup> 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.

<sup>g</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

<sup>h</sup> Beginning in 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

R=Revised. (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> (Excel and CSV files) for all available annual and monthly data beginning in 1973. Sources: See end of section.

Petroleum revisions are due to the incorporation of revised thermal conversion factors in Table A3.



**Table 12.6 Carbon Dioxide Emissions From Energy Consumption: Electric Power Sector**  
(Million Metric Tons of Carbon Dioxide<sup>a</sup>)

	Coal	Natural Gas <sup>b</sup>	Petroleum				Geo-thermal	Non-Biomass Waste <sup>d</sup>	Total <sup>e</sup>
			Distillate Fuel Oil <sup>c</sup>	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	R 22	69	R 99	(s)	11	R 2,350
2005 Total	1,984	319	8	R 24	69	R 101	(s)	11	R 2,416
2006 Total	1,954	338	5	R 21	28	R 55	(s)	12	R 2,358
2007 Total	1,987	372	R 6	R 17	31	R 54	(s)	11	R 2,425
2008 Total	1,959	362	5	R 15	19	R 39	(s)	12	R 2,373
2009 Total	1,741	373	5	R 13	14	R 33	(s)	11	R 2,158
2010 Total	1,828	399	6	R 14	12	R 32	(s)	11	R 2,270
2011 Total	1,723	409	5	R 14	7	R 26	(s)	11	R 2,170
2012 January	130	35	(s)	1	1	2	(s)	1	168
February	115	35	(s)	1	(s)	2	(s)	1	153
March	105	36	(s)	1	(s)	1	(s)	1	144
April	95	39	(s)	R (s)	(s)	1	(s)	1	135
May	115	44	(s)	1	(s)	1	(s)	1	161
June	131	48	(s)	1	1	2	(s)	1	181
July	158	58	(s)	1	1	2	(s)	1	220
August	151	54	(s)	1	1	2	(s)	1	208
September	127	43	(s)	1	(s)	1	(s)	1	173
October	122	36	(s)	1	(s)	1	(s)	1	160
November	128	31	(s)	1	(s)	1	(s)	1	162
December	134	32	(s)	1	(s)	R 1	(s)	1	169
Total	1,511	493	4	9	6	19	(s)	11	R 2,034
2013 January	137	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	111	30	(s)	1	(s)	2	(s)	1	144
May	118	33	(s)	1	(s)	2	(s)	1	155
June	138	40	(s)	1	(s)	2	(s)	1	180
July	152	49	(s)	1	1	2	(s)	1	205
August	150	49	(s)	1	1	2	(s)	1	202
September	133	41	(s)	1	(s)	2	(s)	1	R 176
October	121	35	(s)	1	(s)	2	(s)	1	159
November	121	32	(s)	1	(s)	2	(s)	1	156
December	141	36	(s)	1	1	2	(s)	1	180
Total	1,575	442	4	13	6	23	(s)	11	R 2,052
2014 January	153	36	2	1	2	5	(s)	1	R 195
February	140	30	1	1	1	2	(s)	1	173
March	132	30	1	1	1	3	(s)	1	166
April	108	30	(s)	1	(s)	R 1	(s)	1	140
May	117	35	(s)	1	(s)	2	(s)	1	155
June	136	39	(s)	1	(s)	2	(s)	1	178
July	149	46	(s)	1	(s)	2	(s)	1	198
August	149	49	(s)	1	1	2	(s)	1	200
September	127	42	(s)	1	(s)	2	(s)	1	171
October	112	38	(s)	1	(s)	1	(s)	1	153
10-Month Total	1,323	374	5	10	7	22	(s)	10	1,729
2013 10-Month Total	1,313	374	3	11	5	19	(s)	10	1,716
2012 10-Month Total	1,249	429	3	7	5	16	(s)	10	1,704

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Municipal solid waste from non-biogenic sources, and tire-derived fuels.

<sup>e</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

R=Revised. 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> (Excel and CSV files) for all available annual and monthly data beginning in 1973. Sources: See end of section.

Petroleum revisions are due to the incorporation of revised thermal conversion factors in Table A3.

**Table 12.7 Carbon Dioxide Emissions From Biomass Energy Consumption**  
(Million Metric Tons of Carbon Dioxide<sup>a</sup>)

	By Source					By Sector					
	Wood <sup>b</sup>	Biomass Waste <sup>c</sup>	Fuel Ethanol <sup>d</sup>	Bio-diesel	Total	Residential	Commercial <sup>e</sup>	Industrial <sup>f</sup>	Transportation	Electric Power <sup>g</sup>	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 Total	189	42	73	8	312	42	11	139	80	40	312
2012 January	16	3	6	(s)	26	3	1	12	6	4	26
February	15	3	6	1	25	3	1	11	6	3	25
March	16	4	6	1	26	3	1	12	7	3	26
April	15	3	6	1	25	3	1	11	7	3	25
May	16	3	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	27	3	1	12	7	4	27
August	16	4	7	1	27	3	1	12	7	4	27
September	16	3	6	1	26	3	1	12	6	3	26
October	16	4	6	1	26	3	1	12	7	3	26
November	16	4	6	1	26	3	1	12	6	3	26
December	16	4	6	(s)	27	3	1	12	6	4	27
<b>Total</b>	<b>189</b>	<b>42</b>	<b>73</b>	<b>8</b>	<b>312</b>	<b>39</b>	<b>10</b>	<b>141</b>	<b>80</b>	<b>42</b>	<b>312</b>
2013 January	17	4	6	1	27	5	1	12	6	4	27
February	15	3	5	1	25	4	1	11	6	3	25
March	17	4	6	1	28	5	1	11	7	4	28
April	16	3	6	1	26	4	1	11	7	3	26
May	16	4	6	1	28	5	1	11	7	3	28
June	17	4	6	1	28	4	1	11	7	4	28
July	18	4	6	1	29	5	1	12	7	4	29
August	17	4	6	1	28	5	1	12	7	4	28
September	16	3	6	1	27	4	1	11	7	4	27
October	17	4	7	2	29	5	1	11	8	4	29
November	17	4	6	1	28	4	1	11	7	4	28
December	18	4	6	2	29	5	1	12	8	4	29
<b>Total</b>	<b>201</b>	<b>43</b>	<b>75</b>	<b>13</b>	<b>332</b>	<b>54</b>	<b>11</b>	<b>137</b>	<b>87</b>	<b>43</b>	<b>332</b>
2014 January	17	4	6	1	28	5	1	11	7	4	28
February	16	3	6	1	25	4	1	10	7	4	25
March	17	4	6	1	28	5	1	11	7	4	28
April	16	3	6	1	27	4	1	11	7	4	27
May	17	3	7	1	28	5	1	11	8	4	28
June	17	3	6	1	28	4	1	11	7	4	28
July	18	4	7	1	29	5	1	12	8	4	29
August	18	4	7	1	29	5	1	12	8	4	29
September	17	3	6	1	28	4	1	11	7	4	28
October	17	4	7	1	29	5	1	12	8	4	29
<b>10-Month Total</b>	<b>169</b>	<b>35</b>	<b>63</b>	<b>11</b>	<b>279</b>	<b>45</b>	<b>9</b>	<b>113</b>	<b>73</b>	<b>39</b>	<b>279</b>
2013 10-Month Total	166	36	62	10	274	45	9	113	71	35	274
2012 10-Month Total	157	35	61	7	260	33	8	117	67	35	260

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Wood and wood-derived fuels.

<sup>c</sup> Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass.

<sup>d</sup> Fuel ethanol minus denaturant.

<sup>e</sup> Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

<sup>f</sup> Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

<sup>g</sup> 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> (Excel and CSV files) for all available annual and monthly 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 (CO<sub>2</sub>), 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. CO<sub>2</sub> emissions. The vast majority of CO<sub>2</sub> 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 CO<sub>2</sub> 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. CO<sub>2</sub> emissions from energy consumption, including the nonfuel use of fossil fuels (excluded are estimates for CO<sub>2</sub> emissions from biomass energy consumption, which appear in Table 12.7).

For annual U.S. estimates for emissions of CO<sub>2</sub> 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/](http://www.eia.gov/environment/emissions/ghg_report/).

**Note 2. Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion.** Carbon dioxide (CO<sub>2</sub>) emissions from the combustion of biomass to produce energy are excluded from the energy-related CO<sub>2</sub> 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 CO<sub>2</sub> emissions from biomass can potentially lead to confusion in accounting for and understanding the flow of CO<sub>2</sub> emissions within energy and non-energy systems. In recognition of this issue, reporting of CO<sub>2</sub> emissions from biomass combustion alongside other energy-related CO<sub>2</sub> 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 CO<sub>2</sub> emissions from biomass and energy-related CO<sub>2</sub> 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 Tables A1 and A3.

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 A1, 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\(2008\).pdf](http://www.eia.gov/oiaf/1605/ggprt/documentation/pdf/0638(2008).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 (CO<sub>2</sub>) 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 CO<sub>2</sub> emissions factors at [http://www.eia.gov/oiaf/1605/ggprt/excel/CO2\\_coefs\\_09\\_v2.xls](http://www.eia.gov/oiaf/1605/ggprt/excel/CO2_coefs_09_v2.xls). Beginning in 2010, the 2009 factors are used.

Coal—CO<sub>2</sub> 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—CO<sub>2</sub> emissions for coal coke net imports are calculated.

Natural Gas—CO<sub>2</sub> 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—CO<sub>2</sub> 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 CO<sub>2</sub> 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—CO<sub>2</sub> 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 CO<sub>2</sub> 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/totalenergy/data/monthly/pdf/historical/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.

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 current year’s factors are labeled “estimate,” and are set equal to the previous year’s values until data become available to calculate the factors. 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 and Other Liquids**  
(Million Btu per Barrel, Except as Noted)

Commodity	Heat Content	Commodity	Heat Content
Asphalt and Road Oil	6.636	Motor Gasoline Blending Components (MGBC)	
Aviation Gasoline (Finished)	5.048	Through 2006	5.253
Aviation Gasoline Blending Components	5.048	Beginning in 2007	5.222
Biodiesel	5.359	Oxygenates (excluding Fuel Ethanol)	4.247
Crude Oil—see Table A2		Petrochemical Feedstocks	
Distillate Fuel Oil—see Table A3 for averages		Naphtha Less Than 401 °F	5.248
15 ppm sulfur and under	5.770	Other Oils Equal to or Greater Than 401 °F	5.825
Greater than 15 ppm to 500 ppm sulfur	5.817	Petroleum Coke—see Table A3 for averages	
Greater than 500 ppm sulfur	5.825	Total, through 2003	6.024
Fuel Ethanol—see Table A3		Catalyst, beginning in 2004	<sup>a</sup> 6.287
Hydrocarbon Gas Liquids		Marketable, beginning in 2004	5.719
Ethane/Ethylene	3.082	Plant Condensate	5.418
Propane/Propylene	3.836	Renewable Fuels Except Fuel Ethanol	<sup>b</sup> 5.359
Normal Butane/Butylene	4.326	Residual Fuel Oil	6.287
Isobutane/Isobutylene	3.974	Special Naphthas	5.248
Natural Gasoline (Pentanes Plus)	4.620	Still Gas	<sup>c</sup> 6.000
Hydrogen	<sup>a</sup> 6.287	Unfinished Oils	5.825
Jet Fuel, Kerosene Type	5.670	Unfractionated Stream	5.418
Jet Fuel, Naphtha Type	5.355	Waxes	5.537
Kerosene	5.670	Miscellaneous Products	5.796
Lubricants	6.065	Other Hydrocarbons	5.825
Motor Gasoline (Finished)—see Tables A2/A3			

<sup>a</sup> Per residual fuel oil equivalent barrel (6.287 million Btu per barrel).

<sup>b</sup> The biodiesel heat content factor, 5.359 million Btu per barrel, is used for “Biomass-Based Diesel Fuel” and “Other Renewable Fuels”; however, a factor of 5.494 million Btu per barrel is used for “Other Renewable Diesel Fuel.”

<sup>c</sup> Per fuel oil equivalent barrel (6.000 million Btu per barrel).

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.

This table has been modified to include several new factors.

**Table A2. Approximate Heat Content of Petroleum Production, Imports, and Exports**  
(Million Btu per Barrel)

	Production		Imports				Exports			
			Crude Oil <sup>a</sup>	Petroleum Products		Total	Crude Oil <sup>a</sup>	Petroleum Products		Total
	Natural Gas Plant Liquids	Motor Gasoline <sup>b</sup>		Total Products	Motor Gasoline <sup>c</sup>			Total Products		
1950	5.800	4.522	5.943	5.253	6.263	6.080	5.800	5.253	5.751	5.766
1955	5.800	4.406	5.924	5.253	6.234	6.040	5.800	5.253	5.765	5.768
1960	5.800	4.295	5.911	5.253	6.161	6.021	5.800	5.253	5.835	5.834
1965	5.800	4.264	5.872	5.253	6.123	5.997	5.800	5.253	5.742	5.743
1970	5.800	4.146	5.822	5.253	6.088	5.985	5.800	5.253	5.811	5.810
1975	5.800	3.984	5.821	5.253	5.935	5.858	5.800	5.253	5.747	5.748
1980	5.800	3.914	5.812	5.253	5.748	5.796	5.800	5.253	5.841	5.820
1981	5.800	3.930	5.818	5.253	5.659	5.775	5.800	5.253	5.837	5.821
1982	5.800	3.872	5.826	5.253	5.664	5.775	5.800	5.253	5.829	5.820
1983	5.800	3.839	5.825	5.253	5.677	5.774	5.800	5.253	5.800	5.800
1984	5.800	3.812	5.823	5.253	5.613	5.745	5.800	5.253	5.867	5.850
1985	5.800	3.815	5.832	5.253	5.572	5.736	5.800	5.253	5.819	5.814
1986	5.800	3.797	5.903	5.253	5.624	5.808	5.800	5.253	5.839	5.832
1987	5.800	3.804	5.901	5.253	5.599	5.820	5.800	5.253	5.860	5.858
1988	5.800	3.800	5.900	5.253	5.618	5.820	5.800	5.253	5.842	5.840
1989	5.800	3.826	5.906	5.253	5.641	5.833	5.800	5.253	5.869	5.857
1990	5.800	3.822	5.934	5.253	5.614	5.849	5.800	5.253	5.838	5.833
1991	5.800	3.807	5.948	5.253	5.636	5.873	5.800	5.253	5.827	5.823
1992	5.800	3.804	5.953	5.253	5.623	5.877	5.800	5.253	5.774	5.777
1993	5.800	3.801	5.954	5.253	<sup>R</sup> 5.539	<sup>R</sup> 5.866	5.800	5.253	<sup>R</sup> 5.681	<sup>R</sup> 5.693
1994	5.800	3.794	5.950	5.253	<sup>R</sup> 5.416	<sup>R</sup> 5.835	5.800	5.253	<sup>R</sup> 5.693	<sup>R</sup> 5.704
1995	5.800	3.796	5.938	5.253	<sup>R</sup> 5.345	<sup>R</sup> 5.830	5.800	5.253	<sup>R</sup> 5.692	<sup>R</sup> 5.703
1996	5.800	3.777	5.947	5.253	<sup>R</sup> 5.373	<sup>R</sup> 5.828	5.800	5.253	<sup>R</sup> 5.663	<sup>R</sup> 5.678
1997	5.800	3.762	5.954	5.253	<sup>R</sup> 5.333	<sup>R</sup> 5.836	5.800	5.253	<sup>R</sup> 5.663	<sup>R</sup> 5.678
1998	5.800	3.769	5.953	5.253	<sup>R</sup> 5.314	<sup>R</sup> 5.833	5.800	5.253	<sup>R</sup> 5.505	<sup>R</sup> 5.539
1999	5.800	3.744	5.942	5.253	<sup>R</sup> 5.291	<sup>R</sup> 5.815	5.800	5.253	<sup>R</sup> 5.530	<sup>R</sup> 5.564
2000	5.800	3.733	5.959	5.253	<sup>R</sup> 5.309	<sup>R</sup> 5.823	5.800	5.253	<sup>R</sup> 5.529	<sup>R</sup> 5.542
2001	5.800	3.735	5.976	5.253	<sup>R</sup> 5.330	<sup>R</sup> 5.838	5.800	5.253	<sup>R</sup> 5.637	<sup>R</sup> 5.641
2002	5.800	3.729	5.971	5.253	<sup>R</sup> 5.362	<sup>R</sup> 5.845	5.800	5.253	<sup>R</sup> 5.517	<sup>R</sup> 5.519
2003	5.800	3.739	5.970	5.253	<sup>R</sup> 5.381	<sup>R</sup> 5.845	5.800	5.253	<sup>R</sup> 5.628	<sup>R</sup> 5.630
2004	5.800	3.724	5.981	5.253	<sup>R</sup> 5.429	<sup>R</sup> 5.853	5.800	5.253	<sup>R</sup> 5.532	<sup>R</sup> 5.539
2005	5.800	3.724	5.977	5.253	<sup>R</sup> 5.436	<sup>R</sup> 5.835	5.800	5.253	<sup>R</sup> 5.504	<sup>R</sup> 5.513
2006	5.800	3.712	5.980	5.253	<sup>R</sup> 5.431	<sup>R</sup> 5.836	5.800	5.219	<sup>R</sup> 5.415	<sup>R</sup> 5.423
2007	5.800	3.701	5.985	5.222	<sup>R</sup> 5.483	<sup>R</sup> 5.857	5.800	5.188	<sup>R</sup> 5.465	<sup>R</sup> 5.471
2008	5.800	3.706	5.990	5.222	<sup>R</sup> 5.459	<sup>R</sup> 5.861	5.800	5.215	<sup>R</sup> 5.587	<sup>R</sup> 5.591
2009	5.800	3.692	5.988	5.222	<sup>R</sup> 5.509	<sup>R</sup> 5.878	5.800	5.221	<sup>R</sup> 5.674	<sup>R</sup> 5.677
2010	5.800	3.674	5.989	5.222	<sup>R</sup> 5.545	<sup>R</sup> 5.892	5.800	5.214	<sup>R</sup> 5.601	<sup>R</sup> 5.604
2011	5.800	3.672	6.008	5.222	<sup>R</sup> 5.538	<sup>R</sup> 5.905	5.800	5.216	<sup>R</sup> 5.526	<sup>R</sup> 5.530
2012	5.800	3.683	6.165	5.222	<sup>R</sup> 5.501	<sup>R</sup> 6.035	5.800	5.217	<sup>R</sup> 5.520	<sup>R</sup> 5.526
2013 <sup>P</sup>	5.800	<sup>R</sup> 3.714	6.010	5.222	<sup>R</sup> 5.497	<sup>R</sup> 5.899	5.800	5.216	<sup>R</sup> 5.470	<sup>R</sup> 5.482
2014 <sup>E</sup>	5.800	<sup>R</sup> 3.714	6.010	5.222	<sup>R</sup> 5.497	<sup>R</sup> 5.899	5.800	5.216	<sup>R</sup> 5.470	<sup>R</sup> 5.482

<sup>a</sup> Includes lease condensate.

<sup>b</sup> Excludes fuel ethanol, methyl tertiary butyl ether (MTBE), and other oxygenates blended into motor gasoline.

<sup>c</sup> Through 2005, excludes fuel ethanol, MTBE, and other oxygenates blended into motor gasoline. Beginning in 2006, includes MTBE, but excludes fuel ethanol and other oxygenates blended into motor gasoline.

R=Revised. P=Preliminary. E=Estimate.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#appendices> (Excel and CSV files) for all available annual data beginning in 1949.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

This table has been modified to include columns for "Motor Gasoline" trade. Revisions to "Petroleum Products" and "Total" factors are due to the incorporation of new and revised commodity factors in Tables A1–A3.



**Table A3. Approximate Heat Content of Petroleum Consumption and Fuel Ethanol**  
(Million Btu per Barrel)

	Total Petroleum <sup>a</sup> Consumption by Sector						Distillate Fuel Oil Consumption <sup>f</sup>	Liquefied Petroleum Gases Consumption <sup>g</sup>	Motor Gasoline (Finished) Consumption <sup>h</sup>	Petroleum Coke Consumption <sup>i</sup>	Fuel Ethanol <sup>j</sup>	Fuel Ethanol Feedstock Factor <sup>k</sup>
	Residential	Commercial <sup>b</sup>	Industrial <sup>b</sup>	Transportation <sup>b,c</sup>	Electric Power <sup>d,e</sup>	Total <sup>b,c</sup>						
1950	5.473	5.817	5.953	5.461	6.254	5.649	5.825	4.011	5.253	6.024	NA	NA
1955	5.469	5.781	5.881	5.407	6.254	5.591	5.825	4.011	5.253	6.024	NA	NA
1960	5.417	5.781	5.818	5.387	6.267	5.555	5.825	4.011	5.253	6.024	NA	NA
1965	5.364	5.760	5.748	5.386	6.267	5.532	5.825	4.011	5.253	6.024	NA	NA
1970	5.260	5.708	5.595	5.393	6.252	5.503	5.825	3.779	5.253	6.024	NA	NA
1975	5.253	5.649	5.513	5.392	6.250	5.494	5.825	3.715	5.253	6.024	NA	NA
1980	5.321	5.751	5.366	5.441	6.254	5.479	5.825	3.674	5.253	6.024	3.563	6.586
1981	5.283	5.693	5.299	5.433	6.258	5.448	5.825	3.643	5.253	6.024	3.563	6.562
1982	5.266	5.698	5.247	5.423	6.258	5.415	5.825	3.615	5.253	6.024	3.563	6.539
1983	5.140	5.591	5.254	5.416	6.255	5.406	5.825	3.614	5.253	6.024	3.563	6.515
1984	5.307	5.657	5.207	5.418	6.251	5.395	5.825	3.599	5.253	6.024	3.563	6.492
1985	5.263	5.598	5.199	5.423	6.247	5.387	5.825	3.603	5.253	6.024	3.563	6.469
1986	5.268	5.632	5.269	5.426	6.257	5.418	5.825	3.640	5.253	6.024	3.563	6.446
1987	5.239	5.594	5.233	5.429	6.249	5.403	5.825	3.659	5.253	6.024	3.563	6.423
1988	5.257	5.597	5.228	5.433	6.250	5.410	5.825	3.652	5.253	6.024	3.563	6.400
1989	5.194	5.549	5.219	5.438	6.240	5.410	5.825	3.683	5.253	6.024	3.563	6.377
1990	5.145	5.553	5.253	5.442	6.244	5.411	5.825	3.625	5.253	6.024	3.563	6.355
1991	5.094	5.528	5.167	5.441	6.246	5.384	5.825	3.614	5.253	6.024	3.563	6.332
1992	5.124	5.513	5.168	5.443	6.238	5.378	5.825	3.624	5.253	6.024	3.563	6.309
1993	5.102	<sup>b,R</sup> 5.504	<sup>b,R</sup> 5.177	<sup>b,R</sup> 5.422	6.230	<sup>b,R</sup> 5.370	5.825	3.606	<sup>h</sup> 5.232	6.024	3.563	6.287
1994	<sup>R</sup> 5.095	<sup>R</sup> 5.512	<sup>R</sup> 5.149	<sup>R</sup> 5.424	6.213	<sup>R</sup> 5.360	<sup>f</sup> 5.820	3.635	5.231	6.024	3.563	6.264
1995	<sup>R</sup> 5.060	<sup>R</sup> 5.475	5.121	<sup>R</sup> 5.418	<sup>R</sup> 6.187	<sup>R</sup> 5.342	5.820	3.623	5.218	6.024	3.563	6.242
1996	<sup>R</sup> 4.995	<sup>R</sup> 5.430	5.114	5.420	<sup>R</sup> 6.194	5.336	5.820	3.613	5.218	6.024	3.563	6.220
1997	<sup>R</sup> 4.986	<sup>R</sup> 5.388	<sup>R</sup> 5.119	5.416	<sup>R</sup> 6.198	5.336	5.820	3.616	5.215	6.024	3.563	6.198
1998	<sup>R</sup> 4.972	<sup>R</sup> 5.362	<sup>R</sup> 5.136	<sup>R</sup> 5.414	6.210	5.349	5.819	3.614	5.215	6.024	3.563	6.176
1999	<sup>R</sup> 4.899	<sup>R</sup> 5.288	<sup>R</sup> 5.091	5.413	<sup>R</sup> 6.204	5.328	5.819	3.616	5.213	6.024	3.563	6.167
2000	<sup>R</sup> 4.905	<sup>R</sup> 5.313	<sup>R</sup> 5.056	<sup>R</sup> 5.423	<sup>R</sup> 6.188	5.326	5.819	3.607	5.214	6.024	3.563	6.159
2001	<sup>R</sup> 4.934	<sup>R</sup> 5.322	<sup>R</sup> 5.141	<sup>R</sup> 5.413	6.199	<sup>R</sup> 5.346	5.819	3.614	5.214	6.024	3.563	6.151
2002	<sup>R</sup> 4.883	<sup>R</sup> 5.290	<sup>R</sup> 5.092	5.411	<sup>R</sup> 6.172	5.324	5.819	3.613	5.211	6.024	3.563	6.143
2003	<sup>R</sup> 4.918	<sup>R</sup> 5.312	<sup>R</sup> 5.143	<sup>R</sup> 5.404	6.182	<sup>R</sup> 5.338	5.819	3.629	5.203	6.024	3.563	6.116
2004	<sup>R</sup> 4.949	<sup>R</sup> 5.323	5.144	<sup>R</sup> 5.410	<sup>R</sup> 6.134	<sup>R</sup> 5.341	5.818	3.618	5.201	<sup>i</sup> 5.982	3.563	6.089
2005	<sup>R</sup> 4.913	<sup>R</sup> 5.359	<sup>R</sup> 5.179	<sup>R</sup> 5.412	<sup>R</sup> 6.126	<sup>R</sup> 5.353	5.818	3.620	5.198	5.982	3.563	6.063
2006	<sup>R</sup> 4.883	<sup>R</sup> 5.296	<sup>R</sup> 5.159	<sup>R</sup> 5.409	<sup>R</sup> 6.038	<sup>R</sup> 5.336	5.803	3.605	5.191	5.987	3.563	6.036
2007	<sup>R</sup> 4.831	<sup>R</sup> 5.271	<sup>R</sup> 5.122	<sup>R</sup> 5.385	<sup>R</sup> 6.064	<sup>R</sup> 5.309	5.785	3.591	5.155	5.996	3.563	6.009
2008	<sup>R</sup> 4.769	<sup>R</sup> 5.156	<sup>R</sup> 5.147	<sup>R</sup> 5.355	<sup>R</sup> 6.013	<sup>R</sup> 5.287	5.780	3.600	5.126	5.992	3.563	5.983
2009	<sup>R</sup> 4.661	<sup>R</sup> 5.216	<sup>R</sup> 5.014	<sup>c,R</sup> 5.328	<sup>R</sup> 5.987	<sup>c,R</sup> 5.236	5.781	3.558	5.101	6.017	3.563	5.957
2010	<sup>R</sup> 4.660	<sup>R</sup> 5.193	<sup>R</sup> 4.983	<sup>R</sup> 5.321	<sup>R</sup> 5.956	<sup>R</sup> 5.222	5.778	3.557	5.078	6.059	3.561	5.931
2011	<sup>R</sup> 4.640	<sup>R</sup> 5.163	<sup>R</sup> 4.962	<sup>R</sup> 5.317	<sup>R</sup> 5.900	<sup>R</sup> 5.212	5.776	3.541	5.068	6.077	3.560	5.905
2012	<sup>R</sup> 4.703	<sup>R</sup> 5.117	<sup>R</sup> 4.909	<sup>R</sup> 5.305	<sup>R</sup> 5.925	<sup>R</sup> 5.191	5.774	3.534	5.063	6.084	3.560	5.880
2013	<sup>RE</sup> 4.675	<sup>RE</sup> 5.060	<sup>RE</sup> 4.864	<sup>RE</sup> 5.301	<sup>RP</sup> 5.895	<sup>R</sup> 5.174	5.774	3.556	5.062	6.089	3.559	5.880
2014	<sup>RE</sup> 4.675	<sup>RE</sup> 5.060	<sup>RE</sup> 4.864	<sup>RE</sup> 5.301	<sup>RE</sup> 5.895	<sup>RE</sup> 5.174	<sup>E</sup> 5.774	<sup>E</sup> 3.556	<sup>E</sup> 5.062	<sup>E</sup> 6.089	<sup>E</sup> 3.559	<sup>E</sup> 5.880

<sup>a</sup> 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 for individual products shown in Tables A1 and A3.

<sup>b</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline.

<sup>c</sup> Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

<sup>d</sup> 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.

<sup>e</sup> Electric power sector factors are weighted average heat contents for distillate fuel oil, petroleum coke, and residual fuel oil; they exclude other liquids.

<sup>f</sup> 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 sulfur-content categories of distillate fuel oil are calculated by using heat content values shown in Table A1. Excludes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

<sup>g</sup> 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.

<sup>h</sup> Through 1992, excludes oxygenates. Beginning in 1993, includes fuel ethanol blended into motor gasoline; and for 1993–2006, also includes methyl tertiary butyl ether (MTBE) and other oxygenates blended into motor gasoline.

<sup>i</sup> There is a discontinuity in this time series between 2003 and 2004; beginning in 2004, the single constant factor is replaced by a quantity-weighted factor.

Quantity-weighted averages of the two categories of petroleum coke are calculated by using heat content values shown in Table A1.

<sup>j</sup> 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) and products used as denaturant (pentanes plus, finished motor gasoline, and motor gasoline blending components—see Tables A1 and A3 for factors). The factor for 2009 is used as the estimated factor for 1980–2008.

<sup>k</sup> 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.

R=Revised. 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#appendices> (Excel and CSV files) for all available annual data beginning in 1949.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

This table has been modified to include columns for "Distillate Fuel Oil Consumption," "Motor Gasoline (Finished) Consumption" (formerly called "Motor Gasoline Consumption (New)"), and "Petroleum Coke Consumption." Columns for "Motor Gasoline Consumption (Old)," "Biodiesel," and "Biodiesel Feedstock Factor" have been deleted. Revisions to "Total Petroleum Consumption" factors are due to the incorporation of new and revised commodity factors in Tables A1 and A3.

**Table A4. Approximate Heat Content of Natural Gas**  
(Btu per Cubic Foot)

	Production		Consumption <sup>a</sup>			Imports	Exports
	Marketed	Dry	End-Use Sectors <sup>b</sup>	Electric Power Sector <sup>c</sup>	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	<sup>c</sup> 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 .....	1,142	1,022	1,022	1,021	1,022	1,025	1,009
2012 .....	1,091	1,024	1,025	1,022	1,024	1,025	1,009
2013 .....	1,100	1,027	1,028	<sup>P</sup> 1,025	<sup>P</sup> 1,027	1,025	1,009
2014 .....	<sup>E</sup> 1,100	<sup>E</sup> 1,027	<sup>E</sup> 1,028	<sup>E</sup> 1,025	<sup>E</sup> 1,027	<sup>E</sup> 1,025	<sup>E</sup> 1,009

<sup>a</sup> Consumption factors are for natural gas, plus a small amount of supplemental gaseous fuels.

<sup>b</sup> Residential, commercial, industrial, and transportation sectors.

<sup>c</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#appendices> (Excel and CSV files) for all available annual data beginning in 1949.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

**Table A5. Approximate Heat Content of Coal and Coal Coke**  
(Million Btu per Short Ton)

	Coal									Coal Coke	
	Production <sup>a</sup>	Waste Coal Supplied <sup>b</sup>	Consumption					Imports	Exports		Imports and Exports
			Residential and Commercial Sectors <sup>c</sup>	Industrial Sector		Electric Power Sector <sup>e,f</sup>	Total				
				Coke Plants	Other <sup>d</sup>						
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	<sup>b</sup> 10.391	23.650	26.800	22.347	<sup>e</sup> 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	<sup>a</sup> 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	<sup>c</sup> 23.035	26.281	22.304	19.713	19.979	25.000	25.399	24.800	
2009	19.963	12.076	22.852	26.334	21.823	19.521	19.741	25.000	25.633	24.800	
2010	20.173	11.960	22.611	26.295	21.846	19.623	19.870	25.000	25.713	24.800	
2011	20.142	11.604	22.099	26.299	21.568	19.341	19.600	25.000	25.645	24.800	
2012	20.215	11.539	21.300	28.636	21.449	19.211	19.544	23.128	24.551	24.800	
2013 <sup>P</sup>	20.187	12.428	21.233	28.705	21.623	19.210	19.548	23.367	24.604	24.800	
2014 <sup>E</sup>	20.187	12.428	21.233	28.705	21.623	19.210	19.548	23.367	24.604	24.800	

<sup>a</sup> 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).

<sup>b</sup> 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."

<sup>c</sup> 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.

<sup>d</sup> Includes transportation. Excludes coal synfuel plants.

<sup>e</sup> 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.

<sup>f</sup> Electric power sector factors are for anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and, beginning in 1998, coal synfuel.

P=Preliminary. E=Estimate. NA=Not available.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#appendices> (Excel and CSV files) for all available annual data beginning in 1949.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

**Table A6. Approximate Heat Rates for Electricity, and Heat Content of Electricity**  
(Btu per Kilowatthour)

	Approximate Heat Rates <sup>a</sup> for Electricity Net Generation						Heat Content <sup>j</sup> of Electricity <sup>k</sup>
	Fossil Fuels <sup>b</sup>				Nuclear <sup>h</sup>	Noncombustible Renewable Energy <sup>g,i</sup>	
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Total Fossil Fuels <sup>f,g</sup>			
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	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	10,422	10,125	3,412
2004	10,331	10,571	8,647	10,016	10,428	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	10,435	9,919	3,412
2007	10,375	10,794	8,403	9,884	10,489	9,884	3,412
2008	10,378	11,015	8,305	9,854	10,452	9,854	3,412
2009	10,414	10,923	8,159	9,760	10,459	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	10,498	10,991	8,039	9,516	10,479	9,516	3,412
2013	E 10,498	E 10,991	E 8,039	E 9,516	E 10,479	E 9,516	3,412
2014	E 10,498	E 10,991	E 8,039	E 9,516	E 10,479	E 9,516	3,412

<sup>a</sup> The values in columns 1–6 of this table are for net heat rates. See "Heat Rate" in Glossary.

<sup>b</sup> 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.

<sup>c</sup> Includes anthracite, bituminous coal, subbituminous coal, lignite, and, beginning in 2002, waste coal and coal symfuel.

<sup>d</sup> Includes distillate fuel oil, residual fuel oil, jet fuel, kerosene, petroleum coke, and waste oil.

<sup>e</sup> Includes natural gas and supplemental gaseous fuels.

<sup>f</sup> 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).

<sup>g</sup> 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.

<sup>h</sup> Used as the thermal conversion factor for nuclear electricity net generation.

<sup>i</sup> 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.

<sup>j</sup> See "Heat Content" in Glossary.

<sup>k</sup> 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 Page: See <http://www.eia.gov/totalenergy/data/monthly/#appendices> (Excel and CSV files) for all available annual data beginning in 1949.

Sources: See "Thermal Conversion Factor Source Documentation," which follows this table.

# Thermal Conversion Factor Source Documentation

## Approximate Heat Content of Petro- leum 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 Blending Components.** Assumed by EIA to be 5.048 million Btu per barrel or equal to the thermal conversion factor for **Aviation Gasoline (Finished)**.

**Aviation Gasoline (Finished).** 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-Propane Mixture.** EIA adopted the Bureau of Mines calculation of 4.130 million Btu per barrel based on an assumed mixture of 60 percent normal butane and 40 percent propane. See **Normal Butane/Butylene and Propane/Propylene**.

**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 Consumption.** • 1949–1993: 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.” • 1994 forward: Calculated by EIA as the annual quantity-weighted average of the conversion factors for **Distillate Fuel Oil, 15 ppm Sulfur and Under**

(5.770 million Btu per barrel), **Distillate Fuel Oil, Greater Than 15 ppm to 500 ppm Sulfur** (5.817 million Btu per barrel), and **Distillate Fuel Oil, Greater Than 500 ppm Sulfur** (5.825 million Btu per barrel).

**Distillate Fuel Oil, 15 ppm Sulfur and Under.** EIA adopted the thermal conversion factor of 5.770 million Btu per barrel (137,380 Btu per gallon) for U.S. conventional diesel from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013.

**Distillate Fuel Oil, Greater Than 15 ppm to 500 ppm Sulfur.** EIA adopted the thermal conversion factor of 5.817 million Btu per barrel (138,490 Btu per gallon) for low-sulfur diesel from U.S. Department of Energy, Argonne Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013.

**Distillate Fuel Oil, Greater Than 500 ppm Sulfur.** 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/Ethylene.** 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/Ethylene and Propane/Propylene**.

**Hydrogen.** Assumed by EIA to be 6.287 million Btu per barrel or equal to the thermal conversion factor for **Residual Fuel Oil**.

**Isobutane/Isobutylene.** 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 Blending Components.** • 1949–2006: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for “Gasoline, Motor Fuel” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Markets 1947-1985*, a 1968 release of historical and projected statistics. • 2007 forward: EIA adopted the thermal conversion factor of 5.222 million Btu per barrel (124,340 Btu per gallon) for gasoline blendstock from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013.

**Motor Gasoline Exports.** • 1949–2005: 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. • 2006 forward: Calculated by EIA as the annual quantity-weighted average of the conversion factors for gasoline blendstock and the methyl tertiary butyl ether (MTBE) blended into motor gasoline exports. The factor for gasoline blendstock is 5.253 million Btu per barrel in 2006 and 5.222 million Btu per barrel beginning in 2007 (see **Motor Gasoline Blending Components**). For MTBE, EIA adopted the thermal conversion factor of 4.247 million Btu per barrel (101,130 Btu per gallon) from U.S.

Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013.

**Motor Gasoline (Finished) Consumption.** • 1949–1992: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for “Gasoline, Motor Fuel” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Markets 1947-1985*, a 1968 release of historical and projected statistics. • 1993–2006: Calculated by EIA as the annual quantity-weighted average of the conversion factors for gasoline blendstock and the oxygenates blended into motor gasoline. The factor for gasoline blendstock is 5.253 million Btu per barrel (the motor gasoline factor used for previous years). The factors for fuel ethanol are shown in Table A3 (see **Fuel Ethanol, Denatured**). The following factors for other oxygenates are from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013—methyl tertiary butyl ether (MTBE): 4.247 million Btu per barrel (101,130 Btu per gallon); tertiary amyl methyl ether (TAME): 4.560 million Btu per barrel (108,570 Btu per gallon); ethyl tertiary butyl ether (ETBE): 4.390 million Btu per barrel (104,530 Btu per gallon); methanol: 2.738 million Btu per barrel (65,200 Btu per gallon); and butanol: 4.555 million Btu per barrel (108,458 Btu per gallon). • 2007 forward: Calculated by EIA as the annual quantity-weighted average of the conversion factors for gasoline blendstock and fuel ethanol blended into motor gasoline. The factor for gasoline blendstock is 5.222 million Btu per barrel (124,340 Btu per gallon), which is from the GREET model (see above). The factors for fuel ethanol are shown in Table A3 (see **Fuel Ethanol, Denatured**).

**Motor Gasoline Imports.** • 1949–2006: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for “Gasoline, Motor Fuel” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947-1985*, a 1968 release of historical and projected statistics. • 2007 forward: EIA adopted the thermal conversion factor of 5.222 million Btu per barrel (124,340 Btu per gallon) for gasoline blendstock from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013.

**Natural 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*.

**Normal Butane/Butylene.** 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.

**Other Hydrocarbons.** Assumed by EIA to be 5.825 million Btu per barrel or equal to the thermal conversion factor for **Unfinished Oils**.

**Oxygenates (Excluding Fuel Ethanol).** EIA adopted the thermal conversion factor of 4.247 million Btu per barrel (101,130 Btu per gallon) for methyl tertiary butyl ether (MTBE) from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013.

**Pentanes Plus.** Assumed by EIA to be 4.620 million Btu per barrel or equal to the thermal conversion factor for **Natural Gasoline**.

**Petrochemical Feedstocks, Naphtha Less Than 401 Degrees Fahrenheit.** Assumed by EIA to be 5.248 million Btu per barrel or equal to the thermal conversion factor for **Special Naphthas**.

**Petrochemical Feedstocks, Other Oils Equal to or Greater Than 401 Degrees Fahrenheit.** Assumed by EIA to be 5.825 million Btu per barrel or equal to the thermal conversion factor for **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**.

**Petroleum Coke, Catalyst.** Assumed by EIA to be 6.287 million Btu per barrel or equal to the thermal conversion factor for **Residual Fuel Oil**.

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

**Petroleum Coke, Total.** • 1949–2003: 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. • 2004 forward: Calculated by EIA as the annual quantity-weighted average of the conversion factors for **Petroleum Coke, Catalyst** (6.287 million Btu per barrel) and **Petroleum Coke, Marketable** (5.719 million Btu per barrel).

**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](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 distillate fuel oil, petroleum coke, and residual fuel oil 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](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](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](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/Propylene.** 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.

**Renewable Fuels Except Fuel Ethanol.** For “Biomass-Based Diesel Fuel” and “Other Renewable Fuels,” EIA assumed the thermal conversion factor to be 5.359 million Btu per barrel or equal to the thermal conversion factor for **Biodiesel**. For “Other Renewable Diesel Fuel,” EIA adopted the thermal conversion factor of 5.494 million Btu per barrel (130,817 Btu per gallon) for renewable diesel II (UOP-HDO) from U.S. Department of Energy, Argonne National Laboratory, “The Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model” (GREET), version GREET1\_2013, October 2013.

**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** 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** 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** 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.**

• 1949–2011: Calculated annually by EIA based on the reported volatility (low, medium, or high) of coal received by coke plants. (For 2011, EIA used the following volatility factors, in million Btu per short ton: low volatile—26.680; medium volatile—27.506; and high volatile—25.652.) Data are from Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants,” and predecessor forms. • 2012 forward: Calculated annually by EIA by dividing the heat content of coal received by coke plants by the quantity received. Data are from Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants.”

**Coal Consumption, Industrial Sector, Other.**

• 1949–2007: Calculated annually by EIA by dividing the heat content of coal received by manufacturing plants by the quantity received. Data are from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing Plants,” and predecessor forms. • 2008 forward: Calculated annually by EIA by dividing the heat content of coal received by manufacturing, gasification, and liquefaction plants by the quantity received. Data are from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Users.”

**Coal Consumption, Residential and Commercial Sectors.** • 1949–1999: Calculated annually by EIA by dividing the heat content of coal received by the residential and commercial sectors by the quantity received. Data are from Form EIA-6, “Coal Distribution Report,” and

predecessor forms. • 2000–2007: Calculated annually by EIA by dividing the heat content of coal consumed by commercial combined-heat-and-power (CHP) plants by the quantity consumed. Data are from Form EIA-923, “Power Plant Operations Report,” and predecessor forms. • 2008 forward: Calculated annually by EIA by dividing the heat content of coal received by commercial and institutional users by the quantity received. Data are from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Users.”

**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.** • 1949–2011: 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,” and predecessor forms. • 2012 forward: Calculated annually by EIA by dividing the heat content of steam coal and metallurgical coal exported by the quantity exported. The average heat content of steam coal is derived from receipts data from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Users,” and Form EIA-923, “Power Plant Operations Report.” The average heat content of metallurgical coal is derived from receipts data from Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants.” Data for export quantities 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. Data are from U.S. Department of Commerce, Bureau of the Census, “Monthly Report IM 145,” and predecessor forms. • 1964–2011: Assumed by EIA to be 25,000 million Btu per short ton. • 2012 forward: Calculated annually by EIA by dividing the heat content of coal imported (received) by the quantity imported (received). Data are from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Users”; Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants”; and Form EIA-923, “Power Plant Operations Report.”

**Coal Production.** • 1949–2011: Calculated annually by EIA by dividing the heat content of domestic coal (excluding waste coal) received by the quantity received. Data are from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Users”; Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants”; Form EIA-923, “Power Plant Operations Report”; and predecessor forms. • 2012 forward: Calculated annually by EIA by dividing the heat

content of domestic coal (excluding waste coal) received and exported by the quantity received and exported. Data are from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Users”; Form EIA-5, “Quarterly Coal Consumption and Quality Report—Coke Plants”; Form EIA-923, “Power Plant Operations Report”; U.S. Department of Commerce, Bureau of the Census, “Monthly Report EM 545”; and predecessor forms.

**Waste Coal Supplied.** • 1989–2000: Calculated annually by EIA by dividing the heat content of waste coal consumed by the quantity consumed. Data are from Form EIA-860B, “Annual Electric Generator Report—Nonutility,” and predecessor form. • 2001 forward: Calculated by EIA by dividing the heat content of waste coal received (or consumed) by the quantity received (or consumed). Receipts data are from Form EIA-3, “Quarterly Coal Consumption and Quality Report—Manufacturing and Transformation/Processing Coal Plants and Commercial and Institutional Users,” and predecessor form. Consumption data are from 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

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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
<b>Mass</b>	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 <sup>a</sup>	kilograms (kg)
	1 pound uranium oxide (lb U <sub>3</sub> O <sub>8</sub> )	=	0.384 647 <sup>b</sup>	kilograms uranium (kgU)
	1 ounce, avoirdupois (avdp oz)	=	28.349 52	grams (g)
<b>Volume</b>	1 barrel of oil (bbl)	=	0.158 987 3	cubic meters (m <sup>3</sup> )
	1 cubic yard (yd <sup>3</sup> )	=	0.764 555	cubic meters (m <sup>3</sup> )
	1 cubic foot (ft <sup>3</sup> )	=	0.028 316 85	cubic meters (m <sup>3</sup> )
	1 U.S. gallon (gal)	=	3.785 412	liters (L)
	1 ounce, fluid (fl oz)	=	29.573 53	milliliters (mL)
	1 cubic inch (in <sup>3</sup> )	=	16.387 06	milliliters (mL)
<b>Length</b>	1 mile (mi)	=	1.609 344 <sup>a</sup>	kilometers (km)
	1 yard (yd)	=	0.914 4 <sup>a</sup>	meters (m)
	1 foot (ft)	=	0.304 8 <sup>a</sup>	meters (m)
	1 inch (in)	=	2.54 <sup>a</sup>	centimeters (cm)
<b>Area</b>	1 acre	=	0.404 69	hectares (ha)
	1 square mile (mi <sup>2</sup> )	=	2.589 988	square kilometers (km <sup>2</sup> )
	1 square yard (yd <sup>2</sup> )	=	0.836 127 4	square meters (m <sup>2</sup> )
	1 square foot (ft <sup>2</sup> )	=	0.092 903 04 <sup>a</sup>	square meters (m <sup>2</sup> )
	1 square inch (in <sup>2</sup> )	=	6.451 6 <sup>a</sup>	square centimeters (cm <sup>2</sup> )
<b>Energy</b>	1 British thermal unit (Btu) <sup>c</sup>	=	1,055.055 852 62 <sup>a</sup>	joules (J)
	1 calorie (cal)	=	4.186 8 <sup>a</sup>	joules (J)
	1 kilowatthour (kWh)	=	3.6 <sup>a</sup>	megajoules (MJ)
<b>Temperature<sup>d</sup></b>	32 degrees Fahrenheit (°F)	=	0 <sup>a</sup>	degrees Celsius (°C)
	212 degrees Fahrenheit (°F)	=	100 <sup>a</sup>	degrees Celsius (°C)

<sup>a</sup>Exact conversion.

<sup>b</sup>Calculated by the U.S. Energy Information Administration.

<sup>c</sup>The Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.

<sup>d</sup>To 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 <sup>1</sup>	deka	da	10 <sup>-1</sup>	deci	d
10 <sup>2</sup>	hecto	h	10 <sup>-2</sup>	centi	c
10 <sup>3</sup>	kilo	k	10 <sup>-3</sup>	milli	m
10 <sup>6</sup>	mega	M	10 <sup>-6</sup>	micro	μ
10 <sup>9</sup>	giga	G	10 <sup>-9</sup>	nano	n
10 <sup>12</sup>	tera	T	10 <sup>-12</sup>	pico	p
10 <sup>15</sup>	peta	P	10 <sup>-15</sup>	femto	f
10 <sup>18</sup>	exa	E	10 <sup>-18</sup>	atto	a
10 <sup>21</sup>	zetta	Z	10 <sup>-21</sup>	zepto	z
10 <sup>24</sup>	yotta	Y	10 <sup>-24</sup>	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
<b>Petroleum</b>	1 barrel (bbl)	=	42 <sup>a</sup> U.S. gallons (gal)
<b>Coal</b>	1 short ton	=	2,000 <sup>a</sup> pounds (lb)
	1 long ton	=	2,240 <sup>a</sup> pounds (lb)
	1 metric ton (t)	=	1,000 <sup>a</sup> kilograms (kg)
<b>Wood</b>	1 cord (cd)	=	1.25 <sup>b</sup> shorts tons
	1 cord (cd)	=	128 <sup>a</sup> cubic feet (ft <sup>3</sup> )

<sup>a</sup>Exact conversion.

<sup>b</sup>Calculated 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 quantity of **natural gas** needed to maintain adequate reservoir pressures and deliverability rates throughout the withdrawal season. Base gas usually is not withdrawn and remains in the reservoir. All natural gas native to a depleted reservoir 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 (C<sub>4</sub>H<sub>10</sub>). 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 (C<sub>4</sub>H<sub>8</sub>) 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 (CO<sub>2</sub>):** 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 (C<sub>2</sub>H<sub>6</sub>). 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 (C<sub>2</sub>H<sub>5</sub>OH):** 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 (C<sub>2</sub>H<sub>4</sub>) 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.

**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.

**Hydrocarbon gas liquids (HGL):** A group of hydrocarbons including ethane, propane, normal butane, isobutane, and natural gasoline, and their associated olefins, including ethylene, propylene, butylene, and isobutylene. As marketed products, HGL represents all natural gas liquids (NGL) and olefins. EIA reports production of HGL from refineries (liquefied refinery gas, or LRG) and natural gas plants (natural gas plant liquids, or NGPL). Excludes liquefied natural gas (LNG).

**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:** Light liquid **hydrocarbons** recovered from lease separators or field facilities at associated and non-associated **natural gas** wells. Mostly pentanes and heavier hydrocarbons. Normally enters the **crude oil** stream after production.

**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):** A group of **hydrocarbon** gases, primarily **propane**, normal butane, and **isobutane**, derived from **crude oil** refining or **natural gas** processing. These gases may be marketed individually or mixed. They can be liquefied through pressurization (without requiring cryogenic refrigeration) for convenience of transportation or storage. Excludes **ethane** and olefins. *Note:* In some EIA publications, LPG includes ethane and marketed refinery olefin streams, in accordance with definitions used prior to January 2014.

**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):** See **Natural Gas Marketed Production**.

**Methane:** A colorless, flammable, odorless, **hydrocarbon** gas (CH<sub>4</sub>) 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, (CH<sub>3</sub>)<sub>3</sub>COCH<sub>3</sub>, intended for motor gasoline blending. See **Oxygenates**.

**Methanol:** A light, volatile alcohol (CH<sub>3</sub>OH) 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) **vented natural gas** and **flared natural gas**. 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 **natural gas plant liquids**. Volumes of dry gas withdrawn from gas storage reservoirs are not considered part of production. Dry natural gas production equals **natural gas marketed production** less **natural gas plant liquids** production.

**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 of **vented natural gas** and **flared natural gas**.

**Natural Gas Plant Liquids (NGPL):** Those **hydrocarbons** in **natural gas** that are separated as liquids at natural gas processing, fractionating, and cycling plants. Products obtained include **ethane**, **liquefied petroleum gases (propane, normal butane, and isobutane)**, and **natural gasoline**. Component products may be fractionated or mixed. **Lease condensate** and **plant condensate** are excluded. Note: Some EIA publications categorize NGPL production as field production, in accordance with definitions used prior to January 2014.

**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 commodity product commonly traded in **natural gas liquids (NGL)** markets that comprises liquid **hydrocarbons** (mostly pentanes and hexanes) and generally remains liquid at ambient temperatures and atmospheric pressure. Natural gasoline is equivalent to **pentanes plus**.

**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 liquid **hydrocarbons**, mostly pentanes and heavier, extracted from **natural gas** in a gas processing plant. Pentanes plus is equivalent to **natural gasoline**.

**Petrochemical Feedstocks:** Chemical feedstocks derived from refined or partially refined petroleum fraction, principally for use in the manufacturing 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 kilowatthour). 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 (C<sub>3</sub>H<sub>8</sub>). 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 (C<sub>3</sub>H<sub>6</sub>) 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/neic/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, **still 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:** **Natural 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 quantity of **natural gas** in the reservoir that is in addition to the cushion or **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. Volumes of working gas are reported in thousand cubic feet at standard temperature and pressure.