

March 2015

Monthly Energy Review



Independent Statistics & Analysis
U.S. Energy Information
Administration

www.eia.gov/mer

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.

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

March 2015

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

This report was prepared by the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the United States Government. The views in this report therefore should not be construed as representing those of the Department of Energy or other federal agencies.

Contacts

The *Monthly Energy Review* is prepared by the U.S. Energy Information Administration, Office of Energy Statistics, Office of Survey Development and Statistical Integration, Integrated Energy Statistics Team, under the direction of Barbara T. Fichman, 202-586-5737 (barbara.fichman@eia.gov). Questions and comments specifically related to the *Monthly Energy Review* may be addressed to Alexander Sun, 202-287-5948 (alexander.sun@eia.gov).

For assistance in acquiring data, please contact EIA's Office of Communications at 202-586-8800 (infoctr@eia.gov). Questions about the collection, processing, or interpretation of the information may be directed to the following subject specialists:

Section 1. Energy Overview	Dianne R. Dunn	202-586-2792 dianne.dunn@eia.gov
Section 2. Energy Consumption by Sector	Dianne R. Dunn	202-586-2792 dianne.dunn@eia.gov
Section 3. Petroleum	Jennifer Barrick	202-586-6254 jennifer.barrick@eia.gov
Section 4. Natural Gas	Amy Sweeney	202-586-2627 amy.sweeney@eia.gov
Section 5. Crude Oil and Natural Gas Resource Development	Neal Davis	202-586-6581 neal.davis@eia.gov
Section 6. Coal	Sundar Thapa	202-586-3836 sundar.thapa@eia.gov
Section 7. Electricity	Ronald S. Hankey	202-586-2630 ronald.hankey@eia.gov
Section 8. Nuclear Energy	Stan Kaplan	202-586-5114 stan.kaplan@eia.gov
Section 9. Energy Prices		
Petroleum	Maureen Klein	202-586-8013 maureen.klein@eia.gov
Natural Gas	Amy Sweeney	202-586-2627 amy.sweeney@eia.gov
Average Retail Prices of Electricity	Peter Wong	202-586-7574 peter.wong@eia.gov
Cost of Fuel at Electric Generating Plants	Rebecca Peterson	202-586-4509 rebecca.peterson@eia.gov
Section 10. Renewable Energy	Stan Kaplan	202-586-5114 stan.kaplan@eia.gov
Section 11. International Petroleum	Patricia Smith	202-586-6925 patricia.smith@eia.gov
Section 12. Environment	Perry Lindstrom	202-586-0934 perry.lindstrom@eia.gov

Contents

		Page
Section	1. Energy Overview.	1
Section	2. Energy Consumption by Sector.	25
Section	3. Petroleum.	43
Section	4. Natural Gas.	77
Section	5. Crude Oil and Natural Gas Resource Development.	85
Section	6. Coal.	91
Section	7. Electricity.	101
Section	8. Nuclear Energy.	123
Section	9. Energy Prices.	127
Section	10. Renewable Energy.	145
Section	11. International Petroleum.	157
Section	12. Environment.	167
Appendix	A. British Thermal Unit Conversion Factors.	181
Appendix	B. Metric Conversion Factors, Metric Prefixes, and Other Physical Conversion Factors.	195
Glossary	. . . . .	199

Tables

	Page
Section 1. Energy Overview	
1.1 Primary Energy Overview.	3
1.2 Primary Energy Production by Source.	5
1.3 Primary Energy Consumption by Source.	7
1.4a Primary Energy Imports by Source.	10
1.4b Primary Energy Exports by Source and Total Net Imports.	11
1.5 Merchandise Trade Value.	13
1.6 Cost of Fuels to End Users in Real (1982–1984) Dollars.	15
1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product.	16
1.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Economy.	17
1.9 Heating Degree-Days by Census Division.	18
1.10 Cooling Degree-Days by Census Division.	19
Section 2. Energy Consumption by Sector	
2.1 Energy Consumption by Sector.	27
2.2 Residential Sector Energy Consumption.	29
2.3 Commercial Sector Energy Consumption.	31
2.4 Industrial Sector Energy Consumption.	33
2.5 Transportation Sector Energy Consumption.	35
2.6 Electric Power Sector Energy Consumption.	37
Section 3. Petroleum	
3.1 Petroleum Overview.	45
3.2 Refinery and Blender Net Inputs and Net Production.	47
3.3 Petroleum Trade	
3.3a Overview.	49
3.3b Imports and Exports by Type.	51
3.3c Imports From OPEC Countries.	52
3.3d Imports From Non-OPEC Countries.	53
3.4 Petroleum Stocks.	55
3.5 Petroleum Products Supplied by Type.	57
3.6 Heat Content of Petroleum Products Supplied by Type.	59
3.7 Petroleum Consumption	
3.7a Residential and Commercial Sectors.	61
3.7b Industrial Sector.	62
3.7c Transportation and Electric Power Sectors.	63
3.8 Heat Content of Petroleum Consumption	
3.8a Residential and Commercial Sectors.	66
3.8b Industrial Sector.	67
3.8c Transportation and Electric Power Sectors.	68
Section 4. Natural Gas	
4.1 Natural Gas Overview.	79
4.2 Natural Gas Trade by Country.	80
4.3 Natural Gas Consumption by Sector.	81
4.4 Natural Gas in Underground Storage.	82
Section 5. Crude Oil and Natural Gas Resource Development	
5.1 Crude Oil and Natural Gas Drilling Activity Measurements.	87
5.2 Crude Oil and Natural Gas Exploratory and Development Wells.	88

Tables

	Page
Section 6. Coal	
6.1 Coal Overview	93
6.2 Coal Consumption by Sector	94
6.3 Coal Stocks by Sector	95
Section 7. Electricity	
7.1 Electricity Overview	103
7.2 Electricity Net Generation	
7.2a Total (All Sectors)	105
7.2b Electric Power Sector	106
7.2c Commercial and Industrial Sectors	107
7.3 Consumption of Combustible Fuels for Electricity Generation	
7.3a Total (All Sectors)	109
7.3b Electric Power Sector	110
7.3c Commercial and Industrial Sectors (Selected Fuels)	111
7.4 Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output	
7.4a Total (All Sectors)	113
7.4b Electric Power Sector	114
7.4c Commercial and Industrial Sectors (Selected Fuels)	115
7.5 Stocks of Coal and Petroleum: Electric Power Sector	117
7.6 Electricity End Use	119
Section 8. Nuclear Energy	
8.1 Nuclear Energy Overview	125
Section 9. Energy Prices	
9.1 Crude Oil Price Summary	129
9.2 F.O.B. Costs of Crude Oil Imports From Selected Countries	130
9.3 Landed Costs of Crude Oil Imports From Selected Countries	131
9.4 Motor Gasoline Retail Prices, U.S. City Average	132
9.5 Refiner Prices of Residual Fuel Oil	133
9.6 Refiner Prices of Petroleum Products for Resale	134
9.7 Refiner Prices of Petroleum Products to End Users	135
9.8 Average Retail Prices of Electricity	137
9.9 Cost of Fossil-Fuel Receipts at Electric Generating Plants	139
9.10 Natural Gas Prices	141
Section 10. Renewable Energy	
10.1 Renewable Energy Production and Consumption by Source	147
10.2 Renewable Energy Consumption	
10.2a Residential and Commercial Sectors	148
10.2b Industrial and Transportation Sectors	149
10.2c Electric Power Sector	150
10.3 Fuel Ethanol Overview	151
10.4 Biodiesel Overview	152

Tables

Page

Section 11. International Petroleum

11.1	World Crude Oil Production	
	11.1a OPEC Members	160
	11.1b Persian Gulf Nations, Non-OPEC, and World	161
11.2	Petroleum Consumption in OECD Countries	163
11.3	Petroleum Stocks in OECD Countries	165

Section 12. Environment

12.1	Carbon Dioxide Emissions From Energy Consumption by Source	169
12.2	Carbon Dioxide Emissions From Energy Consumption: Residential Sector	171
12.3	Carbon Dioxide Emissions From Energy Consumption: Commercial Sector	172
12.4	Carbon Dioxide Emissions From Energy Consumption: Industrial Sector	173
12.5	Carbon Dioxide Emissions From Energy Consumption: Transportation Sector	174
12.6	Carbon Dioxide Emissions From Energy Consumption: Electric Power Sector	175
12.7	Carbon Dioxide Emissions From Biomass Energy Consumption	176

Appendix A. British Thermal Unit Conversion Factors

A1.	Approximate Heat Content of Petroleum and Other Liquids	181
A2.	Approximate Heat Content of Petroleum Production, Imports, and Exports	182
A3.	Approximate Heat Content of Petroleum Consumption and Fuel Ethanol	183
A4.	Approximate Heat Content of Natural Gas	184
A5.	Approximate Heat Content of Coal and Coal Coke	185
A6.	Approximate Heat Rates for Electricity, and Heat Content of Electricity	186

Appendix B. Metric Conversion Factors, Metric Prefixes, and Other Physical Conversion Factors

B1.	Metric Conversion Factors	196
B2.	Metric Prefixes	197
B3.	Other Physical Conversion Factors	197

Figures

	Page
Section 1. Energy Overview	
1.1 Primary Energy Overview.	2
1.2 Primary Energy Production.	4
1.3 Primary Energy Consumption.	6
1.4a Primary Energy Imports and Exports.	8
1.4b Primary Energy Net Imports.	9
1.5 Merchandise Trade Value.	12
1.6 Cost of Fuels to End Users in Real (1982–1984) Dollars.	14
1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product.	16
1.8 Motor Vehicle Fuel Economy.	17
Section 2. Energy Consumption by Sector	
2.1 Energy Consumption by Sector.	26
2.2 Residential Sector Energy Consumption.	28
2.3 Commercial Sector Energy Consumption.	30
2.4 Industrial Sector Energy Consumption.	32
2.5 Transportation Sector Energy Consumption.	34
2.6 Electric Power Sector Energy Consumption.	36
Section 3. Petroleum	
3.1 Petroleum Overview	44
3.2 Refinery and Blender Net Inputs and Net Production.	46
3.3 Petroleum Trade	
3.3a Overview.	48
3.3b Imports.	50
3.4 Petroleum Stocks.	54
3.5 Petroleum Products Supplied by Type.	56
3.6 Heat Content of Petroleum Products Supplied by Type.	58
3.7 Petroleum Consumption by Sector.	60
3.8a Heat Content of Petroleum Consumption by End-User Sector.	64
3.8b Heat Content of Petroleum Consumption by End-User Sector, Monthly.	65
Section 4. Natural Gas	
4.1 Natural Gas.	78
Section 5. Crude Oil and Natural Gas Resource Development	
5.1 Crude Oil and Natural Gas Resource Development Indicators.	86
Section 6. Coal	
6.1 Coal.	92
Section 7. Electricity	
7.1 Electricity Overview.	102
7.2 Electricity Net Generation.	104
7.3 Consumption of Selected Combustible Fuels for Electricity Generation.	108
7.4 Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output.	112
7.5 Stocks of Coal and Petroleum: Electric Power Sector.	116
7.6 Electricity End Use.	118

Figures

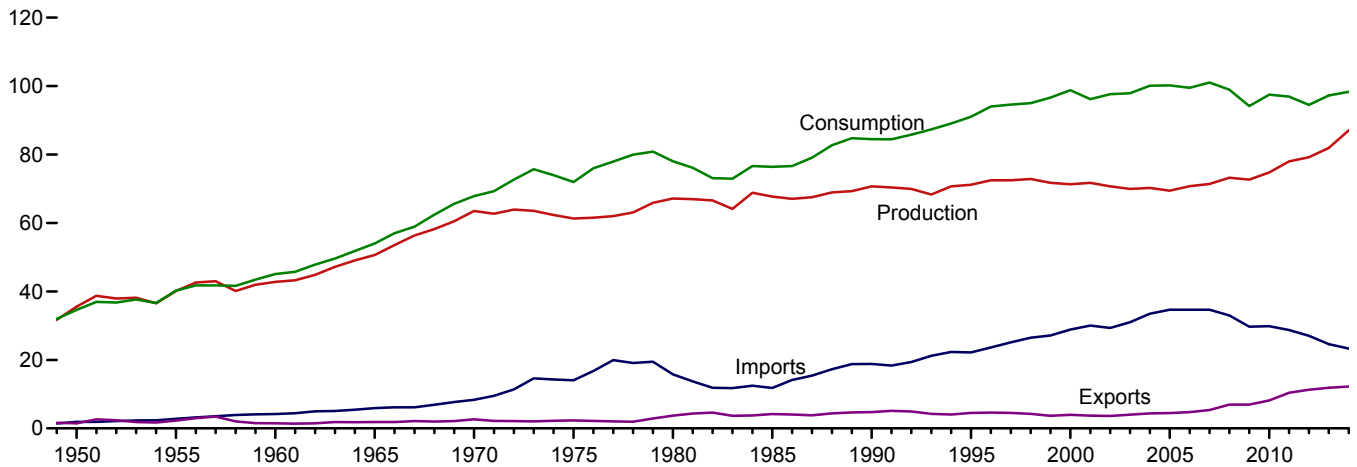
Page

Section 8. Nuclear Energy	
8.1 Nuclear Energy Overview.....	124
Section 9. Energy Prices	
9.1 Petroleum Prices.....	128
9.2 Average Retail Prices of Electricity.....	136
9.3 Cost of Fossil-Fuel Receipts at Electric Generating Plants.....	138
9.4 Natural Gas Prices.....	140
Section 10. Renewable Energy	
10.1 Renewable Energy Consumption.....	146
Section 11. International Petroleum	
11.1 World Crude Oil Production	
11.1a Overview.....	158
11.1b By Selected Country.....	159
11.2 Petroleum Consumption in OECD Countries.....	162
11.3 Petroleum Stocks in OECD Countries.....	164
Section 12. Environment	
12.1 Carbon Dioxide Emissions From Energy Consumption by Source.....	168
12.2 Carbon Dioxide Emissions From Energy Consumption by Sector.....	170

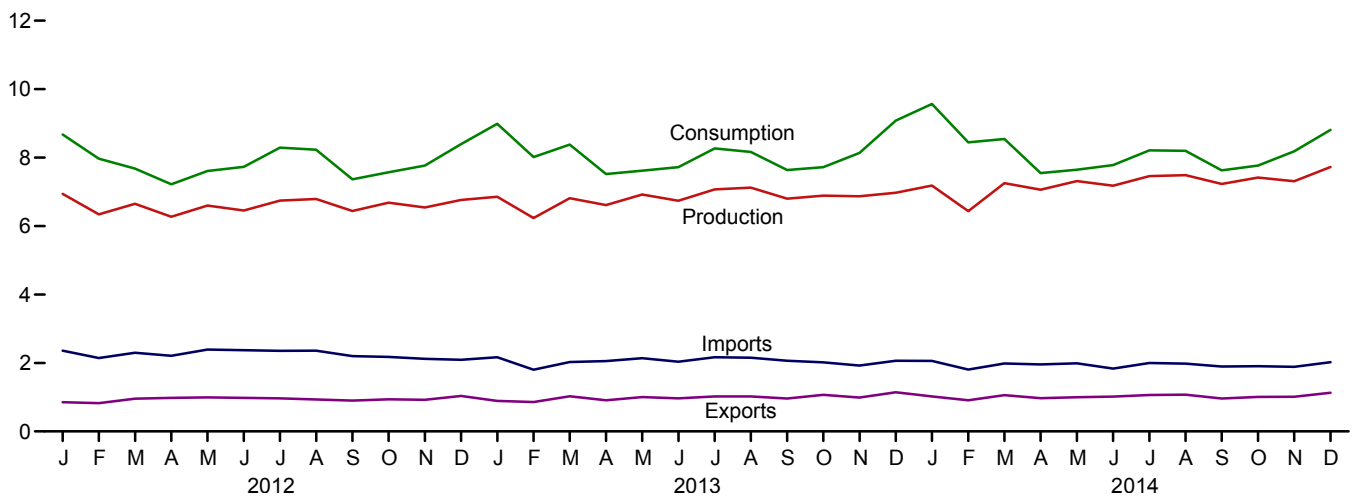
1. Energy Overview

Figure 1.1 Primary Energy Overview
(Quadrillion Btu)

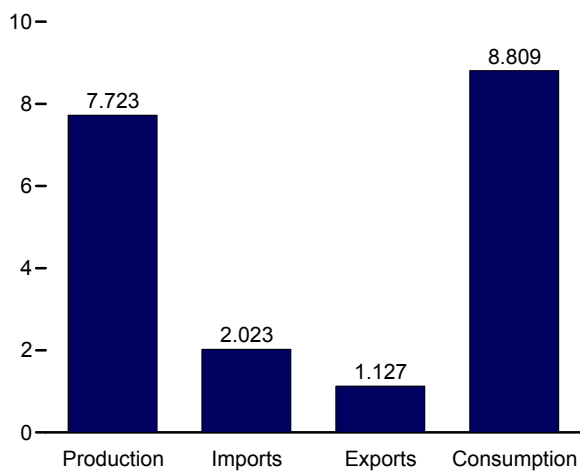
Overview, 1949–2014



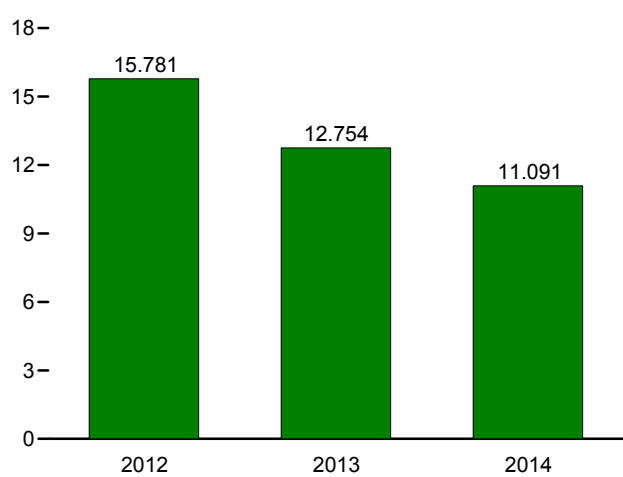
Overview, Monthly



Overview, December 2014



Net Imports, January–December



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

Table 1.1 Primary Energy Overview
(Quadrillion Btu)

	Production				Trade			Stock Change and Other ^d	Consumption			
	Fossil Fuels ^a	Nuclear Electric Power	Renewable Energy ^b	Total	Imports	Exports	Net Imports ^c		Fossil Fuels ^e	Nuclear Electric Power	Renewable Energy ^b	Total ^f
1950 Total	32.563	0.000	2.978	35.540	1.913	1.465	0.448	-1.372	31.632	0.000	2.978	34.616
1955 Total	37.364	.000	2.784	40.148	2.790	2.286	.504	-.444	37.410	.000	2.784	40.208
1960 Total	39.869	.006	2.928	42.803	4.188	1.477	2.710	-.427	42.137	.006	2.928	45.086
1965 Total	47.235	.043	3.396	50.674	5.892	1.829	4.063	-.722	50.577	.043	3.396	54.015
1970 Total	59.186	.239	4.070	63.495	8.342	2.632	5.709	-1.367	63.522	.239	4.070	67.838
1975 Total	54.733	1.900	4.687	61.320	14.032	2.323	11.709	-1.065	65.357	1.900	4.687	71.965
1980 Total	59.008	2.739	5.428	67.175	15.796	3.695	12.101	-1.210	69.828	2.739	5.428	78.067
1985 Total	57.539	4.076	6.084	67.698	11.781	4.196	7.584	1.110	66.093	4.076	6.084	76.392
1990 Total	58.560	6.104	6.041	70.705	18.817	4.752	14.065	-.284	72.332	6.104	6.041	84.485
1995 Total	57.540	7.075	6.558	71.174	22.180	4.496	17.684	2.174	77.262	7.075	6.560	91.032
2000 Total	57.366	7.862	6.104	71.332	28.865	3.962	24.904	2.583	84.735	7.862	6.106	98.819
2001 Total	58.541	8.029	5.164	71.735	30.052	3.731	26.321	-1.883	82.906	8.029	5.163	96.172
2002 Total	56.834	8.145	5.734	70.713	29.331	3.608	25.722	1.211	83.700	8.145	5.729	97.647
2003 Total	56.033	7.960	5.947	69.939	31.007	4.013	26.994	.989	83.992	7.960	5.948	97.922
2004 Total	55.942	8.223	6.069	70.234	33.492	4.351	29.141	.721	85.754	8.223	6.081	100.096
2005 Total	55.044	8.161	6.229	69.434	34.659	4.462	30.197	.565	85.709	8.161	6.242	100.196
2006 Total	55.938	8.215	6.599	70.751	34.649	4.727	29.921	-1.176	84.570	8.215	6.649	99.497
2007 Total	56.436	8.459	6.528	71.422	34.679	5.338	29.341	.271	85.928	8.459	6.541	101.034
2008 Total	57.587	8.426	7.219	73.233	32.970	6.949	26.021	-.335	83.178	8.426	7.202	98.919
2009 Total	56.662	8.355	7.655	72.672	29.960	6.920	22.770	-1.291	78.042	8.355	7.638	94.152
2010 Total	58.230	8.434	8.128	74.793	29.866	8.176	21.690	1.013	80.891	8.434	8.081	97.496
2011 Total	60.548	8.269	9.170	77.986	28.748	10.382	18.366	.565	79.447	8.269	9.074	96.917
2012 January	5.409	.758	.772	6.939	2.360	.853	1.507	.230	7.156	.758	.751	8.676
February	4.979	.669	.693	6.341	2.142	.824	1.317	.308	6.606	.669	.681	7.966
March	5.212	.647	.792	6.651	2.295	.954	1.341	-.314	6.236	.647	.785	7.678
April	4.923	.585	.765	6.273	2.210	.981	1.230	-.284	5.861	.585	.761	7.220
May	5.141	.651	.806	6.597	2.391	.993	1.398	-.385	6.142	.651	.803	7.610
June	4.996	.683	.772	6.451	2.370	.979	1.391	-.111	6.262	.683	.772	7.731
July	5.277	.724	.743	6.744	2.353	.967	1.386	.160	6.803	.724	.744	8.290
August	5.349	.729	.712	6.791	2.360	.934	1.425	.013	6.764	.729	.718	8.299
September	5.119	.676	.644	6.439	2.198	.900	1.298	-.370	6.034	.676	.643	7.366
October	5.378	.626	.678	6.681	2.175	.938	1.238	-.349	6.249	.626	.683	7.570
November	5.265	.594	.683	6.543	2.119	.924	1.194	.029	6.476	.594	.684	7.767
December	5.276	.719	.766	6.761	2.092	1.036	1.056	.574	6.898	.719	.763	8.392
Total	62.324	8.062	8.826	79.212	27.065	11.284	15.781	-.497	77.487	8.062	8.786	94.496
2013 January	R 5.314	R .746	R .796	R 6.856	R 2.165	R .889	R 1.277	R .856	R 7.435	R .746	R .795	R 8.988
February	R 4.881	R .642	R .709	R 6.232	R 1.804	R .856	R .947	R .837	R 6.652	R .642	R .710	R 8.017
March	R 5.383	R .658	R .774	R 6.815	R 2.026	R 1.002	R 1.024	R .565	R 6.936	R .658	R .775	R 8.381
April	R 5.200	R .593	R .822	R 6.615	R 2.054	R .911	R 1.143	R -.240	R 6.094	R .593	R .823	R 7.518
May	R 5.404	R .657	R .861	R 6.922	R 2.137	R 1.001	R 1.136	R -.442	R 6.085	R .657	R .861	R 7.616
June	R 5.221	R .694	R .825	R 6.740	R 2.037	R .964	R 1.073	R -.095	R 6.182	R .694	R .827	R 7.718
July	R 5.517	R .737	R .815	R 7.069	R 2.166	R 1.019	R 1.147	R .051	R 6.701	R .737	R .813	R 8.263
August	R 5.636	R .745	R .743	R 7.124	R 2.153	R 1.023	R 1.130	R -.091	R 6.659	R .745	R .741	R 8.167
September	R 5.411	R .688	R .698	R 6.797	R 2.062	R .960	R 1.102	R -.264	R 6.231	R .688	R .703	R 7.635
October	R 5.487	R .660	R .743	R 6.890	R 2.015	R 1.068	R .947	R -.116	R 6.303	R .660	R .745	R 7.721
November	R 5.426	R .679	R .763	R 6.868	R 1.922	R .988	R .933	R .333	R 6.683	R .679	R .758	R 8.134
December	R 5.427	R .745	R .801	R 6.973	R 2.063	R 1.145	R .918	R 1.188	R 7.524	R .745	R .798	R 9.079
Total	R 64.308	R 8.244	R 9.349	R 81.902	R 24.603	R 11.849	R 12.754	R 2.582	R 79.485	R 8.244	R 9.349	R 97.238
2014 January	R 5.592	R .763	R .827	R 7.183	R 2.061	R 1.024	R 1.038	R 1.345	R 7.969	R .763	R .820	R 9.566
February	R 5.069	R .655	R .709	R 6.433	R 1.806	R .908	R .898	R 1.114	R 7.075	R .655	R .706	R 8.445
March	R 5.746	R .652	R .855	R 7.253	R 1.983	R 1.060	R .923	R .367	R 7.034	R .652	R .847	R 8.544
April	R 5.612	R .589	R .862	R 7.063	R 1.956	R .972	R .984	R -.502	R 6.087	R .589	R .859	R 7.545
May	R 5.794	R .658	R .863	R 7.315	R 1.987	R 1.000	R .987	R -.655	R 6.113	R .658	R .862	R 7.647
June	R 5.607	R .712	R .859	R 7.178	R 1.835	R 1.016	R .819	R -.215	R 6.203	R .712	R .854	R 7.782
July	R 5.883	R .752	R .824	R 7.459	R 1.999	R 1.063	R .936	R -.181	R 6.628	R .752	R .818	R 8.213
August	R 5.985	R .743	R .756	R 7.485	R 1.982	R 1.072	R .910	R -.196	R 6.681	R .743	R .756	R 8.198
September	R 5.811	R .706	R .712	R 7.229	R 1.894	R .962	R .931	R -.534	R 6.195	R .706	R .709	R 7.626
October	R 5.999	R .652	R .766	R 7.417	R 1.905	R 1.006	R .899	R -.549	R 6.335	R .652	R .766	R 7.767
November	R 5.810	R .681	R .816	R 7.307	R 1.884	R 1.013	R .871	R .006	R 6.674	R .681	R .813	R 8.184
December	R 6.123	R .767	R .834	R 7.723	R 2.023	R 1.127	R .896	R .190	R 7.203	R .767	R .824	R 8.809
Total	69.032	8.329	9.684	87.044	23.315	12.224	11.091	.190	80.197	8.329	9.634	98.324

^a Coal, natural gas (dry), crude oil, and natural gas plant liquids.
^b See Tables 10.1–10.2c for notes on series components and estimation; and see Note, "Renewable Energy Production and Consumption," at end of Section 10.
^c Net imports equal imports minus exports.
^d Includes petroleum stock change and adjustments; natural gas net storage withdrawals and balancing item; coal stock change, losses, and unaccounted for; fuel ethanol stock change; and biodiesel stock change and balancing item.
^e Coal, coal coke net imports, natural gas, and petroleum.
^f Also includes electricity net imports.
R=Revised.

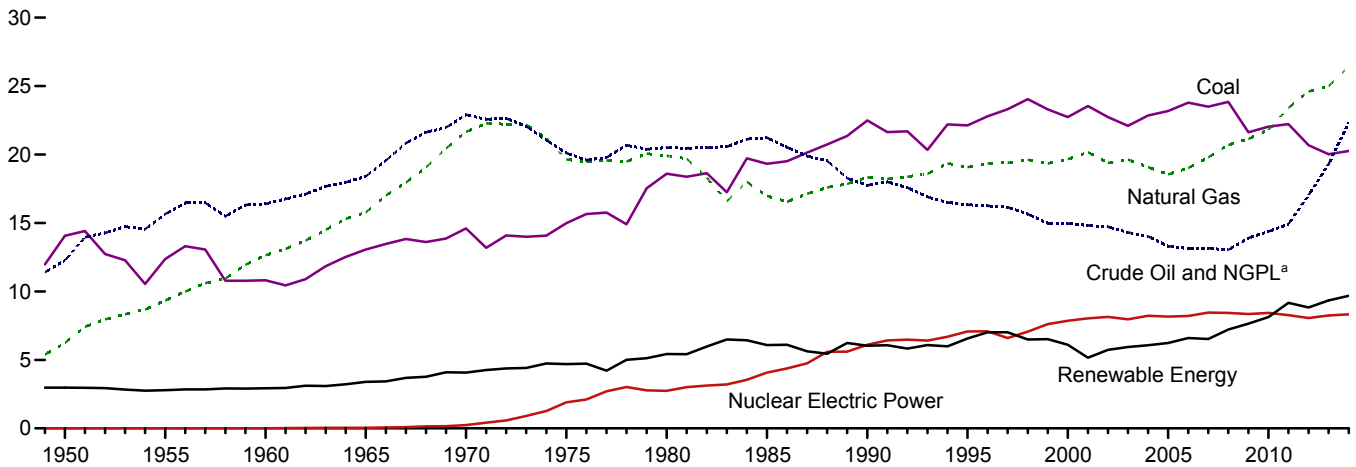
Notes: • See "Primary Energy," "Primary Energy Production," and "Primary Energy Consumption," in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web 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.

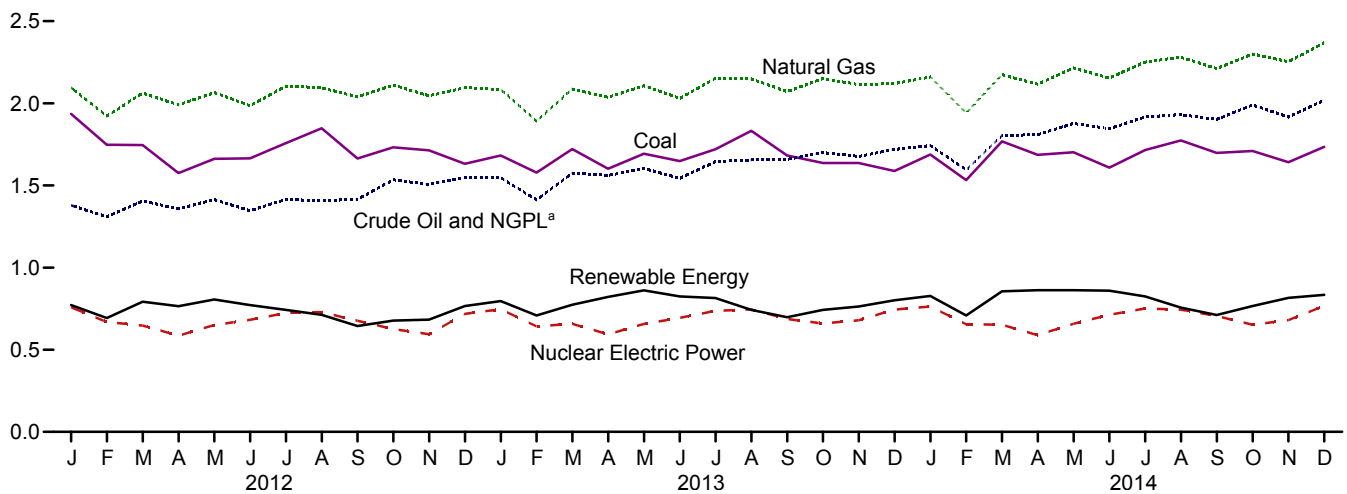
Sources: • **Production:** Table 1.2. • **Trade:** Tables 1.4a and 1.4b. • **Stock Change and Other:** Calculated as consumption minus production and net imports. • **Consumption:** Table 1.3.

Figure 1.2 Primary Energy Production
(Quadrillion Btu)

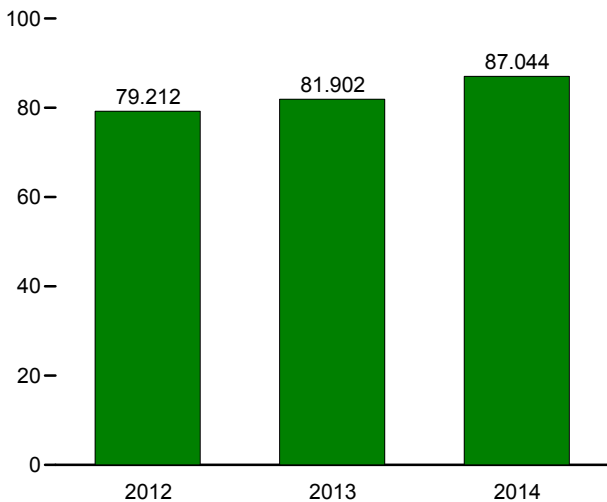
By Source, 1949–2014



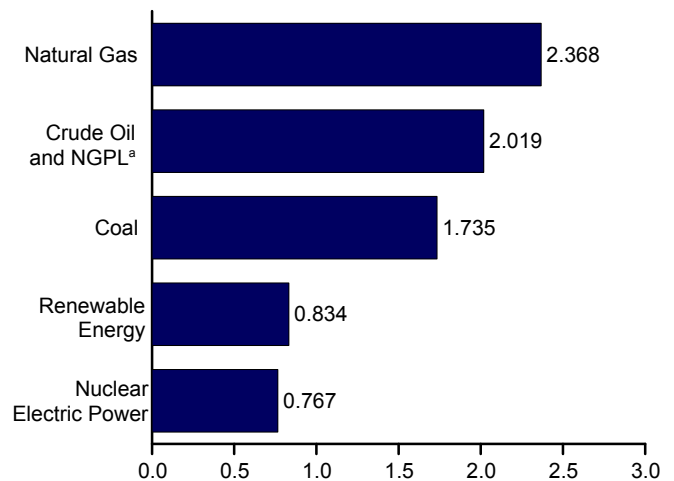
By Source, Monthly



Total, January–December



By Source, December 2014



^a Natural gas plant liquids.

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

Source: Table 1.2.

Table 1.2 Primary Energy Production by Source
(Quadrillion Btu)

	Fossil Fuels					Nuclear Electric Power	Renewable Energy ^a						Total
	Coal ^b	Natural Gas (Dry)	Crude Oil ^c	NGPL ^d	Total		Hydroelectric Power ^e	Geo-thermal	Solar/ PV	Wind	Bio-mass	Total	
1950 Total	14.060	6.233	11.447	0.823	32.563	0.000	1.415	NA	NA	NA	1.562	2.978	35.540
1955 Total	12.370	9.345	14.410	1.240	37.364	.000	1.360	NA	NA	NA	1.424	2.784	40.148
1960 Total	10.817	12.656	14.935	1.461	39.869	.006	1.608	(s)	NA	NA	1.320	2.928	42.803
1965 Total	13.055	15.775	16.521	1.883	47.235	.043	2.059	.002	NA	NA	1.335	3.396	50.674
1970 Total	14.607	21.666	20.401	2.512	59.186	.239	2.634	.006	NA	NA	1.431	4.070	63.495
1975 Total	14.989	19.640	17.729	2.374	54.733	1.900	3.155	.034	NA	NA	1.499	4.687	61.320
1980 Total	18.598	19.908	18.249	2.254	59.008	2.739	2.900	.053	NA	NA	2.475	5.428	67.175
1985 Total	19.325	16.980	18.992	2.241	57.539	4.076	2.970	.097	(s)	(s)	3.016	6.084	67.698
1990 Total	22.488	18.326	15.571	2.175	58.560	6.104	3.046	.171	.059	.029	2.735	6.041	70.705
1995 Total	22.130	19.082	13.887	2.442	57.540	7.075	3.205	.152	.069	.033	3.099	6.558	71.174
2000 Total	22.735	19.662	12.358	2.611	57.366	7.862	2.811	.164	.066	.057	3.006	6.104	71.332
2001 Total	23.547	20.166	12.282	2.547	58.541	8.029	2.242	.164	.064	.070	2.624	5.164	71.735
2002 Total	22.732	19.382	12.160	2.559	56.834	8.145	2.689	.171	.063	.105	2.705	5.734	70.713
2003 Total	22.094	19.633	11.960	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	.358	.683	6.543
December	1.632	2.095	1.273	.276	5.276	.719	.219	.019	.019	.138	.372	.766	6.761
Total	20.677	24.610	13.791	3.246	62.324	8.062	2.629	.212	.227	1.340	4.419	8.826	79.212
2013 January	R 1.683	2.084	1.274	.274	R 5.314	R .746	R .237	.019	.022	R .141	R .378	R .796	R 6.856
February	R 1.578	1.891	1.153	.259	4.881	R .642	R .195	.017	.021	R .134	R .342	R .709	R 6.232
March	R 1.722	2.086	R 1.289	.286	R 5.383	R .658	R .196	.019	.025	R .150	R .384	R .774	R 6.815
April	R 1.602	2.037	1.281	.280	5.200	R .593	R .239	R .017	R .024	R .167	R .374	R .822	R 6.615
May	R 1.693	2.107	R 1.309	.294	5.404	R .657	R .271	.018	.026	.155	R .391	R .861	R 6.922
June	R 1.648	2.030	1.260	.283	5.221	R .694	R .261	R .017	R .026	.131	R .388	R .825	R 6.740
July	R 1.720	2.152	1.344	.301	R 5.517	R .737	R .260	R .018	.027	.106	R .404	R .815	R 7.069
August	R 1.832	2.148	1.343	.313	R 5.636	R .745	R .206	R .018	.028	R .092	R .399	R .743	R 7.124
September	R 1.682	2.071	R 1.347	.311	R 5.411	R .688	R .162	.018	.027	.111	R .380	R .698	R 6.797
October	R 1.636	2.151	R 1.381	.319	R 5.487	R .660	R .164	R .018	.028	R .130	R .402	R .743	R 6.890
November	R 1.636	2.113	R 1.370	.306	R 5.426	R .679	.169	R .017	R .026	.151	R .401	R .763	R 6.868
December	R 1.588	2.119	1.413	.306	R 5.427	R .745	R .202	R .018	R .027	R .133	R .421	R .801	R 6.973
Total	R 20.021	24.991	R 15.764	3.532	R 64.308	R 8.244	R 2.562	R .214	R .305	R 1.601	R 4.666	R 9.349	R 81.902
2014 January	1.689	RE 2.161	RE 1.439	R .305	R 5.592	R .763	.206	.019	.029	R .172	R .401	R .827	R 7.183
February	1.532	RE 1.942	RE 1.315	R .280	R 5.069	R .655	.166	.017	R .028	.133	R .364	R .709	R 6.433
March	1.768	RE 2.174	RE 1.481	R .322	R 5.746	R .652	.231	R .019	R .035	.169	R .401	R .855	R 7.253
April	1.687	RE 2.116	RE 1.483	R .326	R 5.612	R .589	.239	.018	.036	R .179	R .390	R .862	R 7.063
May	1.702	RE 2.215	RE 1.545	R .332	R 5.794	R .658	.252	.019	.039	.148	R .405	R .863	R 7.315
June	1.609	RE 2.154	RE 1.505	R .340	R 5.607	R .712	.246	.018	.040	R .150	R .405	R .859	R 7.178
July	1.715	RE 2.251	RE 1.564	R .353	R 5.883	R .752	.231	R .019	.039	.115	R .419	R .824	R 7.459
August	1.774	RE 2.281	RE 1.575	R .356	R 5.985	R .743	R .189	R .019	.040	.097	R .412	R .756	R 7.485
September	1.698	RE 2.212	RE 1.553	R .349	R 5.811	R .706	R .152	.018	.039	R .110	R .393	R .712	R 7.229
October	1.709	RE 2.300	RE 1.629	R .361	R 5.999	R .652	R .163	R .019	R .037	R .139	R .408	R .766	R 7.417
November	1.641	RE 2.253	RE 1.573	R .343	R 5.810	R .681	R .179	R .019	.034	R .182	R .403	R .816	R 7.307
December	1.735	E 2.368	E 1.659	.360	6.123	.767	.214	.019	.031	.140	.430	.834	7.723
Total	20.259	E 26.427	E 18.318	4.028	69.032	8.329	2.469	.222	.427	1.734	4.832	9.684	87.044

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

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

^c Includes lease condensate.

^d Natural gas plant liquids.

^e Conventional hydroelectric power.

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

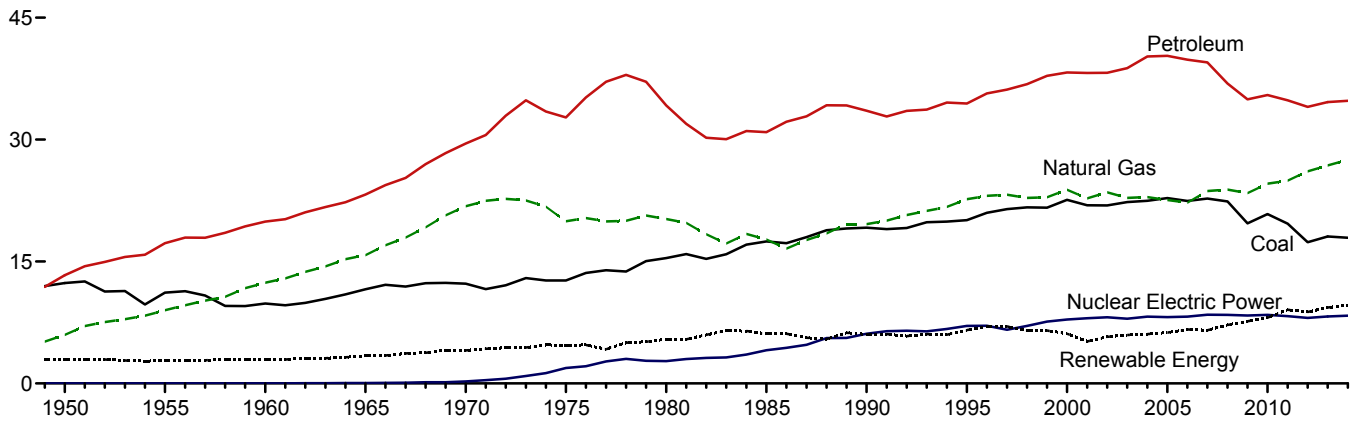
Notes: • See "Primary Energy Production" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web 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.

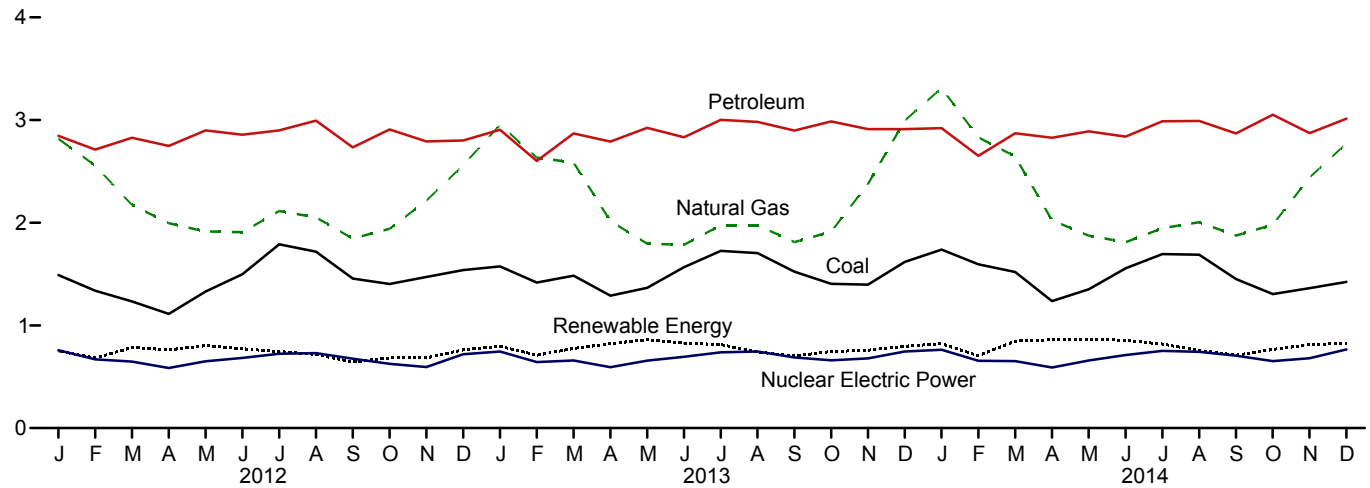
Sources: See end of section.

Figure 1.3 Primary Energy Consumption
(Quadrillion Btu)

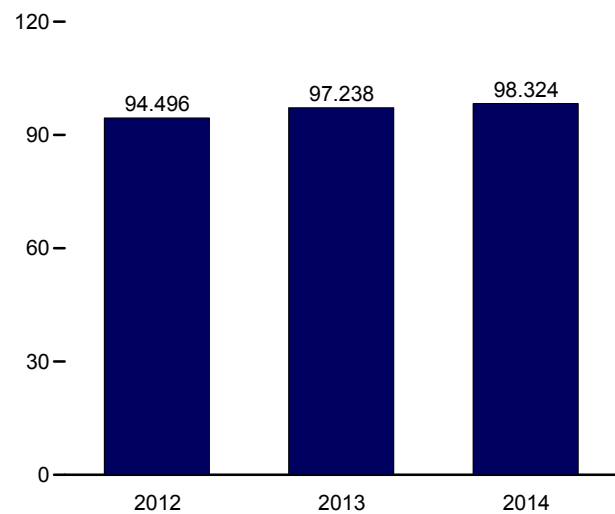
By Source,^a 1949–2014



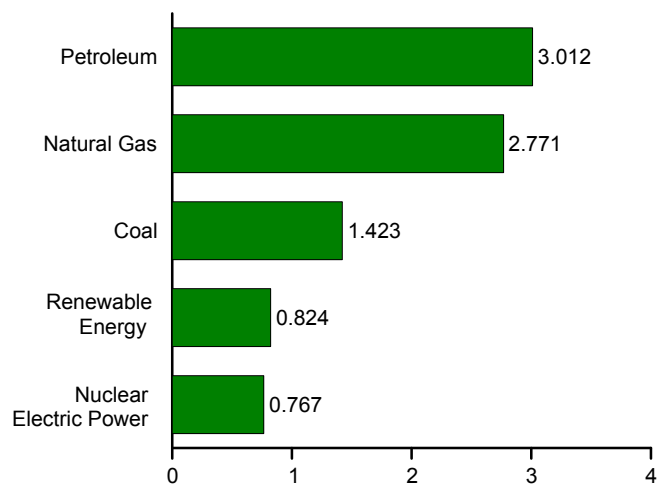
By Source,^a Monthly



Total, January–December



By Source,^a December 2014



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

Table 1.3 Primary Energy Consumption by Source
(Quadrillion Btu)

	Fossil Fuels				Nuclear Electric Power	Renewable Energy ^a						Total ^f
	Coal	Natural Gas ^b	Petroleum ^c	Total ^d		Hydro-electric Power ^e	Geo-thermal	Solar/PV	Wind	Bio-mass	Total	
1950 Total	12.347	5.968	13.315	31.632	0.000	1.415	NA	NA	NA	1.562	2.978	34.616
1955 Total	11.167	8.998	17.255	37.410	.000	1.360	NA	NA	NA	1.424	2.784	40.208
1960 Total	9.838	12.385	19.919	42.137	.006	1.608	(s)	NA	NA	1.320	2.928	45.086
1965 Total	11.581	15.769	23.246	50.577	.043	2.059	.002	NA	NA	1.335	3.396	54.015
1970 Total	12.265	21.795	29.521	63.522	.239	2.634	.006	NA	NA	1.431	4.070	67.838
1975 Total	12.663	19.948	32.732	65.357	1.900	3.155	.034	NA	NA	1.499	4.687	71.965
1980 Total	15.423	20.235	34.205	69.828	2.739	2.900	.053	NA	NA	2.475	5.428	78.067
1985 Total	17.478	17.703	30.925	66.093	4.076	2.970	.097	(s)	(s)	3.016	6.084	76.392
1990 Total	19.173	19.603	33.552	72.332	6.104	3.046	.171	.059	.029	2.735	6.041	84.485
1995 Total	20.089	22.671	34.441	77.262	7.075	3.205	.152	.069	.033	3.101	6.560	91.032
2000 Total	22.580	23.824	38.266	84.735	7.862	2.811	.164	.066	.057	3.008	6.106	98.819
2001 Total	21.914	22.773	38.190	82.906	8.029	2.242	.164	.064	.070	2.622	5.163	96.172
2002 Total	21.904	23.510	38.226	83.700	8.145	2.689	.171	.063	.105	2.701	5.729	97.647
2003 Total	22.321	22.831	38.790	83.992	7.960	2.793	.173	.062	.113	2.807	5.948	97.922
2004 Total	22.466	22.923	40.227	85.754	8.223	2.688	.178	.063	.142	3.010	6.081	100.096
2005 Total	22.797	22.565	40.303	85.709	8.161	2.703	.181	.063	.178	3.117	6.242	100.196
2006 Total	22.447	22.239	39.824	84.570	8.215	2.869	.181	.068	.264	3.267	6.649	99.497
2007 Total	22.749	23.663	39.491	85.928	8.459	2.446	.186	.076	.341	3.492	6.541	101.034
2008 Total	22.387	23.843	36.907	83.178	8.426	2.511	.192	.089	.546	3.865	7.202	98.919
2009 Total	19.691	23.416	34.959	78.042	8.355	2.669	.200	.098	.721	3.950	7.638	94.152
2010 Total	20.834	24.575	35.489	80.891	8.434	2.539	.208	.126	.923	4.285	8.081	97.496
2011 Total	19.658	24.955	34.824	79.447	8.269	3.103	.212	.171	1.168	4.420	9.074	96.917
2012 January	1.491	2.817	2.846	7.156	.758	.220	.017	.017	.130	.367	.751	8.676
February	1.338	2.556	2.712	6.606	.669	.193	.016	.016	.105	.351	.681	7.966
March	1.233	2.174	2.827	6.236	.647	.247	.018	.018	.133	.370	.785	7.678
April	1.112	1.995	2.748	5.861	.585	.250	.017	.018	.121	.354	.761	7.220
May	1.329	1.914	2.898	6.142	.651	.273	.018	.020	.119	.373	.803	7.610
June	1.498	1.908	2.856	6.262	.683	.254	.017	.020	.114	.367	.772	7.731
July	1.790	2.114	2.899	6.803	.724	.252	.018	.021	.084	.369	.744	8.290
August	1.718	2.052	2.994	6.764	.729	.219	.018	.020	.081	.380	.718	8.229
September	1.456	1.845	2.734	6.034	.676	.168	.018	.020	.084	.355	.643	7.366
October	1.403	1.941	2.908	6.249	.626	.157	.018	.020	.120	.368	.683	7.570
November	1.472	2.215	2.792	6.476	.594	.178	.018	.019	.111	.358	.684	7.767
December	1.539	2.559	2.801	6.898	.719	.219	.019	.019	.138	.369	.763	8.392
Total	17.378	26.089	34.016	77.487	8.062	2.629	.212	.227	1.340	4.379	8.786	94.496
2013 January	1.575	R 2.954	2.906	R 7.435	R .746	R .237	.019	.022	R .141	R .377	R .795	R 8.988
February	1.417	R 2.633	2.601	R 6.652	R .642	R .195	.017	.021	R .134	R .343	R .710	R 8.017
March	1.484	R 2.585	2.870	R 6.936	R .658	R .196	.019	.025	R .150	R .385	R .775	R 8.381
April	R 1.289	R 2.016	2.789	R 6.094	R .593	R .239	R .017	R .024	R .167	R .375	R .823	R 7.518
May	R 1.366	R 1.796	2.923	6.085	R .657	R .271	.018	.026	.155	R .391	R .861	7.616
June	R 1.567	R 1.786	2.833	6.182	R .694	R .261	R .017	R .026	.131	R .391	R .827	7.718
July	1.726	R 1.975	3.002	R 6.701	R .737	R .260	R .018	.027	.106	R .403	R .813	R 8.267
August	R 1.704	R 1.976	2.981	R 6.659	R .745	R .206	R .018	.028	R .092	R .397	R .741	R 8.163
September	1.523	R 1.811	2.898	R 6.231	R .688	R .162	.018	.027	.111	R .385	R .703	R 7.635
October	R 1.404	1.913	2.986	6.303	R .660	R .164	R .018	.028	R .130	R .405	R .745	7.721
November	R 1.396	R 2.377	2.912	R 6.683	R .679	R .169	R .017	R .026	.151	R .396	R .758	R 8.134
December	R 1.619	R 2.996	2.911	R 7.524	R .745	R .202	R .018	R .027	R .133	R .418	R .798	R 9.079
Total	R 18.071	R 26.819	34.613	R 79.485	R 8.244	R 2.562	R .214	R .305	R 1.601	R 4.666	R 9.349	R 97.238
2014 January	R 1.738	R 3.312	2.921	R 7.969	R .763	.206	.019	.029	R .172	R .394	R .820	R 9.566
February	R 1.594	R 2.831	2.652	R 7.075	R .655	.166	.017	R .028	.133	R .361	R .706	R 8.445
March	R 1.520	R 2.645	R 2.870	R 7.034	R .652	.231	R .019	R .035	.169	R .393	R .847	R 8.544
April	R 1.237	R 2.024	R 2.827	R 6.087	R .589	.239	.018	.036	R .179	R .387	R .859	R 7.545
May	R 1.352	R 1.874	2.890	6.113	R .658	.252	.019	.039	.148	R .404	R .862	R 7.647
June	R 1.556	R 1.809	R 2.838	R 6.203	R .712	.246	.018	.040	R .150	R .400	R .854	R 7.782
July	R 1.694	R 1.947	R 2.988	R 6.628	R .752	.231	R .019	.039	.115	R .413	R .818	R 8.213
August	1.689	R 2.004	2.991	R 6.681	R .743	R .189	R .019	.040	.097	R .412	R .756	R 8.198
September	1.452	R 1.875	R 2.870	R 6.195	R .706	R .152	.018	.039	R .110	R .391	R .709	R 7.626
October	1.305	R 1.980	R 3.051	R 6.335	R .652	R .163	R .019	R .037	R .139	R .408	R .766	R 7.767
November	1.363	R 2.440	2.873	R 6.674	R .681	R .179	R .019	.034	R .182	R .400	R .813	R 8.184
December	1.423	2.771	3.012	7.203	.767	.214	.019	.031	.140	.420	.824	8.809
Total	17.923	27.513	34.783	80.197	8.329	2.469	.222	.427	1.734	4.782	9.634	98.324

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

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

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

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

^e Conventional hydroelectric power.

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

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

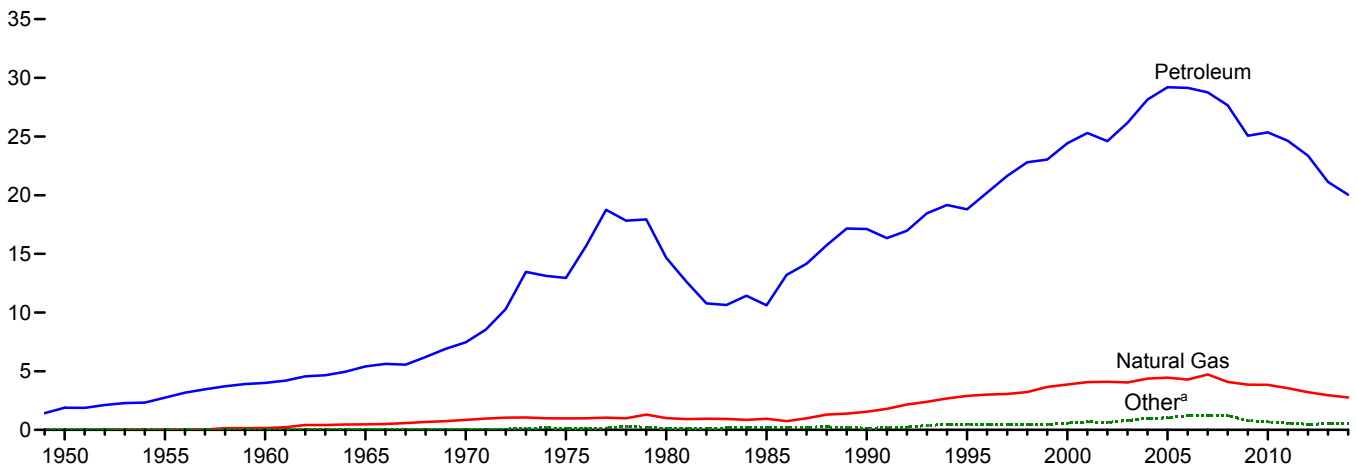
Notes: • See "Primary Energy Consumption" in Glossary.

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

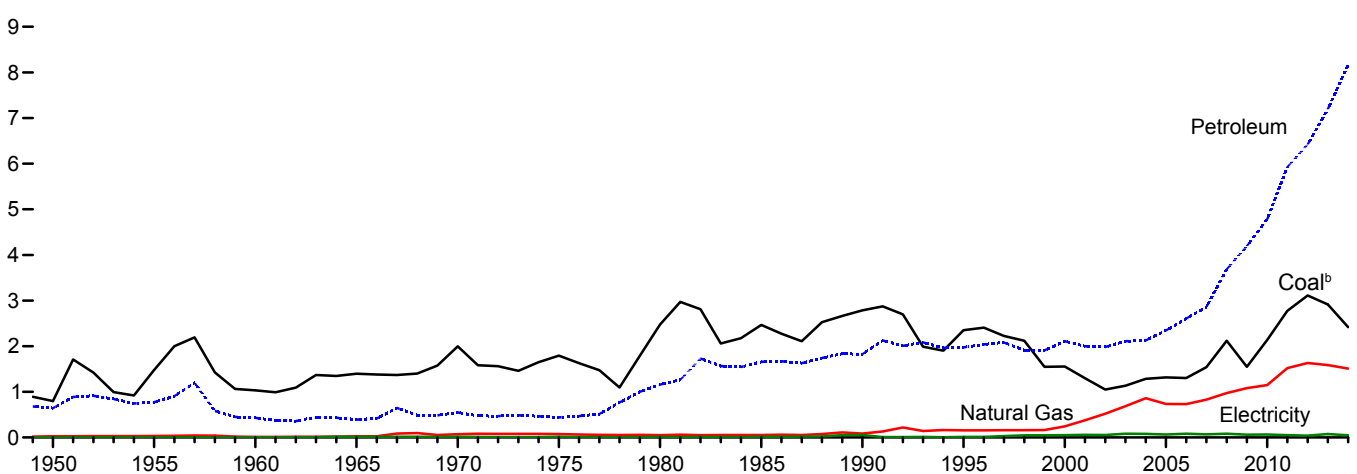
Sources: See end of section.

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

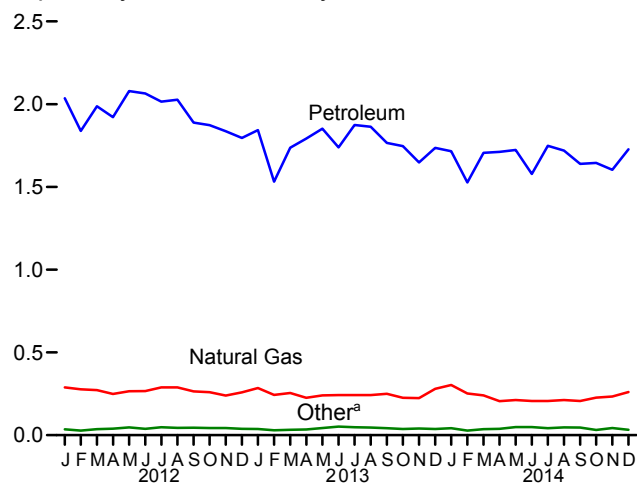
Imports by Source, 1949–2014



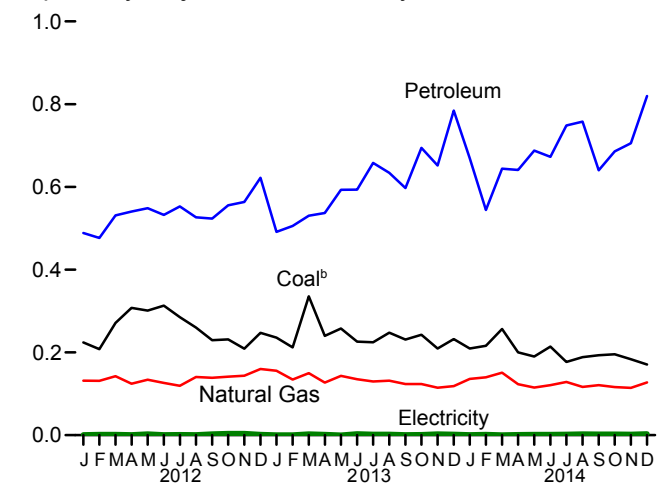
Exports by Source, 1949–2014



Imports by Source, Monthly



Exports by Major Source, Monthly

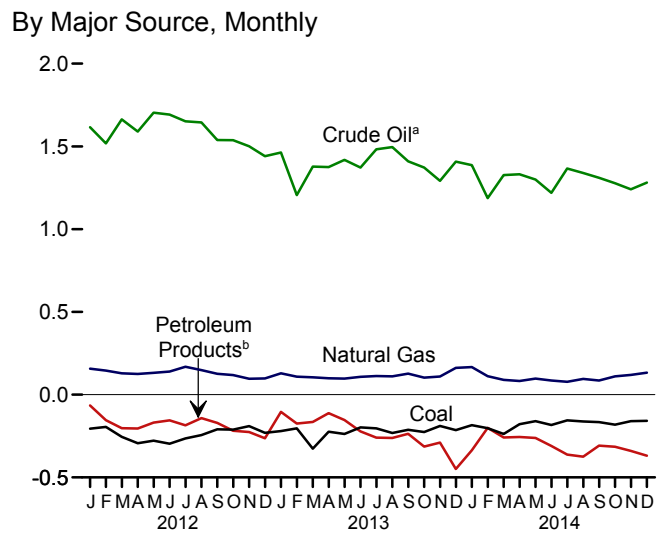
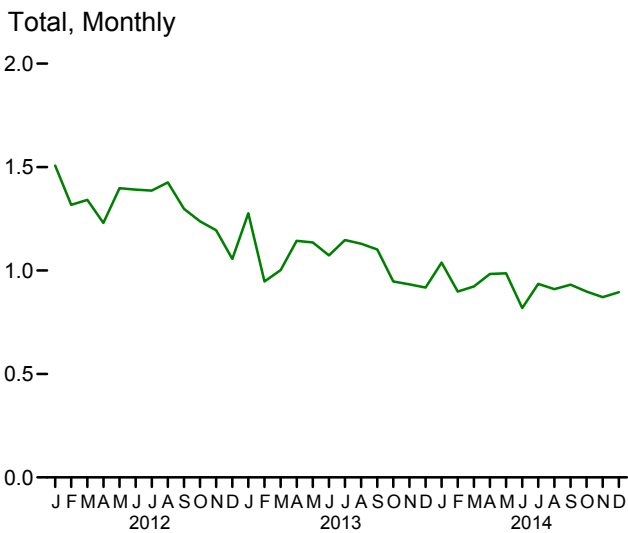
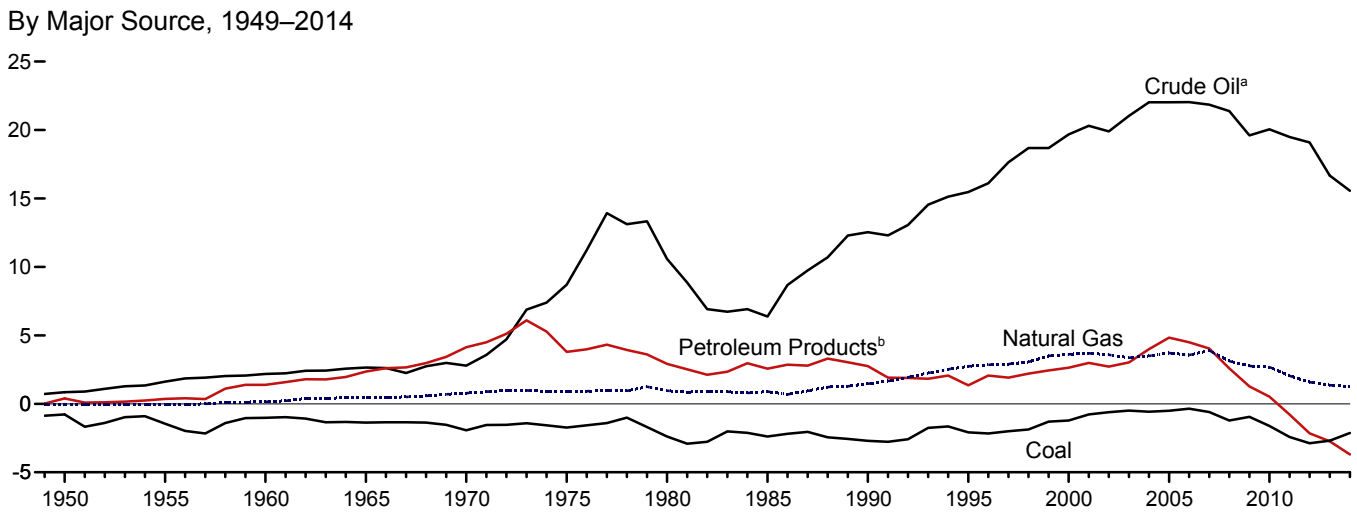
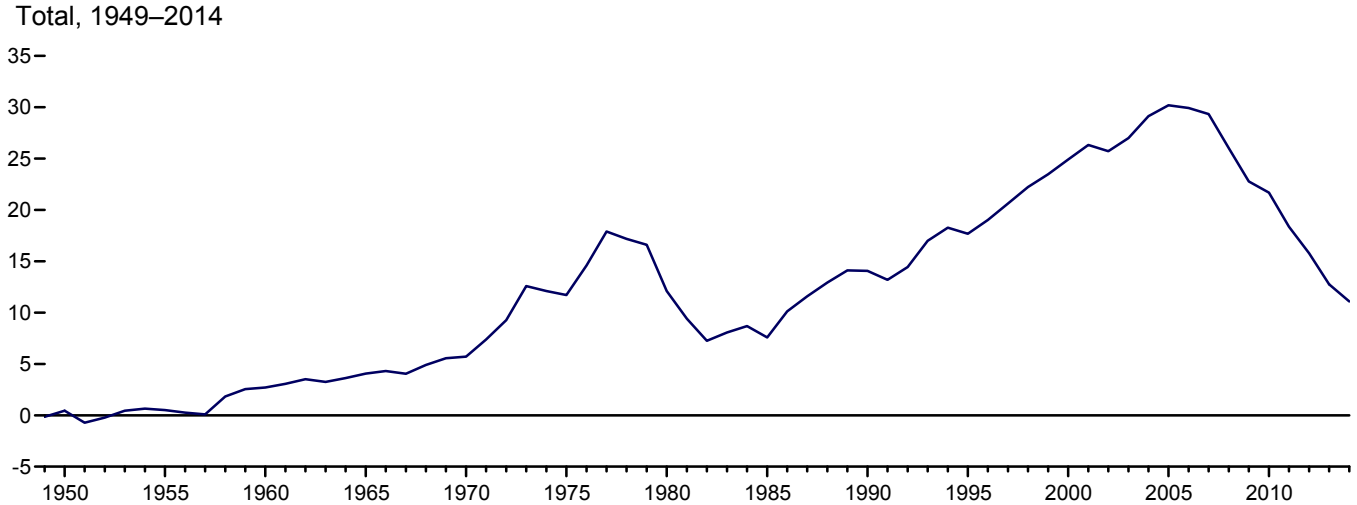


^a Coal, coal coke, biofuels, and electricity.

^b Includes coal coke.

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

Figure 1.4b Primary Energy Net Imports
(Quadrillion Btu)



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

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

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

	Imports								
	Coal	Coal Coke	Natural Gas	Petroleum			Biofuels ^c	Electricity	Total
				Crude Oil ^a	Petroleum Products ^b	Total			
1950 Total	0.009	0.011	0.000	1.056	0.830	1.886	NA	0.007	1.913
1955 Total .....	.008	.003	.011	1.691	1.061	2.752	NA	.016	2.790
1960 Total .....	.007	.003	.161	2.196	1.802	3.999	NA	.018	4.188
1965 Total .....	.005	.002	.471	2.654	2.748	5.402	NA	.012	5.892
1970 Total .....	.001	.004	.846	2.814	4.656	7.470	NA	.021	8.342
1975 Total .....	.024	.045	.978	8.721	4.227	12.948	NA	.038	14.032
1980 Total .....	.030	.016	1.006	11.195	3.463	14.658	NA	.085	15.796
1985 Total .....	.049	.014	.952	6.814	3.796	10.609	NA	.157	11.781
1990 Total .....	.067	.019	1.551	12.766	4.351	17.117	NA	.063	18.817
1995 Total .....	.237	.095	2.901	15.669	3.131	18.800	.001	.146	22.180
2000 Total .....	.313	.094	3.869	19.783	4.641	24.424	(s)	.166	28.865
2001 Total .....	.495	.063	4.068	20.348	4.946	25.294	.002	.131	30.052
2002 Total .....	.422	.080	4.104	19.920	4.677	24.597	.002	.125	29.331
2003 Total .....	.626	.068	4.042	21.060	5.105	26.165	.002	.104	31.007
2004 Total .....	.682	.170	4.365	22.082	6.063	28.145	.013	.117	33.492
2005 Total .....	.762	.088	4.450	22.091	7.108	29.198	.012	.150	34.659
2006 Total .....	.906	.101	4.291	22.085	7.054	29.139	.066	.146	34.649
2007 Total .....	.909	.061	4.723	21.914	6.842	28.756	.055	.175	34.679
2008 Total .....	.855	.089	4.084	21.448	6.214	27.662	.085	.195	32.970
2009 Total .....	.566	.009	3.845	19.699	5.367	25.066	.027	.178	29.690
2010 Total .....	.484	.030	3.834	20.140	5.219	25.359	.004	.154	29.866
2011 Total .....	.327	.035	3.555	19.595	5.038	24.633	.019	.178	28.748
2012 January .....	.018	.003	.288	1.630	.406	2.036	(s)	.014	2.360
February .....	.012	.002	.277	1.531	.307	1.838	(s)	.012	2.142
March .....	.016	.004	.272	1.676	.311	1.988	.002	.014	2.295
April .....	.014	.007	.249	1.597	.325	1.922	.001	.017	2.210
May .....	.023	.004	.265	1.718	.361	2.079	.002	.019	2.391
June .....	.017	.001	.266	1.700	.364	2.065	.004	.018	2.370
July .....	.021	.001	.288	1.665	.351	2.016	.004	.023	2.353
August .....	.015	.001	.288	1.656	.371	2.027	.007	.022	2.360
September .....	.020	.002	.264	1.550	.338	1.888	.007	.017	2.198
October .....	.020	.001	.260	1.549	.323	1.873	.007	.015	2.175
November .....	.018	.001	.240	1.513	.323	1.836	.007	.016	2.119
December .....	.017	.002	.258	1.453	.342	1.795	.005	.015	2.092
Total .....	.212	.028	3.216	19.239	4.122	23.361	.045	.202	27.065
2013 January .....	.015	(s)	.285	1.482	.361	1.843	.003	R .019	R 2.165
February .....	.009	.001	.243	1.227	.304	1.531	.001	R .018	R 1.804
March .....	.009	(s)	.254	1.397	.340	1.737	.006	R .019	R 2.026
April .....	.016	(s)	.226	1.399	.393	1.792	.003	R .017	R 2.054
May .....	.020	.001	.240	1.442	.410	1.852	.004	R .020	R 2.137
June .....	.028	(s)	.243	1.394	.345	1.739	.007	.020	2.037
July .....	.020	(s)	.242	1.501	.373	1.874	.007	R .023	2.166
August .....	.017	.001	.242	1.509	.354	1.863	.008	R .023	R 2.153
September .....	.019	(s)	.250	1.429	.337	1.766	.008	R .019	R 2.062
October .....	.017	(s)	.226	1.393	.353	1.746	.008	R .019	R 2.015
November .....	.020	(s)	.224	1.336	.313	1.648	.010	R .020	R 1.922
December .....	.018	(s)	.280	1.448	.288	1.736	.010	R .019	R 2.063
Total .....	.208	.003	2.955	16.957	4.170	21.127	.075	R .235	R 24.603
2014 January .....	.025	(s)	.303	R 1.431	R .285	R 1.715	.001	.017	R 2.061
February .....	.014	(s)	.252	R 1.227	R .300	R 1.527	.001	.014	R 1.806
March .....	.019	(s)	.240	R 1.370	R .335	R 1.705	.002	.017	R 1.983
April .....	.022	(s)	.206	R 1.378	R .333	R 1.711	.002	.015	R 1.956
May .....	.030	(s)	.212	R 1.352	R .372	R 1.724	.005	.017	R 1.987
June .....	.031	.001	.207	R 1.288	R .290	R 1.578	.002	.017	R 1.835
July .....	.022	(s)	.206	R 1.438	R .310	R 1.748	.003	.020	R 1.999
August .....	.026	(s)	.212	R 1.410	R .310	R 1.720	.003	.021	R 1.982
September .....	.027	(s)	.207	R 1.371	R .269	R 1.640	.002	.019	R 1.894
October .....	.014	.001	.226	R 1.345	R .300	R 1.645	.003	.017	R 1.905
November .....	.023	(s)	.233	R 1.328	R .275	R 1.603	.005	.019	R 1.884
December .....	.013	(s)	.260	1.360	.367	1.727	.004	.019	2.023
Total .....	.264	.002	2.763	16.298	3.745	20.043	.033	.210	R 23.315

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

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

^c Fuel ethanol (minus denaturant) and biodiesel.

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

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

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

Web 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: See end of section.

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

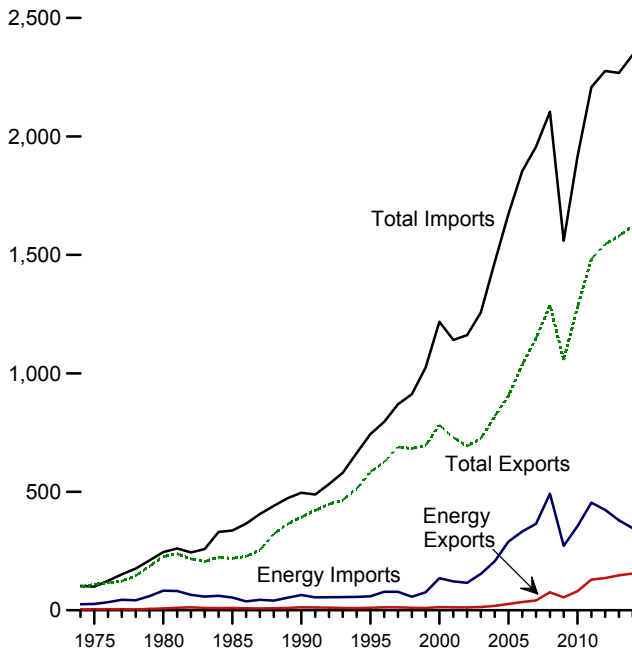
	Exports									Net Imports ^a
	Coal	Coal Coke	Natural Gas	Petroleum			Biofuels ^d	Electricity	Total	
				Crude Oil ^b	Petroleum Products ^c	Total				
1950 Total	0.786	0.010	0.027	0.202	0.440	0.642	NA	0.001	1.465	0.448
1955 Total	1.465	.013	.032	.067	.707	.774	NA	.002	2.286	.504
1960 Total	1.023	.009	.012	.018	.413	.431	NA	.003	1.477	2.710
1965 Total	1.376	.021	.027	.006	.386	.392	NA	.013	1.829	4.063
1970 Total	1.936	.061	.072	.029	.520	.549	NA	.014	2.632	5.709
1975 Total	1.761	.032	.074	.012	.427	.439	NA	.017	2.323	11.709
1980 Total	2.421	.051	.049	.609	.551	1.160	NA	.014	3.695	12.101
1985 Total	2.438	.028	.056	.432	1.225	1.657	NA	.017	4.196	7.584
1990 Total	2.772	.014	.087	.230	1.594	1.824	NA	.055	4.752	14.065
1995 Total	2.318	.034	.156	.200	1.776	1.976	NA	.012	4.496	17.684
2000 Total	1.528	.028	.245	.106	2.003	2.110	NA	.051	3.962	24.904
2001 Total	1.265	.033	.377	.043	1.956	1.999	(s)	.056	3.731	26.321
2002 Total	1.032	.020	.520	.019	1.963	1.982	(s)	.054	3.608	25.722
2003 Total	1.117	.018	.686	.026	2.083	2.110	.001	.082	4.013	26.994
2004 Total	1.253	.033	.862	.057	2.068	2.125	.001	.078	4.351	29.141
2005 Total	1.273	.043	.735	.067	2.276	2.344	.001	.065	4.462	30.197
2006 Total	1.264	.040	.730	.052	2.554	2.606	.005	.083	4.727	29.921
2007 Total	1.507	.036	.830	.058	2.803	2.861	.036	.069	5.338	29.341
2008 Total	2.071	.049	.972	.061	3.626	3.686	.089	.083	6.949	26.021
2009 Total	1.515	.032	1.082	.093	4.101	4.194	.035	.062	6.920	22.770
2010 Total	2.101	.036	1.147	.088	4.691	4.780	.047	.065	8.176	21.690
2011 Total	2.751	.024	1.519	.100	5.829	5.929	.108	.051	10.382	18.366
2012 January .....	.224	.001	.132	.014	.471	.485	.008	.003	.853	1.507
February .....	.208	.002	.131	.012	.461	.474	.007	.003	.824	1.317
March .....	.271	.002	.142	.013	.514	.527	.008	.004	.954	1.341
April .....	.308	.001	.124	.007	.529	.536	.007	.004	.981	1.230
May .....	.301	.003	.134	.015	.530	.545	.007	.004	.993	1.398
June .....	.313	.001	.126	.008	.520	.528	.007	.004	.979	1.391
July .....	.285	.001	.119	.014	.536	.549	.008	.003	.967	1.386
August .....	.260	.001	.141	.011	.513	.524	.006	.003	.934	1.425
September .....	.229	.003	.139	.012	.509	.520	.006	.003	.900	1.298
October .....	.231	.004	.141	.012	.541	.553	.006	.003	.938	1.238
November .....	.209	.004	.144	.013	.548	.561	.004	.003	.924	1.194
December .....	.247	.002	.160	.013	.606	.618	.005	.004	1.036	1.056
Total	3.087	.024	1.633	.143	6.277	6.420	.078	.041	11.284	15.781
2013 January .....	.236	.001	.156	.020	.465	.484	.005	R .007	R .889	R 1.277
February .....	.212	.001	.134	.021	.479	.500	.004	R .005	R .856	R .947
March .....	.336	.003	.150	.019	.505	.524	.005	R .006	R 1.024	R 1.002
April .....	.240	.002	.127	.024	.505	.529	.005	R .008	R .911	R 1.143
May .....	.258	(s)	.143	.023	.563	.587	.006	R .006	R 1.001	R 1.136
June .....	.226	.003	.135	.022	.567	.588	.006	R .005	R .964	R 1.073
July .....	.225	.002	.130	.019	.632	.651	.005	R .007	R 1.019	R 1.147
August .....	.248	.002	.131	.013	.615	.628	.008	R .006	R 1.023	R 1.130
September .....	.231	.001	.124	.018	.574	.592	.007	R .005	R .960	R 1.102
October .....	.242	.001	.124	.021	.666	.688	.006	R .006	R 1.068	R .947
November .....	.209	.003	.115	.044	.602	.646	.010	R .006	R .988	R .933
December .....	.232	.002	.118	.040	.738	.777	.008	R .007	R 1.145	R .918
Total	2.895	.021	1.587	.284	6.911	7.195	.076	R .075	R 11.849	R 12.754
2014 January .....	.210	.001	.136	.044	R .621	R .665	.008	.004	R 1.024	R 1.038
February .....	.216	.002	.140	.039	R .501	R .540	.006	.004	R .908	R .898
March .....	.257	.001	.151	.044	R .593	R .638	.008	.007	R 1.060	R .923
April .....	.200	.001	.123	.047	R .590	R .636	.007	.005	R .972	R .984
May .....	.190	.002	.115	.052	R .633	R .685	.005	.003	R 1.000	R .987
June .....	.214	.002	.121	.069	R .600	R .669	.006	.004	R 1.016	R .819
July .....	.177	.002	.128	.072	R .673	R .745	.007	.004	R 1.063	R .936
August .....	.189	.003	.116	.070	R .685	R .755	.006	.003	R 1.072	R .910
September .....	.193	.003	.121	.061	R .577	R .638	.005	.003	R .962	R .931
October .....	.195	.002	.116	.068	R .615	R .682	.007	.003	R 1.006	R .899
November .....	.184	.002	.114	.087	R .615	R .702	.008	.003	R 1.013	R .871
December .....	.171	.003	.127	.079	.736	.816	.007	.004	1.127	.896
Total	2.395	.023	1.509	.732	7.438	8.170	.081	.046	12.224	11.091

a Net imports equal imports minus exports.
b Crude oil and lease condensate.
c Petroleum products, unfinished oils, pentanes plus, and gasoline blending components. Does not include biofuels.
d Through 2010, data are for biodiesel only. Beginning in 2011, data are for fuel ethanol (minus denaturant) and biodiesel.
R=Revised. NA=Not available. (s)=Less than 0.5 trillion Btu.

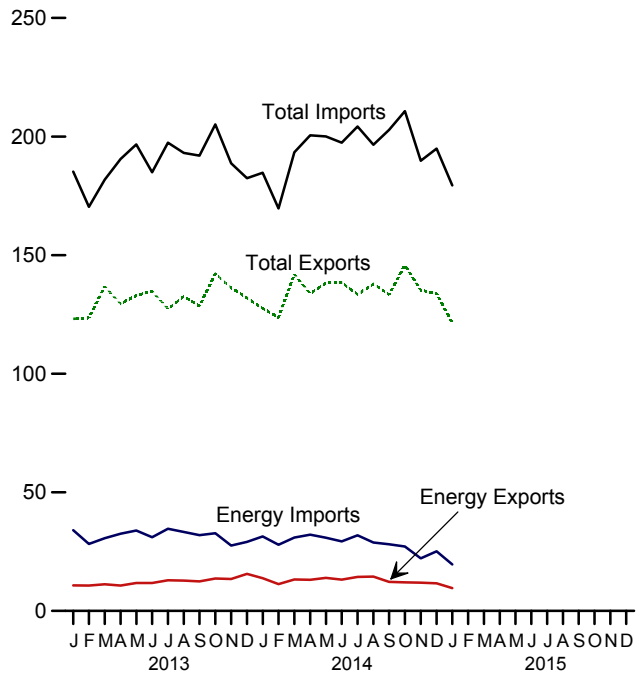
Notes: • See "Primary Energy" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.
Sources: See end of section.

Figure 1.5 Merchandise Trade Value
(Billion Dollars^a)

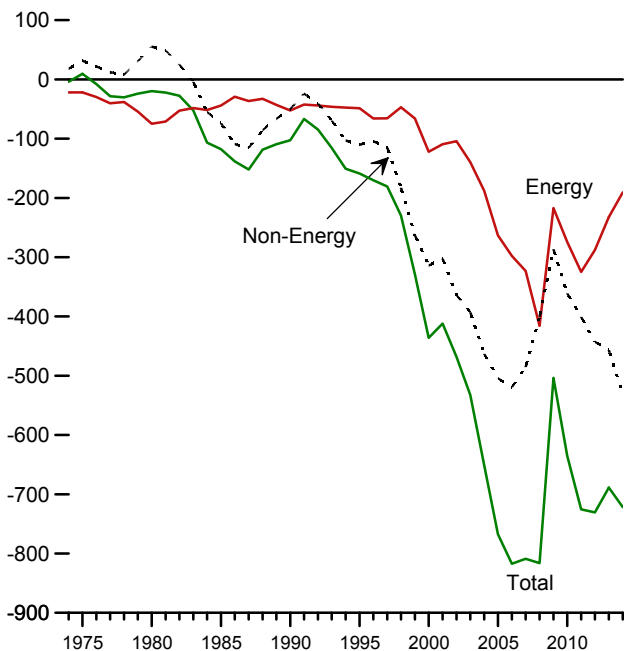
Imports and Exports, 1974–2014



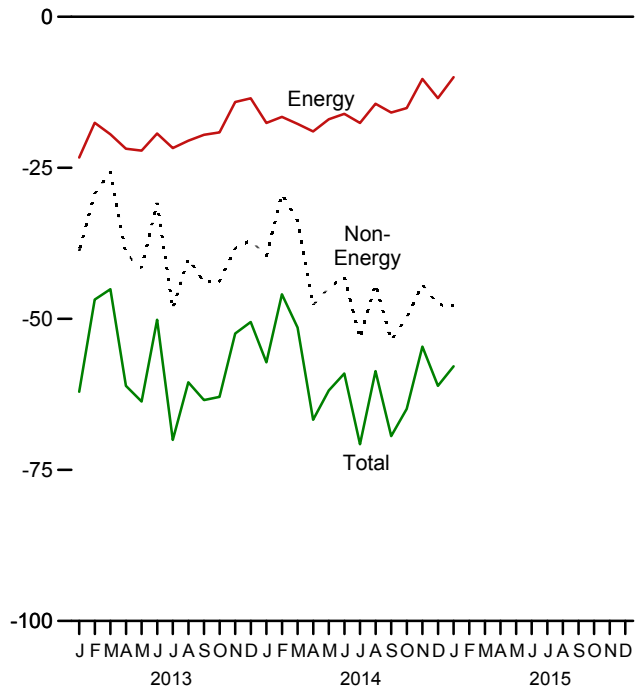
Imports and Exports, Monthly



Trade Balance, 1974–2014



Trade Balance, Monthly



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

Table 1.5 Merchandise Trade Value
(Million Dollars^a)

	Petroleum ^b			Energy ^c			Non-Energy Balance	Total Merchandise		
	Exports	Imports	Balance	Exports	Imports	Balance		Exports	Imports	Balance
1974 Total	792	24,668	-23,876	3,444	25,454	-22,010	18,126	99,437	103,321	-3,884
1975 Total	907	25,197	-24,289	4,470	26,476	-22,006	31,557	108,856	99,305	9,551
1980 Total	2,833	78,637	-75,803	7,982	82,924	-74,942	55,246	225,566	245,262	-19,696
1985 Total	4,707	50,475	-45,768	9,971	53,917	-43,946	-73,765	218,815	336,526	-117,712
1990 Total	6,901	61,583	-54,682	12,233	64,661	-52,428	-50,068	393,592	496,088	-102,496
1995 Total	6,321	54,368	-48,047	10,358	59,109	-48,751	-110,050	584,742	743,543	-158,801
2000 Total	10,192	119,251	-109,059	13,179	135,367	-122,188	-313,916	781,918	1,218,022	-436,104
2001 Total	8,868	102,747	-93,879	12,494	121,923	-109,429	-302,470	729,100	1,140,999	-411,899
2002 Total	8,569	102,660	-94,094	11,541	115,748	-104,207	-364,056	693,103	1,161,366	-468,263
2003 Total	10,209	132,433	-122,224	13,768	153,298	-139,530	-392,820	724,771	1,257,121	-532,350
2004 Total	13,130	179,266	-166,136	18,642	206,660	-188,018	-462,912	818,775	1,469,704	-650,930
2005 Total	19,155	250,068	-230,913	26,488	289,723	-263,235	-504,242	905,978	1,673,455	-767,477
2006 Total	28,171	299,714	-271,543	34,711	332,500	-297,789	-519,515	1,036,635	1,853,938	-817,304
2007 Total	33,293	327,620	-294,327	41,725	364,987	-323,262	-485,501	1,148,199	1,956,962	-808,763
2008 Total	61,695	449,847	-388,152	76,075	491,885	-415,810	-400,389	1,287,442	2,103,641	-816,199
2009 Total	44,509	251,833	-207,324	54,536	271,739	-217,203	-286,379	1,056,043	1,559,625	-503,582
2010 Total	64,753	333,472	-268,719	80,625	354,982	-274,357	-361,005	1,278,495	1,913,857	-635,362
2011 Total	^b 102,180	^b 431,866	^b -329,686	128,989	453,839	-324,850	-400,597	1,482,508	2,207,954	-725,447
2012 January	8,363	36,539	-28,176	10,587	38,155	-27,568	-38,118	117,847	183,533	-65,686
February	8,370	30,763	-22,393	10,207	32,047	-21,840	-26,377	123,613	171,829	-48,217
March	9,570	37,642	-28,072	11,782	38,866	-27,084	-30,012	140,254	197,350	-57,096
April	9,659	37,735	-28,076	11,972	38,898	-26,926	-35,126	127,416	189,468	-62,052
May	9,222	37,467	-28,245	11,312	38,638	-27,326	-39,852	131,232	198,411	-67,178
June	8,874	34,680	-25,806	11,019	35,804	-24,785	-34,427	132,577	191,788	-59,212
July	8,798	33,509	-24,711	10,871	34,833	-23,962	-47,478	121,400	192,840	-71,440
August	8,866	34,484	-25,618	10,790	35,700	-24,910	-41,465	128,585	194,960	-66,375
September	9,485	32,275	-22,790	11,295	33,345	-22,050	-35,381	128,254	185,686	-57,431
October	9,759	33,940	-24,181	11,589	35,193	-23,604	-41,537	133,627	198,768	-65,141
November	9,932	31,185	-21,253	11,609	32,619	-21,010	-43,375	130,170	194,555	-64,385
December	11,052	28,290	-17,238	12,999	29,764	-16,765	-29,621	130,728	177,114	-46,386
Total	111,949	408,509	-296,560	136,032	423,860	-287,828	-442,771	1,545,703	2,276,302	-730,599
2013 January	8,786	32,448	-23,662	10,756	34,049	-23,293	-38,767	123,130	185,190	-62,060
February	9,028	26,828	-17,800	10,724	28,256	-17,532	-29,290	123,536	170,358	-46,822
March	8,909	29,265	-20,356	11,234	30,687	-19,453	-25,640	136,762	181,855	-45,093
April	8,593	31,204	-22,611	10,677	32,518	-21,841	-39,255	129,465	190,561	-61,096
May	9,684	32,590	-22,906	11,766	33,916	-22,150	-41,529	133,007	196,686	-63,679
June	9,845	29,678	-19,833	11,739	31,052	-19,313	-30,822	134,830	184,965	-50,135
July	10,874	33,328	-22,454	12,887	34,626	-21,739	-48,287	127,358	197,384	-70,026
August	10,796	32,053	-21,257	12,784	33,283	-20,499	-40,007	132,604	193,110	-60,506
September	10,468	30,747	-20,279	12,436	31,956	-19,520	-43,933	128,515	191,968	-63,453
October	11,518	31,590	-20,072	13,641	32,780	-19,139	-43,777	142,182	205,098	-62,916
November	11,403	26,227	-14,824	13,466	27,560	-14,094	-38,338	136,249	188,681	-52,432
December	13,466	27,195	-13,729	15,584	29,086	-13,502	-37,007	131,956	182,465	-50,509
Total	123,368	363,152	-239,784	147,693	379,770	-232,077	-456,651	1,579,593	2,268,321	-688,728
2014 January	11,565	29,460	-17,895	13,806	31,377	-17,571	-39,622	127,508	184,701	-57,193
February	8,967	25,663	-16,696	11,303	27,879	-16,576	-29,361	123,728	169,665	-45,937
March	10,411	29,001	-18,590	13,229	30,959	-17,730	-33,711	141,905	193,346	-51,441
April	10,371	30,513	-20,142	13,131	32,119	-18,988	-47,712	133,817	200,517	-66,700
May	11,444	29,206	-17,762	13,900	30,872	-16,972	-44,880	138,225	200,077	-61,852
June	11,042	27,667	-16,625	13,218	29,278	-16,060	-42,986	138,400	197,446	-59,046
July	12,144	30,427	-18,283	14,319	31,895	-17,576	-53,186	133,491	204,253	-70,762
August	12,389	27,569	-15,180	14,467	28,859	-14,392	-44,265	137,878	196,536	-58,657
September	10,096	26,812	-16,716	12,256	28,113	-15,857	-53,532	133,425	202,814	-69,389
October	9,889	25,888	-15,999	12,066	27,165	-15,099	-49,808	145,829	210,736	-64,907
November	10,160	20,743	-10,583	11,878	22,156	-10,278	-44,325	135,191	189,794	-54,603
December	9,897	23,803	-13,906	11,669	25,132	^R -13,462	^R -47,625	^R 133,800	^R 194,888	^R -61,088
Total	128,373	326,752	-198,379	155,242	345,802	-190,560	^R-531,017	^R1,623,197	^R2,344,774	^R-721,577
2015 January	7,939	18,094	-10,155	9,622	19,614	-9,992	-47,873	121,547	179,412	-57,865

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

^b Through 2010, data are for crude oil, petroleum preparations, liquefied propane and butane, and other mineral fuels. Beginning in 2011, data are for petroleum products and preparations.

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

^R=Revised.

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

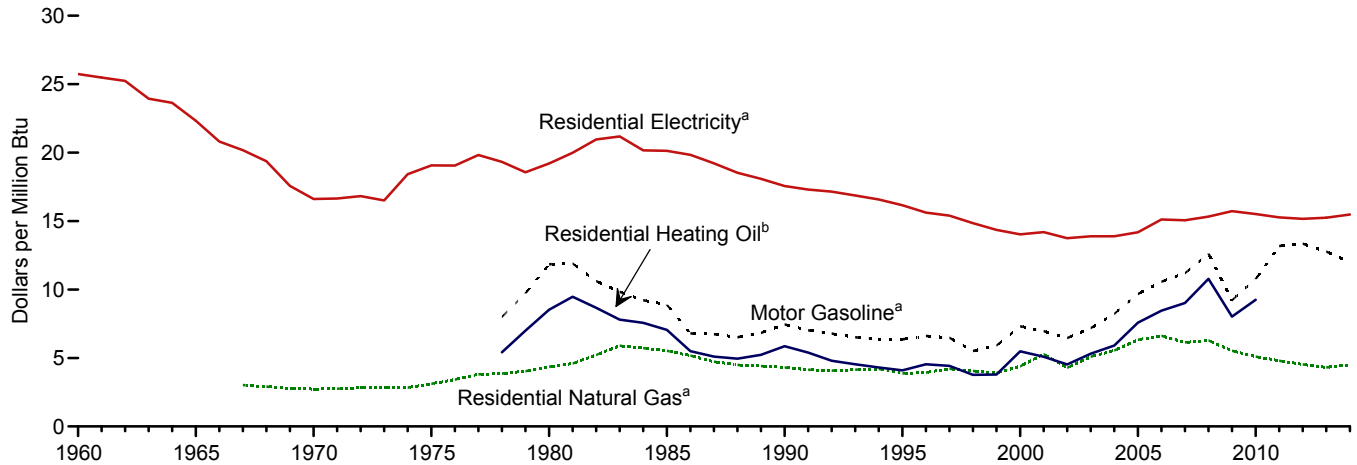
components due to independent rounding. • The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory, which comprises the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual and monthly data beginning in 1974.

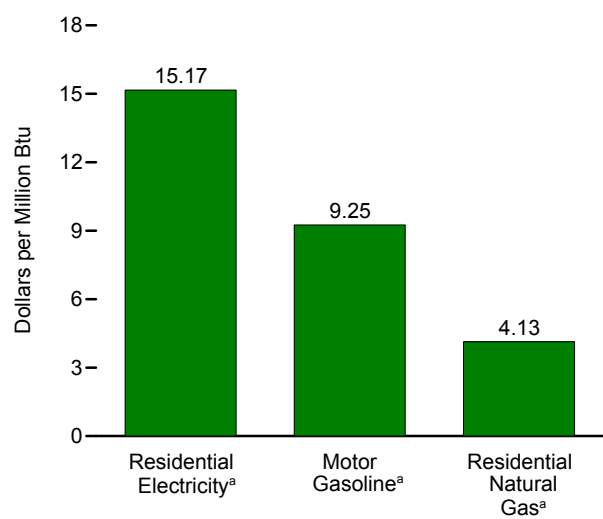
Sources: See end of section.

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

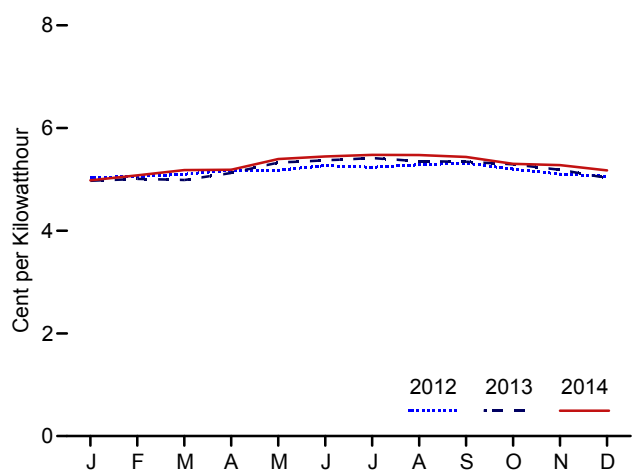
Costs, 1960–2014



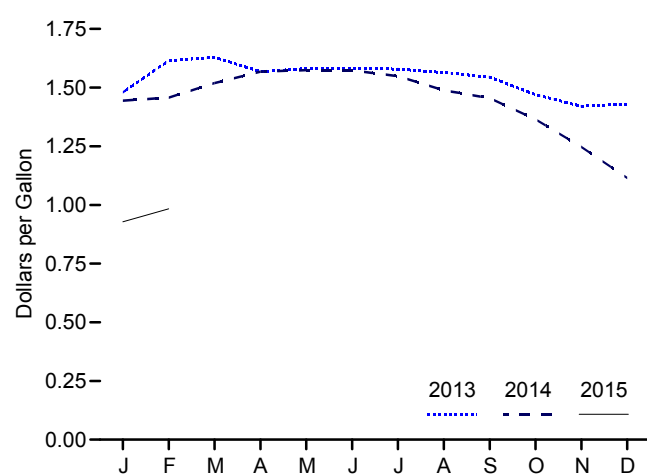
Costs, December 2014



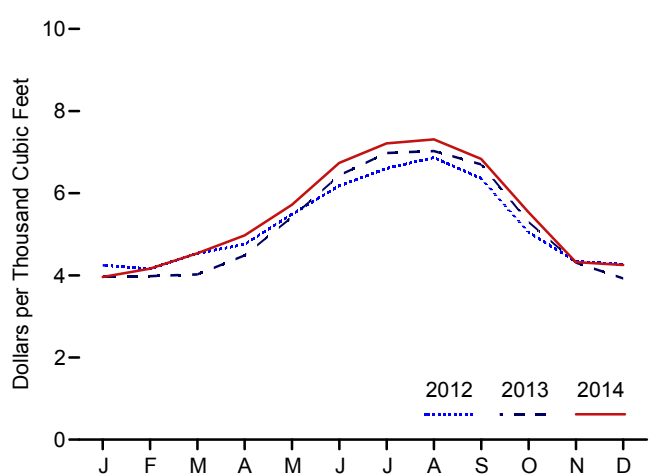
Residential Electricity,^a Monthly



Motor Gasoline,^a Monthly



Residential Natural Gas,^a Monthly



^a Includes taxes.

^b 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 ^a	Motor Gasoline ^b		Residential Heating Oil ^c		Residential Natural Gas ^b		Residential Electricity ^b	
	Index 1982–1984=100	Dollars per Gallon	Dollars per Million Btu	Dollars per Gallon	Dollars per Million Btu	Dollars per Thousand Cubic Feet	Dollars per Million Btu	Cents per Kilowatt-hour	Dollars per Million Btu
1960 Average	29.6	NA	NA	NA	NA	NA	NA	8.8	25.74
1965 Average	31.5	NA	NA	NA	NA	NA	NA	7.6	22.33
1970 Average	38.8	NA	NA	NA	NA	2.81	2.72	5.7	16.62
1975 Average	53.8	NA	NA	NA	NA	3.18	3.12	6.5	19.07
1980 Average	82.4	1.482	11.85	1.182	8.52	4.47	4.36	6.6	19.21
1985 Average	107.6	1.112	8.89	0.979	7.06	5.69	5.52	6.87	20.13
1990 Average	130.7	0.931	7.44	0.813	5.86	4.44	4.31	5.99	17.56
1995 Average	152.4	0.791	6.36	0.569	4.10	3.98	3.87	5.51	16.15
2000 Average	172.2	0.908	7.31	0.761	5.49	4.51	4.39	4.79	14.02
2001 Average	177.1	0.864	6.96	0.706	5.09	5.44	5.28	4.84	14.20
2002 Average	179.9	0.801	6.46	0.628	4.52	4.39	4.28	4.69	13.75
2003 Average	184.0	0.890	7.19	0.736	5.31	5.23	5.09	4.74	13.89
2004 Average	188.9	1.018	8.22	0.819	5.91	5.69	5.55	4.74	13.89
2005 Average	195.3	1.197	9.67	1.051	7.58	6.50	6.33	4.84	14.18
2006 Average	201.6	1.307	10.58	1.173	8.46	6.81	6.63	5.16	15.12
2007 Average	207.342	1.374	11.20	1.250	9.01	6.31	6.14	5.14	15.05
2008 Average	215.303	1.541	12.62	1.495	10.78	6.45	6.28	5.23	15.33
2009 Average	214.537	1.119	9.21	1.112	8.02	5.66	5.52	5.37	15.72
2010 Average	218.056	1.301	10.76	1.283	9.25	5.22	5.11	5.29	15.51
2011 Average	224.939	1.590	13.18	NA	NA	4.90	4.80	5.21	15.27
2012 January	226.665	1.521	12.62	NA	NA	4.24	4.14	5.03	14.75
February	227.663	1.591	13.20	NA	NA	4.16	4.06	5.06	14.82
March	229.392	1.708	14.17	NA	NA	4.54	4.43	5.10	14.95
April	230.085	1.728	14.34	NA	NA	4.76	4.64	5.18	15.18
May	229.815	1.670	13.86	NA	NA	5.49	5.35	5.18	15.18
June	229.478	1.570	13.02	NA	NA	6.18	6.03	5.27	15.44
July	229.104	1.529	12.68	NA	NA	6.60	6.44	5.24	15.35
August	230.379	1.632	13.54	NA	NA	6.87	6.70	5.28	15.48
September	231.407	1.689	14.01	NA	NA	6.36	6.21	5.32	15.58
October	231.317	1.660	13.77	NA	NA	5.05	4.93	5.20	15.24
November	230.221	1.539	12.76	NA	NA	4.34	4.23	5.10	14.96
December	229.601	1.475	12.23	NA	NA	4.27	4.16	5.06	14.83
Average	229.594	1.609	13.35	NA	NA	4.64	4.53	5.17	15.17
2013 January	230.280	1.480	12.28	NA	NA	3.97	3.87	R 4.97	R 14.57
February	232.166	1.614	13.39	NA	NA	3.98	3.87	5.01	14.68
March	232.773	1.629	13.52	NA	NA	4.02	3.91	R 4.99	R 14.62
April	232.531	1.568	13.01	NA	NA	4.49	4.36	5.13	R 15.02
May	232.945	1.581	13.11	NA	NA	5.41	5.27	5.33	R 15.61
June	233.504	1.582	13.12	NA	NA	6.43	6.26	5.37	15.74
July	233.596	1.578	13.10	NA	NA	6.98	6.79	R 5.42	R 15.87
August	233.877	1.564	12.98	NA	NA	7.03	6.83	5.35	R 15.69
September	234.149	1.544	12.81	NA	NA	6.70	6.52	R 5.34	R 15.66
October	233.546	1.470	12.20	NA	NA	5.30	5.16	R 5.29	R 15.51
November	233.069	1.420	11.78	NA	NA	4.31	4.19	5.19	15.20
December	233.049	1.430	11.87	NA	NA	3.93	3.82	5.03	14.74
Average	232.957	1.538	12.76	NA	NA	4.43	4.31	5.20	15.25
2014 January	233.916	1.444	R 11.99	NA	NA	3.96	3.85	4.98	14.60
February	234.781	1.458	R 12.10	NA	NA	4.16	4.05	R 5.08	R 14.88
March	236.293	1.519	12.61	NA	NA	4.54	4.41	R 5.18	R 15.18
April	237.072	1.568	13.01	NA	NA	4.97	4.84	5.19	R 15.21
May	237.900	1.574	R 13.07	NA	NA	5.72	5.56	5.40	15.82
June	238.343	1.573	R 13.06	NA	NA	6.74	6.55	R 5.45	R 15.96
July	238.250	1.549	R 12.86	NA	NA	7.21	7.01	5.48	16.05
August	237.852	1.488	12.35	NA	NA	7.31	7.11	5.47	R 16.04
September	238.031	1.455	R 12.08	NA	NA	6.84	6.65	5.44	15.93
October	237.433	1.365	11.33	NA	NA	5.54	5.39	5.30	R 15.54
November	236.151	1.247	10.35	NA	NA	4.32	4.21	5.28	15.46
December	234.812	1.115	9.25	NA	NA	R 4.25	R 4.13	R 5.17	R 15.17
Average	236.736	1.447	R 12.01	NA	NA	R 4.63	R 4.51	R 5.28	R 15.48
2015 January	233.707	0.929	7.71	NA	NA	NA	NA	NA	NA
February	234.722	0.983	8.16	NA	NA	NA	NA	NA	NA

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

^b Includes taxes.

^c Excludes taxes.

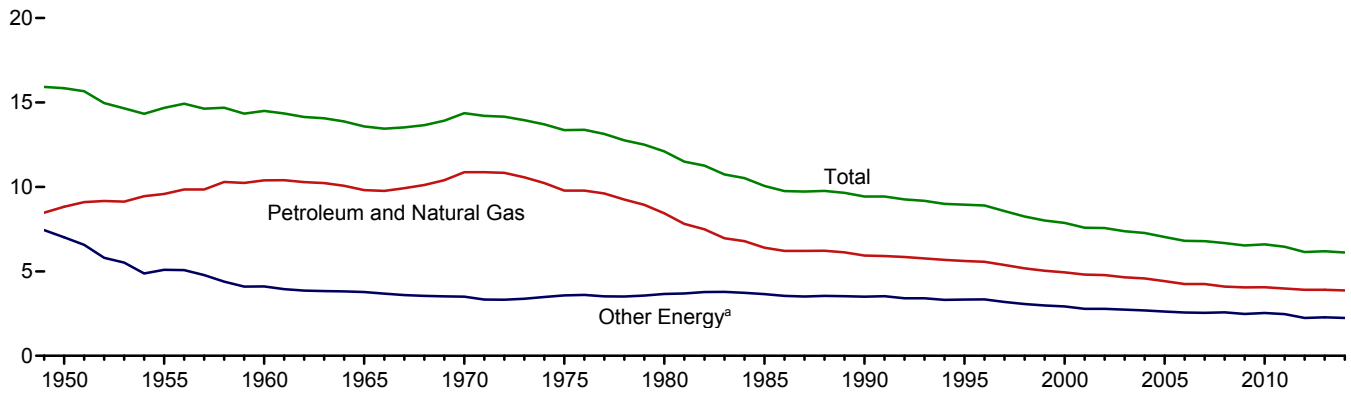
R=Revised. NA=Not available.

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

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

Figure 1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product, 1949–2014
(Thousand Btu per Chained (2009) Dollar)



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

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

	Energy Consumption			Gross Domestic Product (GDP)	Energy Consumption per Real Dollar of GDP		
	Petroleum and Natural Gas	Other Energy ^a	Total		Petroleum and Natural Gas	Other Energy ^a	Total
	Quadrillion Btu				Billion Chained (2009) Dollars	Thousand Btu per Chained (2009) Dollar	
1950	19.284	15.332	34.616	2,184.0	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	57.112	33.920	91.032	10,174.8	5.61	3.33	8.95
2000	62.090	36.729	98.819	12,559.7	4.94	2.92	7.87
2001	60.962	35.210	96.172	12,682.2	4.81	2.78	7.58
2002	61.736	35.911	97.647	12,908.8	4.78	2.78	7.56
2003	61.620	36.301	97.922	13,271.1	4.64	2.74	7.38
2004	63.150	36.946	100.096	13,773.5	4.58	2.68	7.27
2005	62.868	37.328	100.196	14,234.2	4.42	2.62	7.04
2006	62.062	37.435	99.497	14,613.8	4.25	2.56	6.81
2007	63.154	37.881	101.034	14,873.7	4.25	2.55	6.79
2008	60.750	38.169	98.919	14,830.4	4.10	2.57	6.67
2009	58.375	35.777	94.152	14,418.7	4.05	2.48	6.53
2010	60.064	37.432	97.496	14,783.8	4.06	2.53	6.59
2011	59.778	37.139	96.917	15,020.6	3.98	2.47	6.45
2012	60.105	34.392	94.496	15,369.2	3.91	2.24	6.15
2013	^R 61.432	^R 35.806	^R 97.238	15,710.3	3.91	2.28	6.19
2014	62.296	36.028	98.324	16,085.3	3.87	2.24	6.11

^a Coal, coal coke net imports, nuclear electric power, renewable energy, and electricity net imports.

R=Revised.

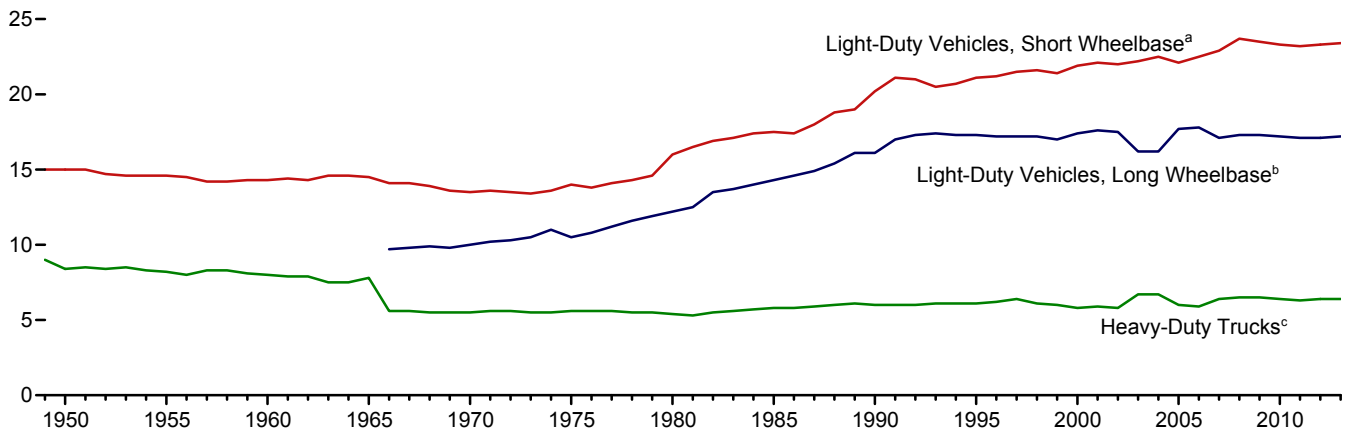
Notes: • See "Primary Energy Consumption" and "Real Dollars" in Glossary.

- 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 (February 27, 2015), Table 1.1.6.

Figure 1.8 Motor Vehicle Fuel Economy, 1949–2013
(Miles per Gallon)



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

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

	Light-Duty Vehicles, Short Wheelbase ^a			Light-Duty Vehicles, Long Wheelbase ^b			Heavy-Duty Trucks ^c			All Motor Vehicles ^d		
	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy
	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon
1950	9,060	603	15.0	(^e)	(^e)	(^e)	10,316	1,229	8.4	9,321	725	12.8
1955	9,447	645	14.6	(^e)	(^e)	(^e)	10,576	1,293	8.2	9,661	761	12.7
1960	9,518	668	14.3	(^e)	(^e)	(^e)	10,693	1,333	8.0	9,732	784	12.4
1965	9,603	661	14.5	(^e)	(^e)	(^e)	10,851	1,387	7.8	9,826	787	12.5
1970	9,989	737	13.5	8,676	866	10.0	13,565	2,467	5.5	9,976	830	12.0
1975	9,309	665	14.0	9,829	934	10.5	15,167	2,722	5.6	9,627	790	12.2
1980	8,813	551	16.0	10,437	854	12.2	18,736	3,447	5.4	9,458	712	13.3
1985	9,419	538	17.5	10,506	735	14.3	20,597	3,570	5.8	10,020	685	14.6
1990	10,504	520	20.2	11,902	738	16.1	23,603	3,953	6.0	11,107	677	16.4
1995	11,203	530	21.1	12,018	694	17.3	26,514	4,315	6.1	11,793	700	16.8
2000	11,976	547	21.9	11,672	669	17.4	25,617	4,391	5.8	12,164	720	16.9
2001	11,831	534	22.1	11,204	636	17.6	26,602	4,477	5.9	11,887	695	17.1
2002	12,202	555	22.0	11,364	650	17.5	27,071	4,642	5.8	12,171	719	16.9
2003	12,325	556	22.2	11,287	697	16.2	28,093	4,215	6.7	12,208	718	17.0
2004	12,460	553	22.5	11,184	690	16.2	27,023	4,057	6.7	12,200	714	17.1
2005	12,510	567	22.1	10,920	617	17.7	26,235	4,385	6.0	12,082	706	17.1
2006	12,485	554	22.5	10,920	612	17.8	25,231	4,304	5.9	12,017	698	17.2
2007	^a 10,710	^a 468	^a 22.9	^b 14,970	^b 877	^b 17.1	^c 28,290	^c 4,398	6.4	11,915	693	17.2
2008	10,290	435	23.7	15,256	880	17.3	28,573	4,387	6.5	11,631	667	17.4
2009	10,391	442	23.5	15,252	882	17.3	26,274	4,037	6.5	11,631	661	17.6
2010	10,650	456	23.3	15,474	901	17.2	26,604	4,180	6.4	11,866	681	17.4
2011	11,150	481	23.2	12,007	702	17.1	26,054	4,128	6.3	11,652	665	17.5
2012	11,262	484	23.3	11,885	694	17.1	25,255	3,973	6.4	11,707	665	17.6
2013 ^P	11,244	480	23.4	11,712	683	17.2	25,952	4,086	6.4	11,679	663	17.6

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

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

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

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

^e Included in "Heavy-Duty Trucks."

P=Preliminary.

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

Web 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	February					Cumulative July through February				
	Normal ^a	2014	2015	Percent Change		Normal ^a	2014	2015	Percent Change	
				Normal to 2015	2014 to 2015				Normal to 2015	2014 to 2015
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	1,060	1,143	1,398	32	22	4,768	4,919	4,980	4	1
Middle Atlantic New Jersey, New York, Pennsylvania	983	1,099	1,294	32	18	4,332	4,547	4,576	6	1
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	1,061	1,312	1,395	31	6	4,835	5,413	5,242	8	-3
West North Central Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	1,078	1,340	1,303	21	-3	5,163	5,641	5,233	1	-7
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	507	494	663	31	34	2,233	2,265	2,350	5	4
East South Central Alabama, Kentucky, Mississippi, Tennessee	623	686	856	37	25	2,853	3,118	3,102	9	-1
West South Central Arkansas, Louisiana, Oklahoma, Texas	414	482	508	23	5	1,912	2,156	1,997	4	-7
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	737	688	596	-19	-13	3,835	3,521	3,187	-17	-9
Pacific^b California, Oregon, Washington	439	404	285	-35	-29	2,256	1,887	1,590	-30	-16
U.S. Average^b	732	811	883	21	9	3,388	3,524	3,405	1	-3

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

^b 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	February					Cumulative January through February				
	Normal ^a	2014	2015	Percent Change		Normal ^a	2014	2015	Percent Change	
				Normal to 2015	2014 to 2015				Normal to 2015	2014 to 2015
New England Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont	0	0	0	NM	NM	0	0	0	NM	NM
Middle Atlantic New Jersey, New York, Pennsylvania	0	0	0	NM	NM	0	0	0	NM	NM
East North Central Illinois, Indiana, Michigan, Ohio, Wisconsin	0	0	0	NM	NM	0	0	0	NM	NM
West North Central Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota	0	0	0	NM	NM	0	0	0	NM	NM
South Atlantic Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia	30	36	15	NM	NM	64	53	40	NM	NM
East South Central Alabama, Kentucky, Mississippi, Tennessee	4	1	0	NM	NM	12	1	0	NM	NM
West South Central Arkansas, Louisiana, Oklahoma, Texas	15	16	6	NM	NM	29	17	8	NM	NM
Mountain Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming	3	5	3	NM	NM	4	5	3	NM	NM
Pacific^b California, Oregon, Washington	1	0	0	NM	NM	3	0	0	NM	NM
U.S. Average^b	8	9	4	NM	NM	17	12	8	NM	NM

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

^b Excludes Alaska and Hawaii.

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

Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. 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 1.2 Sources

Coal

1949–1988: Coal production data from Table 6.1 are converted to Btu by multiplying by the coal production heat content factors in Table A5.

1989 forward: Coal production data from Table 6.1 are converted to Btu by multiplying by the coal production heat content factors in Table A5. Waste coal supplied data from Table 6.1 are converted to Btu by multiplying by the waste coal supplied heat content factors in Table A5. Coal production (including waste coal supplied) is equal to coal production plus waste coal supplied.

Natural Gas (Dry)

1949 forward: Natural gas (dry) production data from Table 4.1 are converted to Btu by multiplying by the natural gas (dry) production heat content factors in Table A4.

Crude Oil

1949 forward: Crude oil (including lease condensate) production data from Table 3.1 are converted to Btu by multiplying by the crude oil (including lease condensate) production heat content factors in Table A2.

NGPL

1949 forward: Natural gas plant liquids (NGPL) production data from Table 3.1 are converted to Btu by multiplying by the NGPL production heat content factors in Table A2.

Fossil Fuels Total

1949 forward: Total fossil fuels production is the sum of the production values for coal, natural gas (dry), crude oil, and NGPL.

Nuclear Electric Power

1949 forward: Nuclear electricity net generation data from Table 7.2a are converted to Btu by multiplying by the nuclear heat rate factors in Table A6.

Renewable Energy

1949 forward: Table 10.1.

Total Primary Energy Production

1949 forward: Total primary energy production is the sum of the production values for fossil fuels, nuclear electric power, and renewable energy.

Table 1.3 Sources

Coal

1949 forward: Coal consumption data from Table 6.1 are converted to Btu by multiplying by the total coal consumption heat content factors in Table A5.

Natural Gas

1949–1979: Natural gas (including supplemental gaseous fuels) consumption data from Table 4.1 are converted to Btu by multiplying by the total natural gas consumption heat content factors in Table A4.

1980 forward: Natural gas (including supplemental gaseous fuels) consumption data from Table 4.1 are converted to Btu by multiplying by the total natural gas consumption heat content factors in Table A4. Supplemental gaseous fuels data in Btu are estimated using the method described in Note 3, “Supplemental Gaseous Fuels,” at the end of Section 4. Natural gas (excluding supplemental gaseous fuels) consumption is equal to natural gas (including supplemental gaseous fuels) consumption minus supplemental gaseous fuels.

Petroleum

1949–1992: Petroleum (excluding biofuels) consumption is equal to total petroleum products supplied from Table 3.6.

1993–2008: Petroleum (excluding biofuels) consumption is equal to total petroleum products supplied from Table 3.6 minus fuel ethanol consumption from Table 10.3.

2009 forward: Petroleum (excluding biofuels) consumption is equal to: total petroleum products supplied from Table 3.6; minus fuel ethanol (minus denaturant) consumption from Table 10.3; minus refinery and blender net inputs of renewable fuels (excluding fuel ethanol) from U.S. Energy Information Administration, *Petroleum Supply Annual/Petroleum Supply Monthly*, Table 1 (data are converted to Btu by multiplying by the biodiesel heat content factor in Table A1).

Coal Coke Net Imports

1949 forward: Coal coke net imports are equal to coal coke imports from Table 1.4a minus coal coke exports from Table 1.4b.

Fossil Fuels Total

1949 forward: Total fossil fuels consumption is the sum of the consumption values for coal, natural gas, and petroleum, plus coal coke net imports.

Nuclear Electric Power

1949 forward: Nuclear electricity net generation data from Table 7.2a are converted to Btu by multiplying by the nuclear heat rate factors in Table A6.

Renewable Energy

1949 forward: Table 10.1.

Electricity Net Imports

1949 forward: Electricity net imports are equal to electricity imports from Table 1.4a minus electricity exports from Table 1.4b.

Total Primary Energy Consumption

1949 forward: Total primary energy consumption is the sum of the consumption values for fossil fuels, nuclear electric power, and renewable energy, plus electricity net imports.

Table 1.4a Sources

Coal

1949 forward: Coal imports data from Table 6.1 are converted to Btu by multiplying by the coal imports heat content factors in Table A5.

Coal Coke

1949 forward: Coal coke imports data from U.S. Department of Commerce, Bureau of the Census, Monthly Report IM 145, are converted to Btu by multiplying by the coal coke imports heat content factor in Table A5.

Natural Gas

1949 forward: Natural gas imports data from Table 4.1 are converted to Btu by multiplying by the natural gas imports heat content factors in Table A4.

Crude Oil

1949 forward: Crude oil imports data from Table 3.3b are converted to Btu by multiplying by the crude oil imports heat content factors in Table A2.

Petroleum Products

1949–1992: Petroleum products (excluding biofuels) imports are equal to total petroleum imports from Table 3.3b minus crude oil imports from Table 3.3b; petroleum products (excluding biofuels) imports data are converted to Btu by multiplying by the total petroleum products imports heat content factors in Table A2.

1993–2008: Petroleum products (excluding biofuels) imports are equal to petroleum products (including biofuels) imports (see 1949–1992 sources above) minus fuel ethanol (minus denaturant) imports (see “Biofuels—Fuel Ethanol (Minus Denaturant)” sources below).

2009 forward: Renewable fuels (excluding fuel ethanol) imports data are from U.S. Energy Information Administration, *Petroleum Supply Annual (PSA)/Petroleum Supply Monthly (PSM)*, Table 1, and are converted to Btu by multiplying by the biodiesel heat content factor in Table A1. Petroleum products (excluding biofuels) imports are equal to petroleum products (including biofuels) imports (see 1949–1992 sources above) minus fuel ethanol (minus denaturant) imports (see “Biofuels—Fuel Ethanol (Minus Denaturant)” sources below) minus renewable fuels (excluding fuel ethanol) imports.

Total Petroleum

1949 forward: Total petroleum imports are equal to crude oil imports plus petroleum products imports.

Biofuels—Fuel Ethanol (Minus Denaturant)

1993 forward: Fuel ethanol (including denaturant) imports data are from PSA/PSM Table 1. Fuel ethanol (minus denaturant) production is equal to fuel ethanol (including denaturant) production from Table 10.3 minus denaturant from Table 10.3. Fuel ethanol (minus denaturant) imports are equal to fuel ethanol (including denaturant) imports multiplied by the ratio of fuel ethanol (minus denaturant) production to fuel ethanol (including denaturant) production. Fuel ethanol (minus denaturant) imports data are converted to Btu by multiplying by 3.539 million Btu per barrel, the undenatured ethanol heat content factor in Table A3.

Biofuels—Biodiesel

2001 forward: Biodiesel imports data are from Table 10.4, and are converted to Btu by multiplying by the biodiesel heat content factor in Table A1.

Biofuels—Other Renewable Fuels

2009 forward: Other renewable fuels imports data are from PSA Table 25/PSM Table 37, and are converted to Btu by multiplying by the biodiesel heat content factor in Table A1.

Total Biofuels

1993–2000: Total biofuels imports are equal to fuel ethanol (minus denaturant) imports.

2001–2008: Total biofuels imports are equal to fuel ethanol (minus denaturant) imports plus biodiesel imports.

2009 forward: Total biofuels imports are the sum of imports values for fuel ethanol (minus denaturant), biodiesel, and other renewable fuels.

Electricity

1949 forward: Electricity imports data from Table 7.1 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

Total Primary Energy Imports

1949 forward: Total primary energy imports are the sum of the imports values for coal, coal coke, natural gas, total petroleum, total biofuels, and electricity.

Table 1.4b Sources

Coal

1949 forward: Coal exports data from Table 6.1 are converted to Btu by multiplying by the coal exports heat content factors in Table A5.

Coal Coke

1949 forward: Coal coke exports data from U.S. Department of Commerce, Bureau of the Census, Monthly Report EM 545, are converted to Btu by multiplying by the coal coke exports heat content factor in Table A5.

Natural Gas

1949 forward: Natural gas exports data from Table 4.1 are converted to Btu by multiplying by the natural gas exports heat content factors in Table A4.

Crude Oil

1949 forward: Crude oil exports data from Table 3.3b are converted to Btu by multiplying by the crude oil exports heat content factor in Table A2.

Petroleum Products

1949–2009: Petroleum products (excluding biofuels) exports are equal to total petroleum exports from Table 3.3b minus crude oil exports from Table 3.3b; petroleum products (excluding biofuels) exports data are converted to Btu by multiplying by the total petroleum products exports heat content factors in Table A2.

2010 forward: Petroleum products (including biofuels) exports are equal to total petroleum exports from Table 3.3b minus crude oil exports from Table 3.3b; petroleum products (including biofuels) exports data are converted to Btu by multiplying by the total petroleum products exports heat content factors in Table A2. Petroleum products (excluding biofuels) exports are equal to petroleum products (including biofuels) exports minus fuel ethanol (minus denaturant) exports (see “Biofuels—Fuel Ethanol (Minus Denaturant)” sources below).

Total Petroleum

1949 forward: Total petroleum exports are equal to crude oil exports plus petroleum products exports.

Biofuels—Fuel Ethanol (Minus Denaturant)

2010 forward: Fuel ethanol (including denaturant) exports data are from U.S. Energy Information Administration, *Petroleum Supply Annual/Petroleum Supply Monthly*, Table 1. Fuel ethanol (minus denaturant) production is equal to fuel ethanol (including denaturant) production from Table 10.3 minus denaturant from Table 10.3. Fuel ethanol (minus denaturant) exports are equal to fuel ethanol (including denaturant) exports multiplied by

the ratio of fuel ethanol (minus denaturant) production to fuel ethanol (including denaturant) production. Fuel ethanol (minus denaturant) exports are converted to Btu by multiplying by 3.539 million Btu per barrel, the undenatured ethanol heat content factor in Table A3.

Biofuels—Biodiesel

2001 forward: Biodiesel exports data are from Table 10.4, and are converted to Btu by multiplying by the biodiesel heat content factor in Table A1.

Total Biofuels

2001–2009: Total biofuels exports are equal to biodiesel exports.

2010 forward: Total biofuels exports are equal to fuel ethanol (minus denaturant) exports plus biodiesel exports.

Electricity

1949 forward: Electricity exports data from Table 7.1 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

Total Primary Energy Exports

1949 forward: Total primary energy exports are the sum of the exports values for coal, coal coke, natural gas, total petroleum, total biofuels, and electricity.

Total Primary Energy Net Imports

1949 forward: Total primary energy net imports are equal to total primary energy imports from Table 1.4a minus total primary energy exports.

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 and 2015: “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 and 2015: "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 and 2015: "U.S. International Trade in Goods and Services," FT-900, monthly.

Petroleum Balance

1974 forward: The petroleum balance is calculated by the U.S. Energy Information Administration (EIA) as petroleum imports minus petroleum exports.

Energy Balance

1974 forward: The energy balance is calculated by EIA as energy imports minus energy exports.

Non-Energy Balance

1974 forward: The non-energy balance is calculated by EIA as the total merchandise balance minus the energy balance.

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.

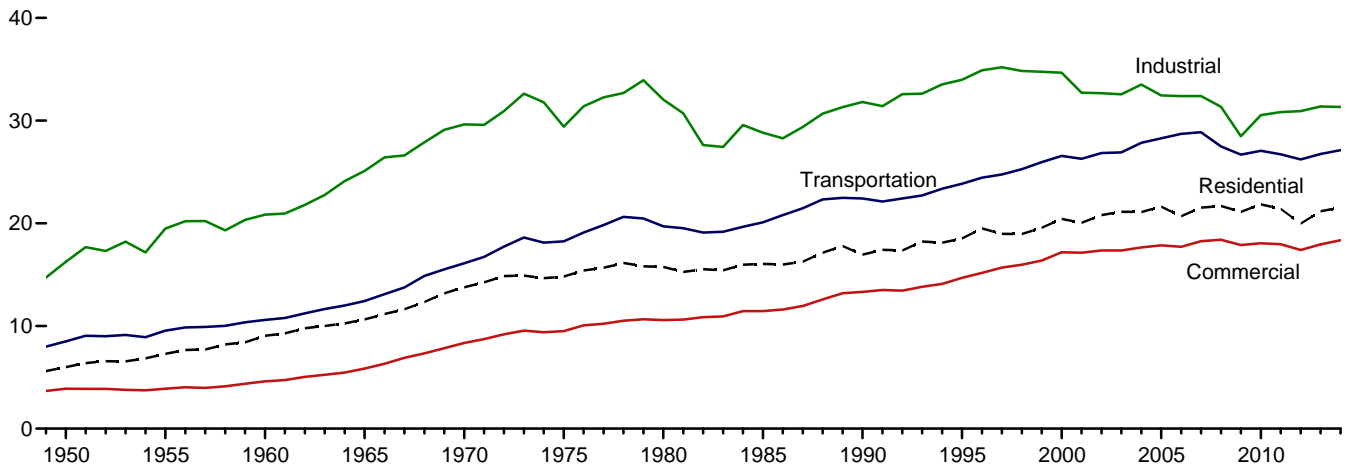
2014 and 2015: "U.S. International Trade in Goods and Services," FT-900, monthly.

THIS PAGE INTENTIONALLY LEFT BLANK

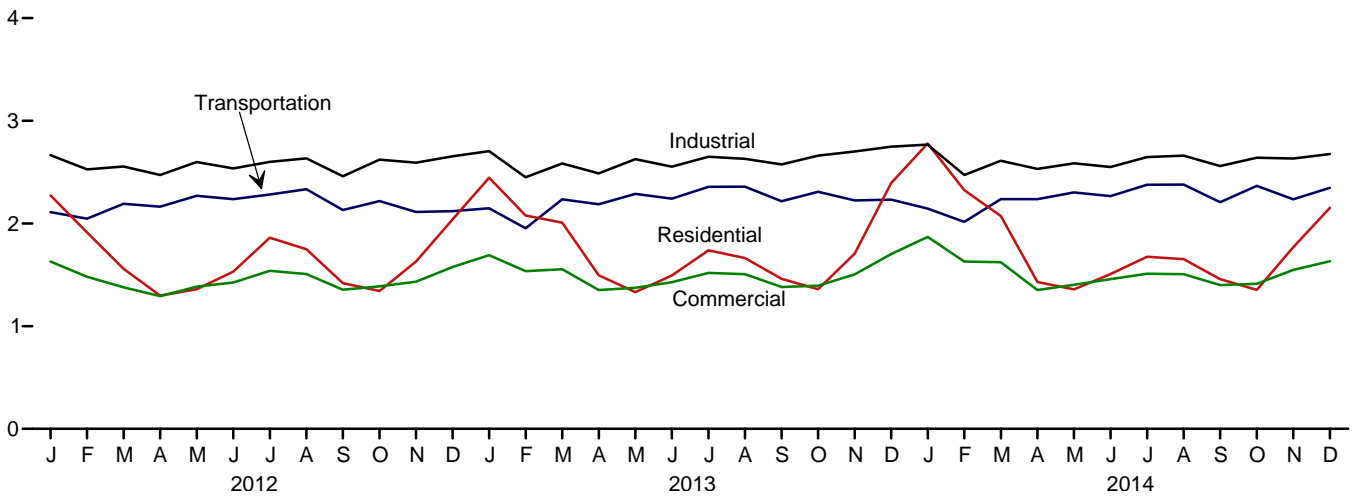
2. Energy Consumption by Sector

Figure 2.1 Energy Consumption by Sector
(Quadrillion Btu)

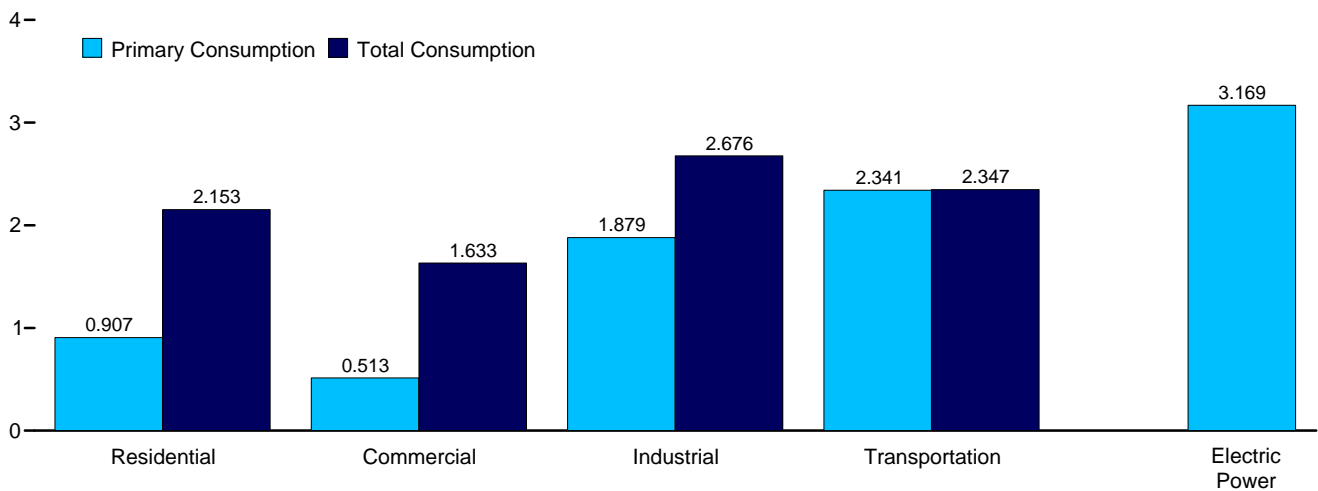
Total Consumption by End-Use Sector, 1949–2014



Total Consumption by End-Use Sector, Monthly



By Sector, December 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 ^{c,d}	Balancing Item ^g	Primary Total ^h
	Residential		Commercial ^a		Industrial ^b		Transportation				
	Primary ^e	Total ^f	Primary ^e	Total ^f	Primary ^e	Total ^f	Primary ^e	Total ^f			
1950 Total	4,829	5,989	2,834	3,893	13,890	16,241	8,383	8,492	4,679	(s)	34,616
1955 Total	5,608	7,278	2,561	3,895	16,103	19,485	9,474	9,550	6,461	(s)	40,208
1960 Total	6,651	9,039	2,723	4,609	16,996	20,842	10,560	10,596	8,158	(s)	45,086
1965 Total	7,279	10,639	3,177	5,845	20,148	25,098	12,399	12,432	11,012	(s)	54,015
1970 Total	8,322	13,766	4,237	8,346	22,964	29,628	16,062	16,098	16,253	(s)	67,838
1975 Total	7,990	14,813	4,059	9,492	21,434	29,413	18,210	18,245	20,270	1	71,965
1980 Total	7,439	15,753	4,105	10,578	22,595	32,039	19,659	19,697	24,269	-1	78,067
1985 Total	7,148	16,041	3,732	11,451	19,443	28,816	20,041	20,088	26,032	-4	76,392
1990 Total	6,537	16,945	3,896	13,320	21,180	31,810	22,366	22,420	^d 30,495	-9	84,485
1995 Total	6,936	18,518	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	7,237	21,124	4,297	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	^R 21,689	4,094	^R 18,396	20,540	^R 31,346	27,404	^R 27,486	39,969	1	98,919
2009 Total	6,662	^R 21,107	4,048	^R 17,880	18,769	28,479	26,605	26,687	38,069	(s)	94,152
2010 Total	6,590	^R 21,844	4,011	^R 18,047	20,291	^R 30,539	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	1,848	2,665	2,104	2,110	3,209	(s)	8,676
February	819	1,912	469	1,482	1,735	2,527	2,041	2,047	2,905	-3	7,966
March	548	1,559	335	1,378	1,728	2,555	2,186	2,192	2,888	-6	7,678
April	402	1,297	267	1,293	1,650	2,472	2,158	2,164	2,749	-6	7,220
May	288	1,360	208	1,385	1,699	2,598	2,263	2,269	3,156	-2	7,610
June	243	1,531	188	1,425	1,660	2,536	2,230	2,236	3,407	3	7,731
July	228	1,861	181	1,539	1,679	2,600	2,275	2,282	3,919	8	8,290
August	236	1,749	198	1,508	1,734	2,635	2,327	2,333	3,730	5	8,229
September	238	1,418	197	1,355	1,645	2,460	2,124	2,130	3,159	3	7,366
October	365	1,343	270	1,388	1,781	2,621	2,213	2,219	2,941	(s)	7,570
November	618	1,629	374	1,432	1,772	2,593	2,107	2,113	2,895	(s)	7,767
December	822	2,040	466	1,577	1,818	2,654	2,114	2,121	3,173	(s)	8,392
Total	5,779	19,965	3,695	17,392	20,748	30,921	26,140	26,216	38,131	2	94,496
2013 January	1,090	^R 2,445	582	^R 1,692	^R 1,879	^R 2,704	2,141	2,147	3,297	(s)	^R 8,988
February	946	^R 2,078	523	^R 1,536	^R 1,686	^R 2,451	1,947	1,953	^R 2,917	-1	^R 8,017
March	855	^R 2,008	481	^R 1,555	^R 1,761	^R 2,585	2,229	2,236	3,057	-2	^R 8,381
April	527	^R 1,496	318	^R 1,352	^R 1,679	^R 2,488	2,180	2,187	^R 2,817	-4	^R 7,518
May	332	^R 1,332	224	^R 1,373	^R 1,742	^R 2,626	2,282	^R 2,288	^R 3,038	-3	7,616
June	252	^R 1,493	183	^R 1,428	^R 1,677	^R 2,554	^R 2,235	2,241	^R 3,369	-2	7,718
July	242	^R 1,738	184	^R 1,518	^R 1,756	^R 2,649	^R 2,350	^R 2,357	^R 3,729	5	^R 8,267
August	243	^R 1,663	^R 191	^R 1,507	^R 1,737	^R 2,630	2,352	2,359	^R 3,636	4	^R 8,163
September	255	^R 1,461	197	^R 1,381	^R 1,758	^R 2,576	^R 2,211	2,217	^R 3,214	1	^R 7,635
October	363	^R 1,359	260	^R 1,394	^R 1,831	^R 2,661	2,303	2,309	^R 2,966	-2	7,721
November	676	^R 1,707	410	^R 1,504	^R 1,867	^R 2,702	2,218	2,224	^R 2,966	-2	^R 8,134
December	1,032	^R 2,394	550	^R 1,703	^R 1,928	^R 2,748	^R 2,226	^R 2,233	^R 3,341	1	^R 9,079
Total	6,812	^R21,172	4,103	^R17,942	^R21,302	^R31,374	^R26,672	^R26,751	^R38,349	-1	^R97,238
2014 January	^R 1,237	^R 2,778	^R 665	^R 1,869	^R 1,956	^R 2,768	^R 2,138	^R 2,145	^R 3,565	^R 5	^R 9,566
February	^R 1,037	^R 2,324	^R 580	^R 1,630	^R 1,745	^R 2,473	^R 2,008	^R 2,015	^R 3,071	^R 3	^R 8,445
March	^R 885	^R 2,073	^R 505	^R 1,622	^R 1,803	^R 2,611	^R 2,230	^R 2,237	^R 3,120	(s)	^R 8,544
April	^R 492	^R 1,430	^R 305	^R 1,351	^R 1,745	^R 2,531	^R 2,231	^R 2,237	^R 2,776	^R -4	^R 7,545
May	^R 347	^R 1,358	^R 236	^R 1,403	^R 1,721	^R 2,586	^R 2,296	^R 2,303	^R 3,050	^R -2	^R 7,647
June	^R 261	^R 1,508	^R 195	^R 1,458	^R 1,683	^R 2,549	^R 2,260	^R 2,266	^R 3,383	^R 1	^R 7,782
July	^R 249	^R 1,675	^R 189	^R 1,511	^R 1,765	^R 2,646	^R 2,371	^R 2,378	^R 3,636	^R 4	^R 8,213
August	^R 245	^R 1,652	^R 192	^R 1,506	^R 1,770	^R 2,660	^R 2,372	^R 2,379	^R 3,617	^R 2	^R 8,198
September	^R 271	^R 1,458	^R 210	^R 1,400	^R 1,753	^R 2,560	^R 2,201	^R 2,207	^R 3,190	(s)	^R 7,626
October	^R 372	^R 1,354	^R 271	^R 1,412	^R 1,823	^R 2,640	^R 2,360	^R 2,367	^R 2,947	^R -6	^R 7,767
November	^R 716	^R 1,769	^R 439	^R 1,547	^R 1,805	^R 2,632	^R 2,229	^R 2,236	^R 2,996	-1	^R 8,184
December	907	2,153	513	1,633	1,879	2,676	2,341	2,347	3,169	-1	8,809
Total	7,018	21,531	4,300	18,343	21,448	31,333	27,037	27,118	38,520	(s)	98,324

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

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

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

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

^e See "Primary Energy Consumption" in Glossary.

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

^g A balancing item. The sum of primary consumption in the five energy-use sectors equals the sum of total consumption in the four end-use sectors. However, total energy consumption does not equal the sum of the sectoral components due

to the use of sector-specific conversion factors for coal and natural gas.

^h Primary energy consumption total. See Table 1.3.

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

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

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

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

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

Web 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: • End-Use Sectors: Tables 2.2-2.5. • Electric Power Sector:

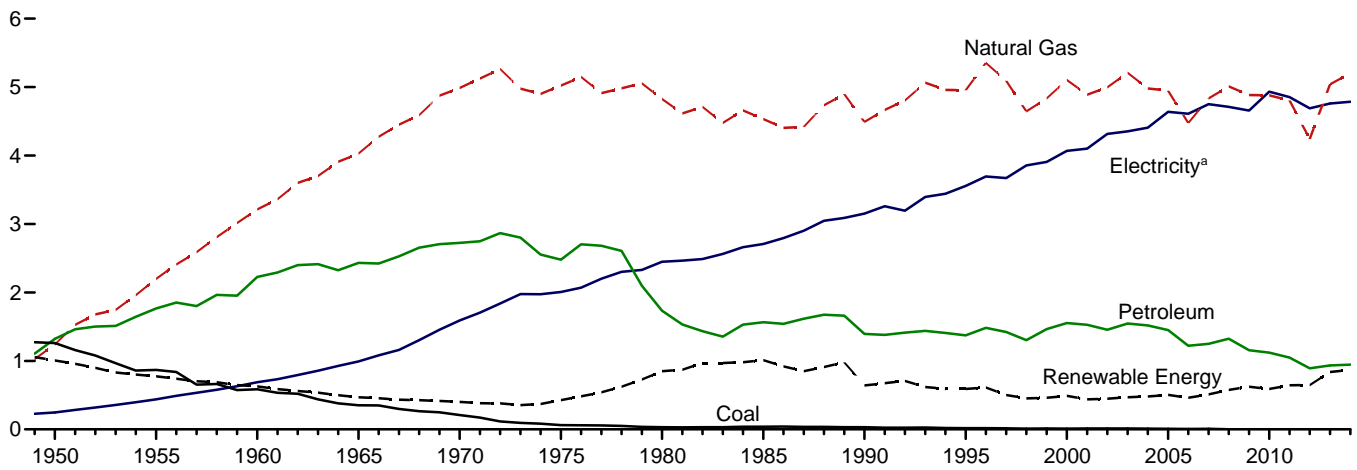
Table 2.6. • Balancing Item: Calculated as primary energy total consumption

minus the sum of total energy consumption in the four end-use sectors.

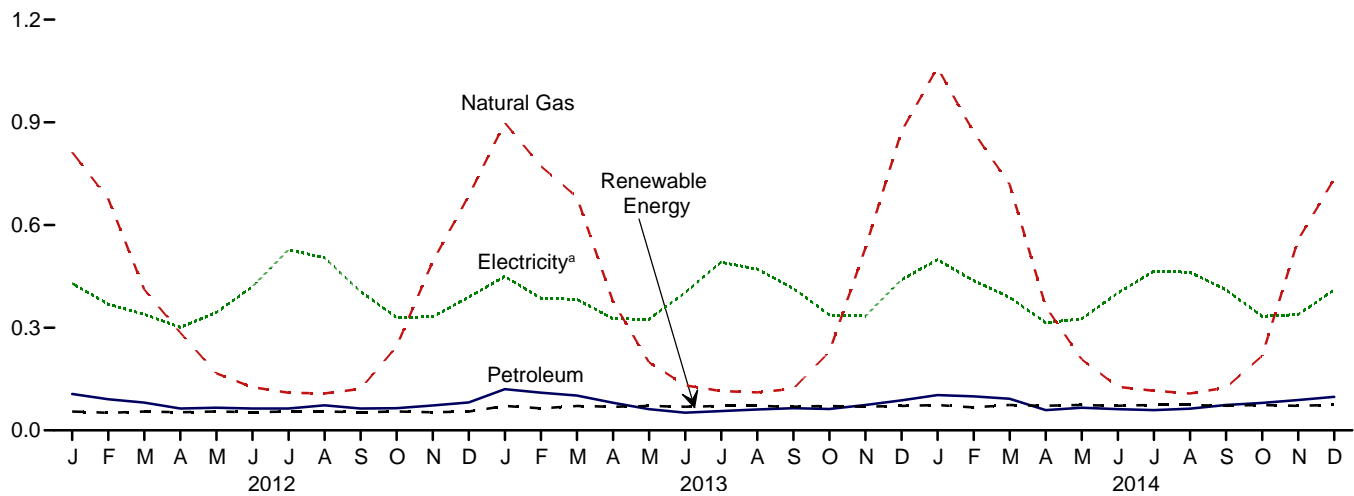
• Primary Total: Table 1.3.

Figure 2.2 Residential Sector Energy Consumption
(Quadrillion Btu)

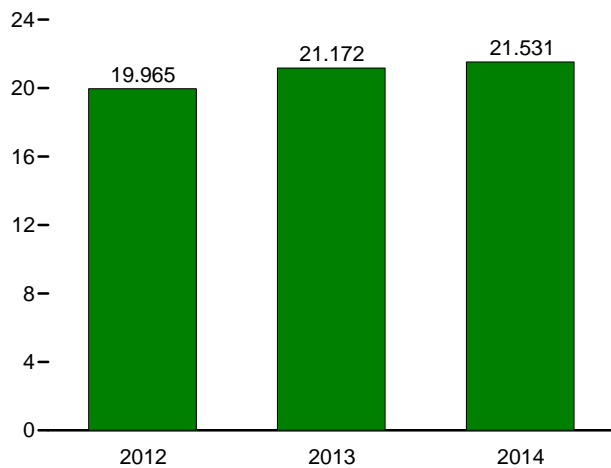
By Major Source, 1949–2014



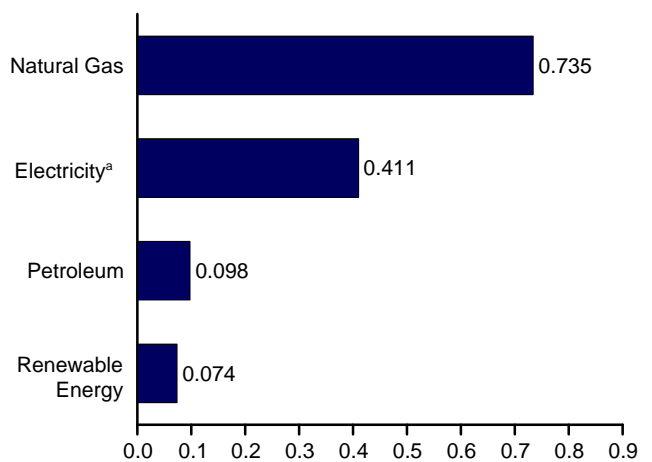
By Major Source, Monthly



Total, January–December



By Major Source, December 2014



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

Table 2.2 Residential Sector Energy Consumption
(Trillion Btu)

	Primary Consumption ^a									Electricity Retail Sales ^d	Electrical System Energy Losses ^e	Total
	Fossil Fuels				Renewable Energy ^b				Total Primary			
	Coal	Natural Gas ^c	Petroleum	Total	Geo-thermal	Solar/PV	Bio-mass	Total				
1950 Total	1,261	1,240	1,322	3,824	NA	NA	1,006	1,006	4,829	246	913	5,989
1955 Total	867	2,198	1,767	4,833	NA	NA	775	775	5,608	438	1,232	7,278
1960 Total	585	3,212	2,227	6,024	NA	NA	627	627	6,651	687	1,701	9,039
1965 Total	352	4,028	2,432	6,811	NA	NA	468	468	7,279	993	2,367	10,639
1970 Total	209	4,987	2,725	7,922	NA	NA	401	401	8,322	1,591	3,852	13,766
1975 Total	63	5,023	2,479	7,564	NA	NA	425	425	7,990	2,007	4,817	14,813
1980 Total	31	4,825	1,734	6,589	NA	NA	850	850	7,439	2,448	5,866	15,753
1985 Total	39	4,534	1,565	6,138	NA	NA	1,010	1,010	7,148	2,709	6,184	16,041
1990 Total	31	4,491	1,394	5,916	6	56	580	641	6,557	3,153	7,235	16,945
1995 Total	17	4,954	1,373	6,345	7	64	520	591	6,936	3,557	8,026	18,518
2000 Total	11	5,105	1,553	6,669	9	61	420	489	7,158	4,069	9,197	20,424
2001 Total	12	4,889	1,528	6,429	9	59	370	438	6,867	4,100	9,074	20,421
2002 Total	12	4,995	1,456	6,463	10	57	380	448	6,911	4,317	9,562	20,790
2003 Total	12	5,209	1,546	6,768	13	57	400	470	7,237	4,353	9,534	21,124
2004 Total	11	4,981	1,519	6,511	14	57	410	481	6,992	4,408	9,687	21,087
2005 Total	8	4,946	1,450	6,405	16	58	430	504	6,908	4,638	10,074	21,620
2006 Total	6	4,476	1,221	5,704	18	63	380	462	6,165	4,611	9,905	20,681
2007 Total	8	4,835	1,249	6,092	22	70	420	512	6,603	4,750	10,180	21,534
2008 Total	NA	5,010	1,324	6,334	26	80	470	577	6,911	R 4,711	R 10,068	R 21,689
2009 Total	NA	4,883	1,157	6,040	33	89	500	622	6,662	R 4,657	R 9,788	R 21,107
2010 Total	NA	4,878	1,121	5,999	37	114	440	591	6,590	R 4,933	R 10,321	R 21,844
2011 Total	NA	4,805	1,048	5,852	40	153	450	643	6,495	4,855	10,554	21,404
2012 January	NA	813	106	919	3	16	36	55	974	430	869	2,272
February	NA	677	91	768	3	15	33	51	819	368	724	1,912
March	NA	412	81	493	3	16	36	55	548	339	672	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	228	527	1,106	1,861
August	NA	108	73	181	3	16	36	55	236	505	1,008	1,749
September	NA	121	64	185	3	15	34	53	238	405	775	1,418
October	NA	245	65	310	3	16	36	55	365	330	648	1,343
November	NA	493	73	565	3	15	34	53	618	331	680	1,629
December	NA	686	81	767	3	16	36	55	822	390	829	2,040
Total	NA	4,242	892	5,134	40	186	420	646	5,779	4,690	9,496	19,965
2013 January	NA	899	R 120	1,019	3	19	49	71	1,090	R 450	R 905	R 2,445
February	NA	772	110	882	3	17	44	64	946	R 386	R 746	R 2,078
March	NA	682	102	783	3	19	49	71	855	R 383	R 771	R 2,008
April	NA	377	81	458	3	18	48	69	527	R 326	R 643	R 1,496
May	NA	199	62	261	3	19	49	71	332	R 325	R 675	R 1,332
June	NA	131	52	183	3	18	48	69	252	R 403	R 839	R 1,493
July	NA	115	56	171	3	19	49	71	242	R 491	R 1,004	R 1,738
August	NA	111	61	172	3	19	49	71	243	R 471	R 949	R 1,663
September	NA	121	65	186	3	18	48	69	255	R 414	R 792	R 1,461
October	NA	229	62	291	3	19	49	71	363	337	R 659	R 1,359
November	NA	533	74	607	3	18	48	69	676	334	R 697	R 1,707
December	NA	873	88	961	3	19	49	71	1,032	R 440	R 922	R 2,394
Total	NA	5,040	933	R 5,973	40	219	580	839	6,812	R 4,759	R 9,601	R 21,172
2014 January	NA	1,060	R 103	R 1,163	3	21	49	74	R 1,237	R 499	R 1,042	R 2,778
February	NA	871	R 99	R 971	3	19	44	67	R 1,037	R 437	R 849	R 2,324
March	NA	719	R 93	R 811	3	21	49	74	R 885	R 389	R 799	R 2,073
April	NA	361	R 59	R 420	3	21	48	72	R 492	315	R 623	R 1,430
May	NA	207	R 66	R 273	3	21	49	74	R 347	326	R 684	R 1,358
June	NA	128	R 62	R 189	3	21	48	72	R 261	401	R 845	R 1,508
July	NA	116	R 59	R 175	3	21	49	74	R 249	465	R 961	R 1,675
August	NA	108	R 63	R 171	3	21	49	74	R 245	R 462	R 945	R 1,652
September	NA	125	R 74	R 199	3	21	48	72	R 271	410	R 777	R 1,458
October	NA	217	R 80	R 298	3	21	49	74	R 372	333	R 649	R 1,354
November	NA	R 556	R 89	R 644	3	21	48	72	R 716	338	R 715	R 1,769
December	NA	735	98	833	3	21	49	74	907	411	835	2,153
Total	NA	5,201	945	6,147	40	252	580	871	7,018	4,787	9,726	21,531

^a See "Primary Energy Consumption" in Glossary.

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

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

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

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

section.

R=Revised. NA=Not available.

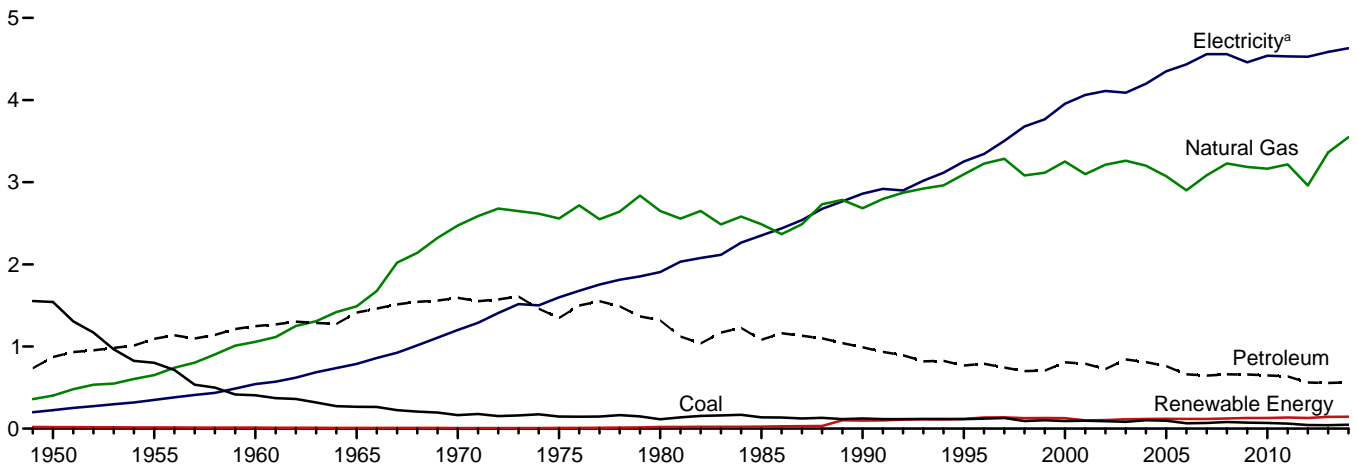
Notes: • Data are estimates, except for electricity retail sales. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web 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.

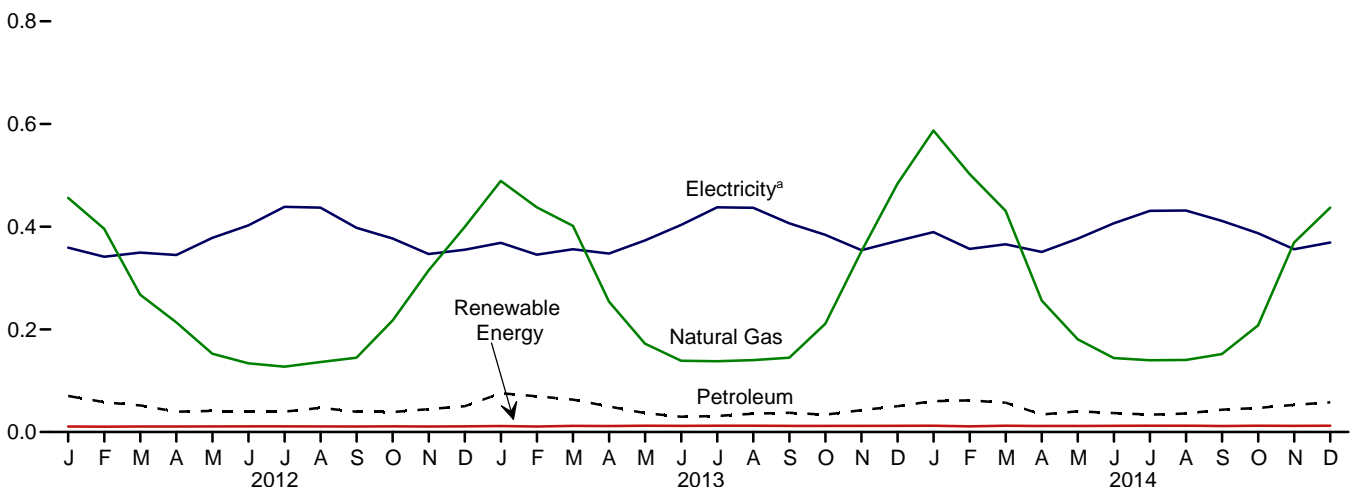
Sources: See end of section.

Figure 2.3 Commercial Sector Energy Consumption
(Quadrillion Btu)

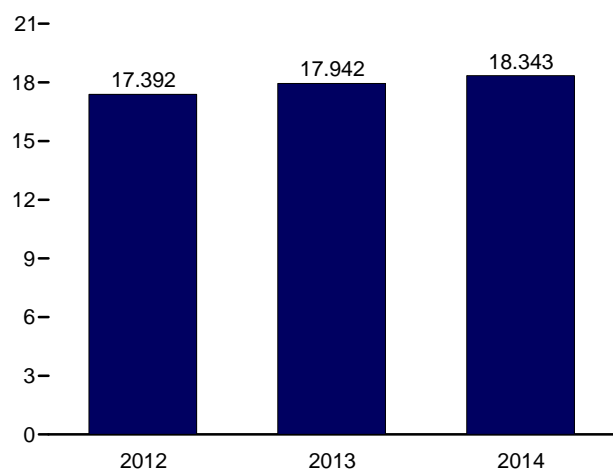
By Major Source, 1949–2014



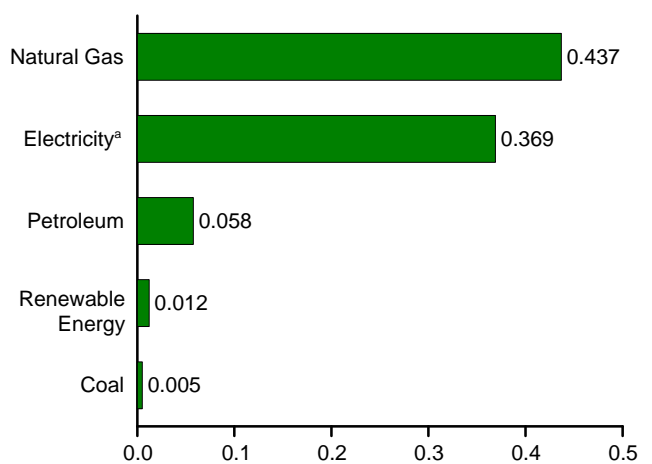
By Major Source, Monthly



Total, January–December



By Major Source, December 2014



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

Table 2.3 Commercial Sector Energy Consumption
(Trillion Btu)

	Primary Consumption ^a											Elec- tricity Retail Sales ^f	Electrical System Energy Losses ^g	Total
	Fossil Fuels				Renewable Energy ^b									
	Coal	Natural Gas ^c	Petro- leum ^d	Total	Hydro- electric Power ^e	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total	Total Primary			
1950 Total	1,542	401	872	2,815	NA	NA	NA	NA	19	19	2,834	225	834	3,893
1955 Total	801	651	1,095	2,547	NA	NA	NA	NA	15	15	2,561	350	984	3,895
1960 Total	407	1,056	1,248	2,711	NA	NA	NA	NA	12	12	2,723	543	1,344	4,609
1965 Total	265	1,490	1,413	3,168	NA	NA	NA	NA	9	9	3,177	789	1,880	5,845
1970 Total	165	2,473	1,592	4,229	NA	NA	NA	NA	8	8	4,237	1,201	2,908	8,346
1975 Total	147	2,558	1,346	4,051	NA	NA	NA	NA	8	8	4,059	1,598	3,835	9,492
1980 Total	115	2,651	1,318	4,084	NA	NA	NA	NA	21	21	4,105	1,906	4,567	10,578
1985 Total	137	2,488	1,083	3,708	NA	NA	NA	NA	24	24	3,732	2,351	5,368	11,451
1990 Total	124	2,682	991	3,798	1	3	-	-	94	98	3,896	2,860	6,564	13,320
1995 Total	117	3,096	769	3,982	1	5	-	-	113	118	4,100	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	R 4,559	R 9,743	R 18,396
2009 Total	73	3,187	659	3,919	1	17	(s)	(s)	112	129	4,048	R 4,459	R 9,373	R 17,880
2010 Total	70	3,165	647	3,881	1	19	(s)	(s)	111	130	4,011	R 4,539	R 9,497	R 18,047
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	70	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	256	(s)	2	(s)	(s)	9	11	267	345	681	1,293
May	3	152	41	196	(s)	2	(s)	(s)	9	11	208	378	799	1,385
June	3	134	40	177	(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	186	(s)	2	(s)	(s)	9	11	198	437	873	1,508
September	3	145	39	187	(s)	2	(s)	(s)	9	11	197	398	760	1,355
October	3	217	39	259	(s)	2	(s)	(s)	9	11	270	377	741	1,388
November	4	315	45	364	(s)	2	(s)	(s)	9	11	374	347	711	1,432
December	5	400	50	455	(s)	2	(s)	(s)	9	11	466	355	756	1,577
Total	44	2,960	562	3,565	(s)	20	1	1	108	130	3,695	4,528	9,168	17,392
2013 January	5	489	76	570	(s)	2	(s)	(s)	10	12	582	R 368	R 742	R 1,692
February	5	438	70	512	(s)	2	(s)	(s)	9	11	523	R 346	R 668	R 1,536
March	5	401	63	469	(s)	2	(s)	(s)	10	12	481	R 356	R 718	R 1,555
April	3	254	50	307	(s)	2	(s)	(s)	10	12	318	R 348	R 686	R 1,352
May	3	172	37	212	(s)	2	(s)	(s)	10	12	224	R 373	R 775	R 1,373
June	3	139	30	171	(s)	2	(s)	(s)	10	12	183	R 403	R 841	R 1,428
July	3	138	31	172	(s)	2	(s)	(s)	10	12	184	R 438	R 896	R 1,518
August	3	140	36	178	(s)	2	(s)	(s)	10	12	R 191	R 437	R 879	R 1,507
September	2	145	38	185	(s)	2	(s)	(s)	10	12	197	R 407	R 777	R 1,381
October	3	211	34	248	(s)	2	(s)	(s)	10	12	260	R 384	R 750	R 1,394
November	4	352	43	398	(s)	2	(s)	(s)	10	12	410	R 354	R 740	R 1,504
December	4	484	50	538	(s)	2	(s)	(s)	10	12	550	R 372	R 780	R 1,703
Total	41	3,363	556	3,960	(s)	20	3	1	R 120	143	4,103	R 4,586	R 9,252	R 17,942
2014 January	5	587	R 60	R 653	(s)	2	(s)	(s)	10	12	R 665	390	R 814	R 1,869
February	5	502	R 62	R 569	(s)	2	(s)	(s)	9	11	R 580	357	R 693	R 1,630
March	5	431	R 57	R 493	(s)	2	(s)	(s)	10	12	R 505	R 366	R 752	R 1,622
April	3	256	R 34	R 293	(s)	2	(s)	(s)	10	12	R 305	R 351	R 695	R 1,351
May	3	181	R 40	R 224	(s)	2	(s)	(s)	10	12	R 236	R 377	R 791	R 1,403
June	2	144	R 37	R 183	(s)	2	(s)	(s)	10	12	R 195	R 407	R 856	R 1,458
July	3	140	R 34	R 177	(s)	2	(s)	(s)	10	12	R 189	R 431	R 891	R 1,511
August	3	141	R 36	R 180	(s)	2	(s)	(s)	10	12	R 192	R 411	R 883	R 1,506
September	3	152	R 43	R 199	(s)	2	(s)	(s)	10	12	R 210	R 431	R 778	R 1,400
October	4	208	R 47	R 259	(s)	2	(s)	(s)	10	12	R 271	387	R 754	R 1,412
November	5	R 369	R 53	R 427	(s)	2	(s)	(s)	10	12	R 439	356	R 752	R 1,547
December	5	437	58	501	(s)	2	(s)	(s)	10	12	513	369	751	1,633
Total	47	3,547	561	4,155	(s)	20	4	1	119	144	4,300	4,632	9,411	18,343

^a See "Primary Energy Consumption" in Glossary.

^b See Table 10.2a for notes on series components and estimation.

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

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

^e Conventional hydroelectric power.

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

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

R=Revised. NA=Not available. - =No data reported. (s)=Less than 0.5 trillion Btu.

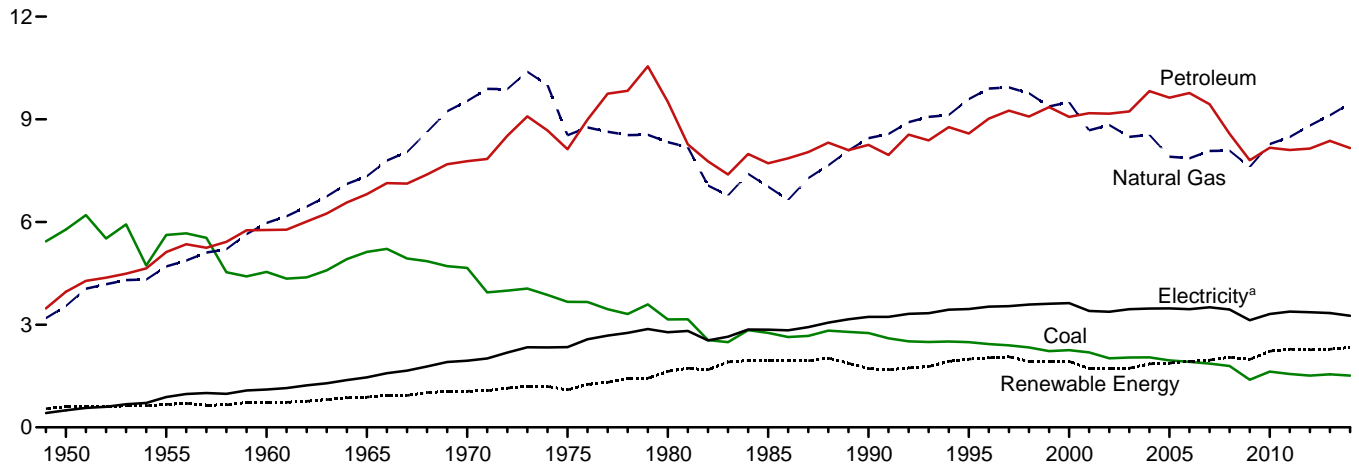
Notes: • Data are estimates, except for coal totals beginning in 2008; hydroelectric power; solar/PV; wind; and electricity retail sales beginning in 1979. • The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web 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.

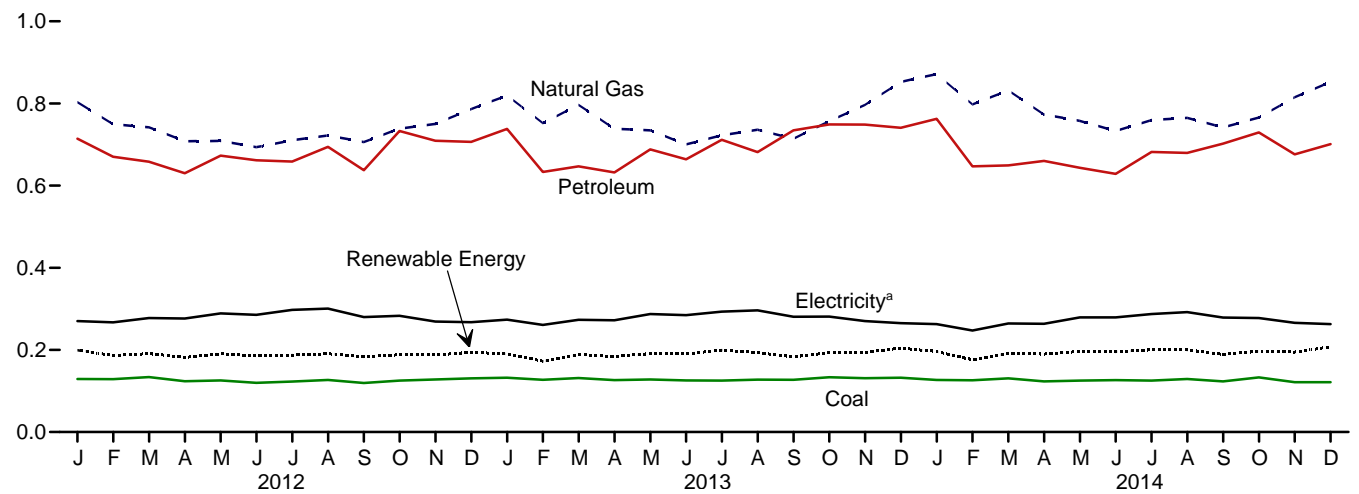
Sources: See end of section.

Figure 2.4 Industrial Sector Energy Consumption
(Quadrillion Btu)

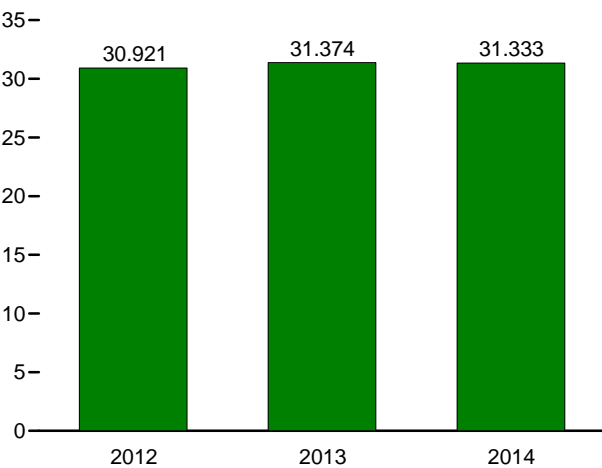
By Major Source, 1949–2014



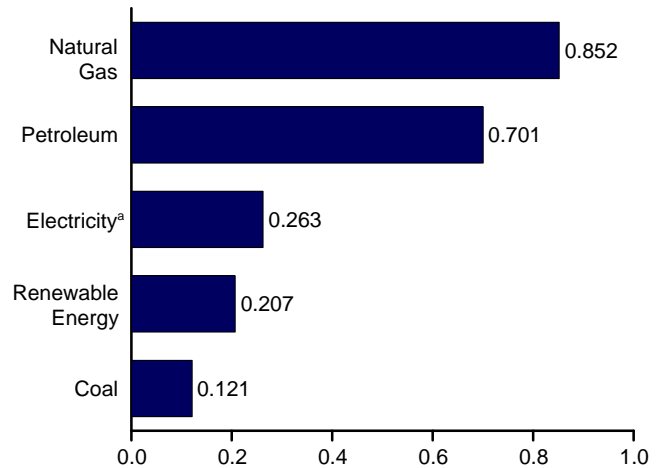
By Major Source, Monthly



Total, January–December



By Major Source, December 2014



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

Table 2.4 Industrial Sector Energy Consumption
(Trillion Btu)

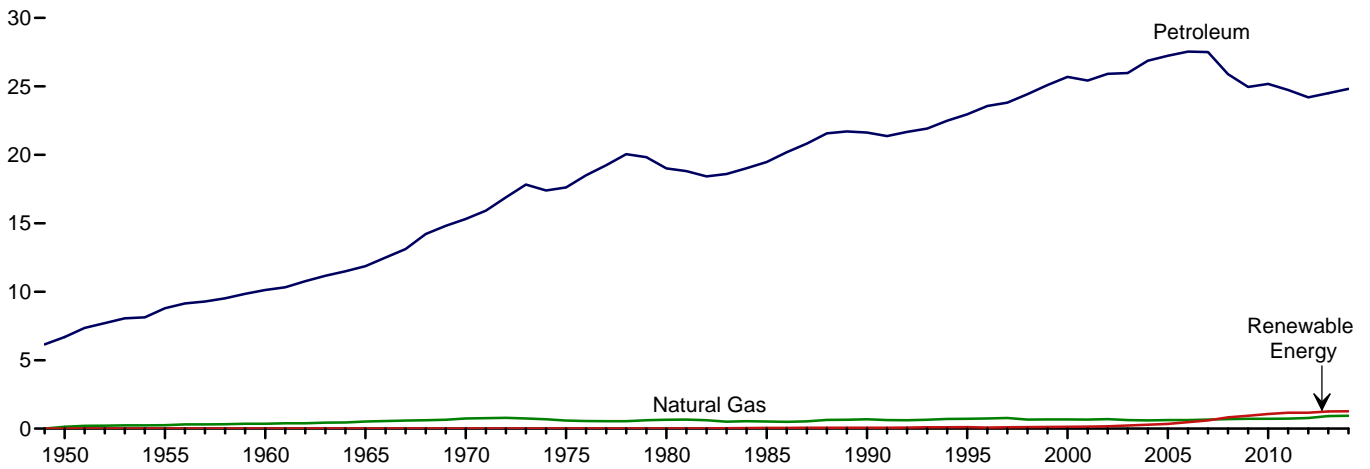
	Primary Consumption ^a											Elec- tricity Retail Sales ^g	Electrical System Energy Losses ^h	Total ^e	
	Fossil Fuels				Renewable Energy ^b										
	Coal	Natural Gas ^c	Petro- leum ^d	Total ^e	Hydro- electric Power ^f	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total	Total Primary				
1950 Total	5,781	3,546	3,960	13,288	69	NA	NA	NA	532	602	13,890	500	1,852	16,241	
1955 Total	5,620	4,701	5,123	15,434	38	NA	NA	NA	631	669	16,103	887	2,495	19,485	
1960 Total	4,543	5,973	5,766	16,277	39	NA	NA	NA	680	719	16,996	1,107	2,739	20,842	
1965 Total	5,127	7,339	6,813	19,260	33	NA	NA	NA	855	888	20,148	1,463	3,487	25,098	
1970 Total	4,656	9,536	7,776	21,911	34	NA	NA	NA	1,019	1,053	22,964	1,948	4,716	29,628	
1975 Total	3,667	8,532	8,127	20,339	32	NA	NA	NA	1,063	1,096	21,434	2,346	5,632	29,413	
1980 Total	3,155	8,333	9,509	20,962	33	NA	NA	NA	1,600	1,633	22,595	2,781	6,664	32,039	
1985 Total	2,760	7,032	7,714	17,492	33	NA	NA	NA	1,918	1,951	19,443	2,855	6,518	28,816	
1990 Total	2,756	8,451	8,251	19,463	31	2	-	-	1,684	1,717	21,180	3,226	7,404	31,810	
1995 Total	2,488	9,592	8,585	20,726	55	3	-	-	1,934	1,992	22,718	3,455	7,796	33,970	
2000 Total	2,256	9,500	9,073	20,895	42	4	-	-	1,881	1,928	22,823	3,631	8,208	34,662	
2001 Total	2,192	8,676	9,177	20,074	33	5	-	-	1,681	1,719	21,793	3,400	7,526	32,719	
2002 Total	2,019	8,832	9,167	20,078	39	5	-	-	1,676	1,720	21,798	3,379	7,484	32,661	
2003 Total	2,041	8,488	9,229	19,809	43	3	-	-	1,679	1,725	21,534	3,454	7,565	32,554	
2004 Total	2,047	8,550	9,825	20,560	33	4	-	-	1,817	1,853	22,413	3,473	7,631	33,517	
2005 Total	1,954	7,907	9,634	19,540	32	4	-	-	1,837	1,873	21,413	3,477	7,554	32,444	
2006 Total	1,914	7,861	9,767	19,603	29	4	-	-	1,897	1,930	21,533	3,451	7,411	32,395	
2007 Total	1,865	8,074	9,442	19,405	16	5	-	-	1,944	1,965	21,370	3,507	7,515	32,392	
2008 Total	1,793	8,083	8,576	18,493	17	5	-	-	2,026	2,047	20,540	3,444	7,362	31,346	
2009 Total	1,392	7,609	7,806	16,784	18	4	-	-	1,963	1,985	18,769	3,130	6,580	28,479	
2010 Total	1,631	8,278	8,167	18,070	16	4	(s)	-	2,201	2,221	20,291	3,314	6,934	30,539	
2011 Total	1,561	8,481	8,105	18,157	17	4	(s)	(s)	2,261	2,283	20,440	3,382	7,005	30,827	
2012															
January	129	803	714	1,648	3	(s)	(s)	(s)	196	199	1,848	270	547	2,665	
February	129	749	670	1,548	2	(s)	(s)	(s)	184	186	1,735	267	525	2,527	
March	134	742	658	1,537	2	(s)	(s)	(s)	188	191	1,728	277	550	2,555	
April	124	708	630	1,468	2	(s)	(s)	(s)	180	182	1,650	276	546	2,472	
May	125	709	673	1,508	2	(s)	(s)	(s)	188	191	1,699	289	611	2,598	
June	120	694	661	1,475	2	(s)	(s)	(s)	183	185	1,660	285	591	2,536	
July	123	710	659	1,492	1	(s)	(s)	(s)	186	187	1,679	298	624	2,600	
August	127	722	694	1,543	1	(s)	(s)	(s)	189	191	1,734	301	600	2,635	
September	119	706	638	1,462	2	(s)	(s)	(s)	181	183	1,645	280	535	2,460	
October	125	739	733	1,594	2	(s)	(s)	(s)	186	188	1,781	283	556	2,621	
November	128	750	709	1,584	2	(s)	(s)	(s)	185	188	1,772	269	552	2,593	
December	131	786	706	1,623	2	(s)	(s)	(s)	192	194	1,818	267	569	2,654	
Total	1,513	8,819	8,146	18,482	22	4	(s)	(s)	2,239	2,266	20,748	3,363	6,810	30,921	
2013															
January	132	819	738	1,689	3	(s)	(s)	(s)	R 187	R 190	R 1,879	R 274	R 551	R 2,704	
February	127	752	633	1,513	3	(s)	(s)	(s)	R 169	R 172	R 1,686	R 261	R 504	R 2,451	
March	131	796	647	1,572	3	(s)	(s)	(s)	R 185	R 189	R 1,761	R 273	R 551	R 2,585	
April	126	739	632	1,495	2	(s)	(s)	(s)	R 181	R 184	R 1,679	R 272	R 537	R 2,488	
May	128	735	688	1,551	3	(s)	(s)	(s)	R 188	R 191	R 1,742	R 287	R 597	R 2,626	
June	126	700	664	1,487	3	(s)	(s)	(s)	R 187	R 190	R 1,677	R 284	R 593	R 2,554	
July	125	722	712	1,557	3	(s)	(s)	(s)	R 196	R 199	R 1,756	R 293	R 600	R 2,649	
August	128	736	682	1,543	2	(s)	(s)	(s)	R 191	R 193	R 1,737	R 296	R 597	R 2,630	
September	127	714	734	1,575	2	(s)	(s)	(s)	R 180	R 183	R 1,758	R 281	R 537	R 2,576	
October	133	757	749	1,638	2	(s)	(s)	(s)	R 191	R 193	R 1,831	R 281	R 549	R 2,661	
November	131	796	749	1,673	2	(s)	(s)	(s)	R 191	R 194	R 1,867	R 270	R 564	R 2,702	
December	132	853	R 741	R 1,724	3	(s)	(s)	(s)	R 201	R 204	R 1,928	R 265	R 555	R 2,748	
Total	1,547	9,120	8,368	R 19,019	R 33	4	(s)	(s)	R 2,246	R 2,283	R 21,302	R 3,338	R 6,734	R 31,374	
2014															
January	127	872	R 762	R 1,760	3	(s)	(s)	(s)	R 192	R 196	R 1,956	R 263	R 549	R 2,768	
February	126	R 798	R 647	R 1,569	2	(s)	(s)	(s)	R 173	R 176	R 1,745	R 247	R 480	R 2,473	
March	131	832	R 649	R 1,611	2	(s)	(s)	(s)	R 190	R 192	R 1,803	R 264	R 543	R 2,611	
April	123	773	R 660	R 1,555	2	(s)	(s)	(s)	R 188	R 190	R 1,745	R 263	R 522	R 2,531	
May	125	757	R 644	R 1,524	2	(s)	(s)	(s)	R 194	R 196	R 1,721	R 279	R 586	R 2,586	
June	126	733	R 629	R 1,487	2	(s)	(s)	(s)	R 193	R 195	R 1,683	R 279	R 588	R 2,549	
July	R 125	R 760	R 682	R 1,564	2	(s)	(s)	(s)	R 198	R 200	R 1,765	287	R 594	R 2,646	
August	R 129	R 765	R 680	R 1,570	2	(s)	(s)	(s)	R 198	R 200	R 1,770	292	R 598	R 2,660	
September	R 123	741	R 702	R 1,564	2	(s)	(s)	(s)	R 187	R 189	R 1,753	279	R 528	R 2,560	
October	R 133	R 766	R 730	R 1,626	2	(s)	(s)	(s)	R 194	R 197	R 1,823	277	R 540	R 2,640	
November	R 121	R 815	R 676	R 1,610	2	(s)	(s)	(s)	R 192	R 195	R 1,805	R 266	R 562	R 2,632	
December	121	852	701	1,672	2	(s)	(s)	(s)	205	207	1,879	263	534	2,676	
Total	1,511	9,464	8,161	19,115	26	4	(s)	(s)	2,303	2,334	21,448	3,260	6,624	31,333	

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

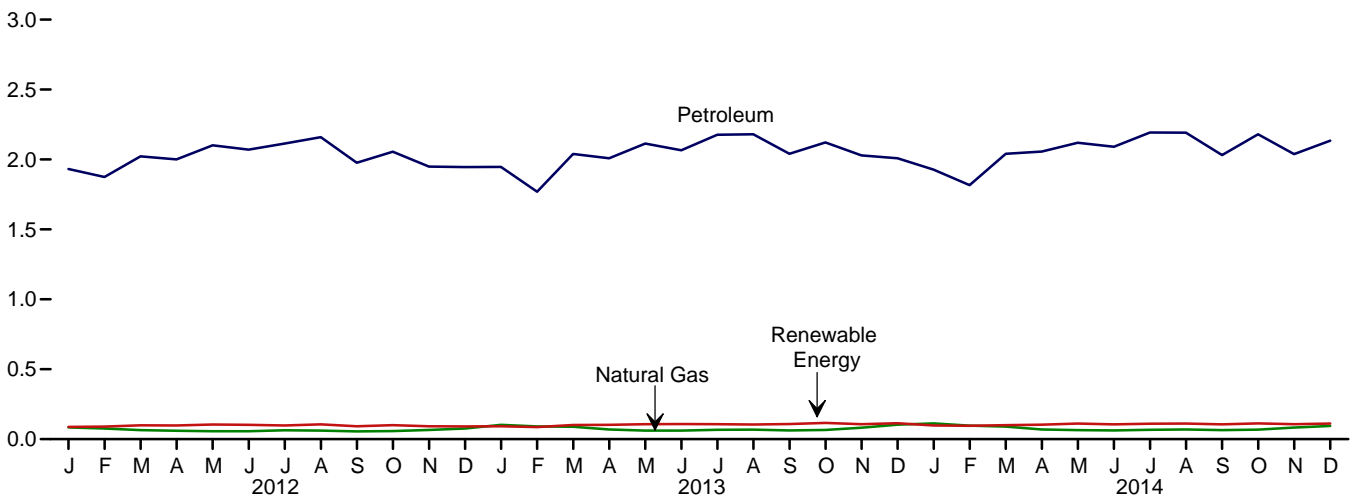
section.
 R=Revised. NA=Not available. --=No data reported. (s)=Less than 0.5 trillion Btu.
 Notes: • Data are estimates, except for coal totals; hydroelectric power in 1949–1978 and 1989 forward; solar/PV; wind; and electricity retail sales. • The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
 Web 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: See end of section.

Figure 2.5 Transportation Sector Energy Consumption
(Quadrillion Btu)

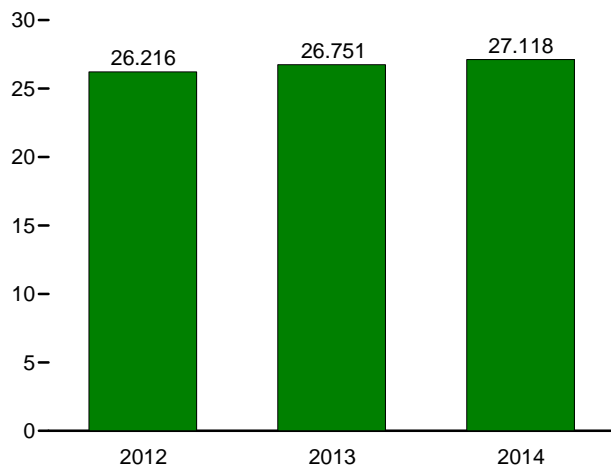
By Major Source, 1949–2014



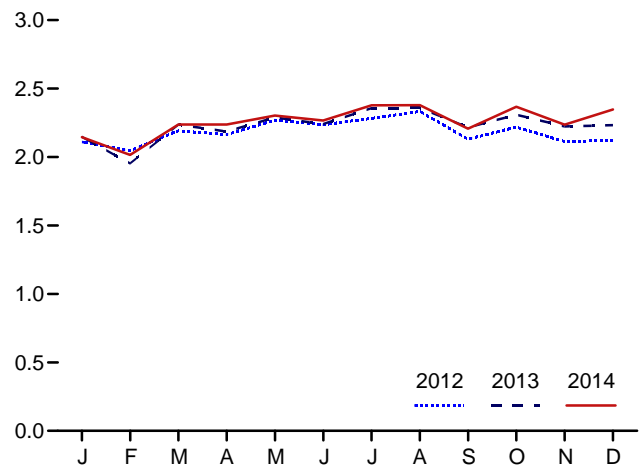
By Major Source, Monthly



Total, January–December



Total, Monthly



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

Table 2.5 Transportation Sector Energy Consumption
(Trillion Btu)

	Primary Consumption ^a						Electricity Retail Sales ^e	Electrical System Energy Losses ^f	Total
	Fossil Fuels				Renewable Energy ^b	Total Primary			
	Coal	Natural Gas ^c	Petroleum ^d	Total	Biomass				
1950 Total	1,564	130	6,690	8,383	NA	8,383	23	86	8,492
1955 Total	421	254	8,799	9,474	NA	9,474	20	56	9,550
1960 Total	75	359	10,125	10,560	NA	10,560	10	26	10,596
1965 Total	16	517	11,866	12,399	NA	12,399	10	24	12,432
1970 Total	7	745	15,310	16,062	NA	16,062	11	26	16,098
1975 Total	1	595	17,615	18,210	NA	18,210	10	24	18,245
1980 Total	(g)	650	19,009	19,659	NA	19,659	11	27	19,697
1985 Total	(g)	519	19,472	19,992	50	20,041	14	32	20,088
1990 Total	(g)	680	21,626	22,306	60	22,366	16	37	22,420
1995 Total	(g)	724	22,959	23,683	112	23,796	17	38	23,851
2000 Total	(g)	672	25,689	26,361	135	26,495	18	42	26,555
2001 Total	(g)	658	25,419	26,077	142	26,219	20	43	26,282
2002 Total	(g)	699	25,917	26,616	170	26,785	19	42	26,846
2003 Total	(g)	627	25,969	26,596	230	26,826	23	51	26,900
2004 Total	(g)	602	26,872	27,474	290	27,764	25	54	27,843
2005 Total	(g)	624	27,236	27,860	339	28,199	26	56	28,280
2006 Total	(g)	625	27,538	28,163	475	28,638	25	54	28,717
2007 Total	(g)	663	27,506	28,170	602	28,772	28	60	28,859
2008 Total	(g)	692	25,888	26,580	825	27,404	26	56	27,486
2009 Total	(g)	715	24,955	25,670	935	26,605	27	56	26,687
2010 Total	(g)	719	25,184	25,903	1,075	26,978	26	55	27,059
2011 Total	(g)	734	24,740	25,474	1,158	26,632	26	54	26,712
2012 January	(g)	84	1,932	2,016	87	2,104	2	4	2,110
February	(g)	77	1,875	1,952	89	2,041	2	4	2,047
March	(g)	65	2,022	2,087	99	2,186	2	4	2,192
April	(g)	60	2,000	2,060	98	2,158	2	4	2,164
May	(g)	57	2,102	2,159	104	2,263	2	4	2,269
June	(g)	57	2,071	2,128	102	2,230	2	4	2,236
July	(g)	63	2,114	2,177	98	2,275	2	4	2,282
August	(g)	61	2,160	2,221	106	2,327	2	4	2,333
September	(g)	55	1,977	2,032	92	2,124	2	4	2,130
October	(g)	58	2,055	2,113	100	2,213	2	4	2,219
November	(g)	66	1,949	2,015	92	2,107	2	4	2,113
December	(g)	77	1,946	2,022	92	2,114	2	4	2,121
Total	(g)	780	24,202	24,982	1,159	26,140	25	51	26,216
2013 January	(g)	102	1,947	R 2,048	92	2,141	2	5	2,147
February	(g)	91	1,770	1,860	86	1,947	2	4	1,953
March	(g)	89	2,039	2,128	101	2,229	2	4	2,236
April	(g)	69	2,009	2,078	102	2,180	2	4	2,187
May	(g)	61	2,114	R 2,175	106	2,282	2	4	R 2,288
June	(g)	61	2,065	R 2,127	108	R 2,235	2	5	2,241
July	(g)	67	R 2,176	R 2,244	107	R 2,350	2	5	R 2,357
August	(g)	68	2,180	R 2,248	105	2,352	2	4	2,359
September	(g)	62	2,041	2,103	108	R 2,211	2	4	2,217
October	(g)	65	2,122	2,187	116	2,303	2	4	2,309
November	(g)	82	R 2,029	R 2,111	107	2,218	2	4	2,224
December	(g)	103	R 2,009	R 2,112	114	R 2,226	2	5	R 2,233
Total	(g)	920	R 24,501	R 25,421	1,251	R 26,672	26	R 52	26,751
2014 January	(g)	112	R 1,927	R 2,039	98	R 2,138	R 3	5	R 2,145
February	(g)	96	R 1,817	R 1,913	95	R 2,008	2	5	R 2,015
March	(g)	90	R 2,041	R 2,131	100	R 2,230	2	5	R 2,237
April	(g)	70	R 2,057	R 2,127	104	R 2,231	2	4	R 2,237
May	(g)	65	R 2,120	R 2,185	111	R 2,296	2	5	R 2,303
June	(g)	62	R 2,091	R 2,154	106	R 2,260	2	4	R 2,266
July	(g)	67	R 2,193	R 2,260	111	R 2,371	2	5	R 2,378
August	(g)	69	R 2,192	R 2,261	111	R 2,372	2	4	R 2,379
September	(g)	65	R 2,031	R 2,096	105	R 2,201	2	4	R 2,207
October	(g)	68	R 2,180	R 2,248	113	R 2,360	2	4	R 2,367
November	(g)	83	R 2,038	R 2,121	107	R 2,229	2	5	R 2,236
December	(g)	94	2,135	2,229	112	2,341	2	4	2,347
Total	(g)	942	24,822	25,764	1,273	27,037	27	54	27,118

^a See "Primary Energy Consumption" in Glossary.

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

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

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

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

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

section.

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

R=Revised; NA=Not available.

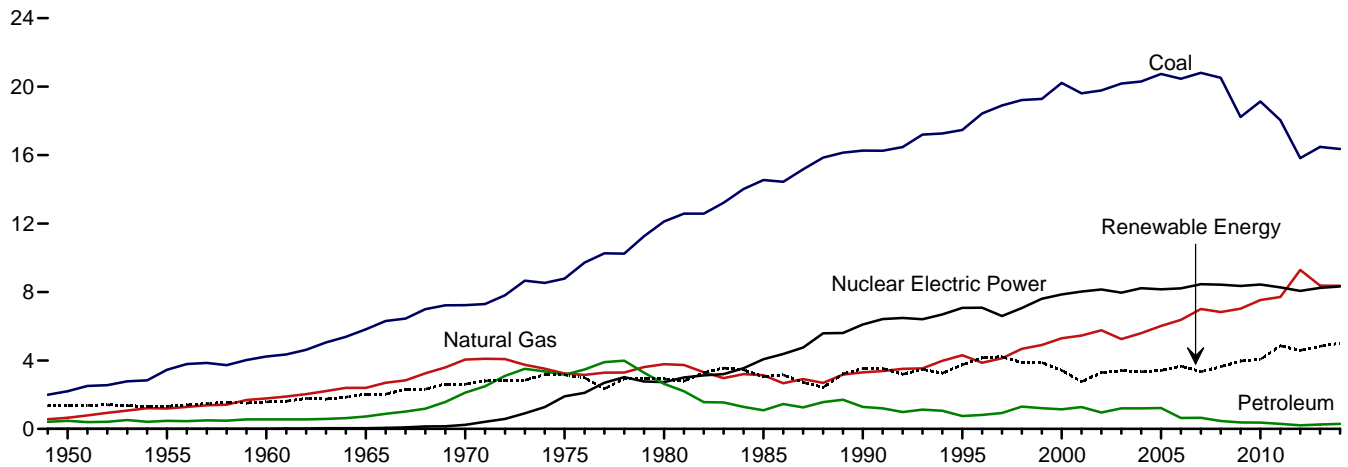
Notes: • Data are estimates, except for coal totals through 1977; and electricity retail sales beginning in 1979. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the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

Web 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.

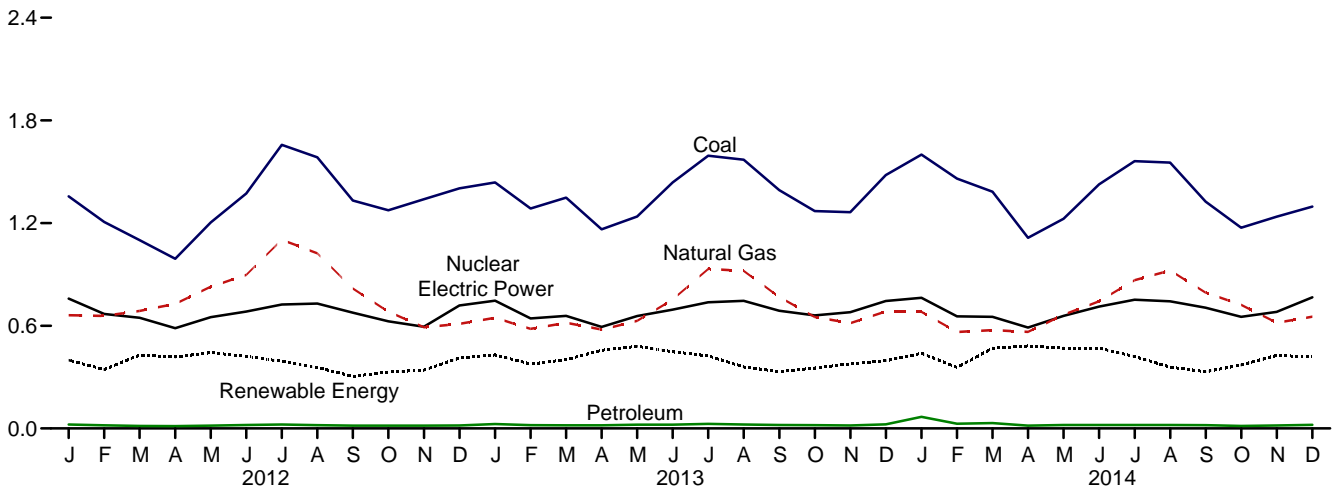
Sources: See end of section.

Figure 2.6 Electric Power Sector Energy Consumption
(Quadrillion Btu)

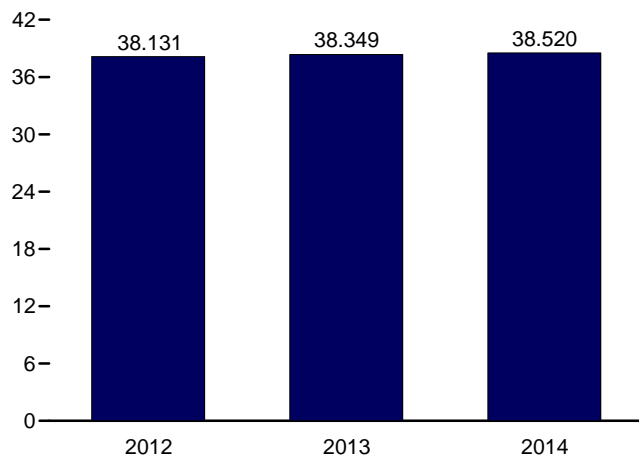
By Major Source, 1949–2014



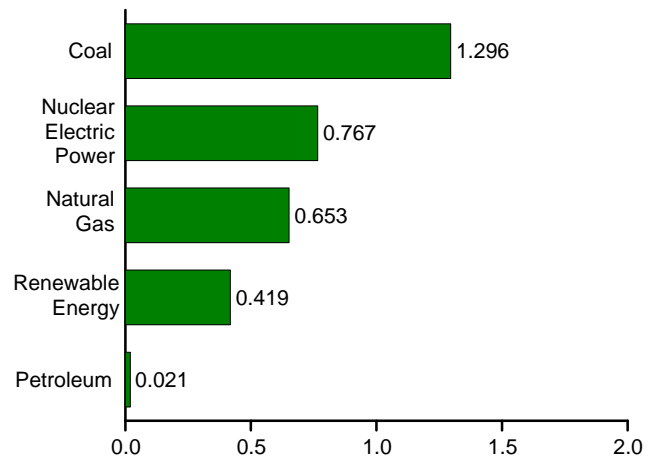
By Major Source, Monthly



Total, January–December



By Major Source, December 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 ^a												Elec- tricity Net Imports ^e	Total Primary
	Fossil Fuels				Nuclear Electric Power	Renewable Energy ^b								
	Coal	Natural Gas ^c	Petro- leum	Total		Hydro- electric Power ^d	Geo- thermal	Solar/ PV	Wind	Bio- mass	Total			
1950 Total	2,199	651	472	3,322	0	1,346	NA	NA	NA	5	1,351	6	4,679	
1955 Total	3,458	1,194	471	5,123	0	1,322	NA	NA	NA	3	1,325	14	6,461	
1960 Total	4,228	1,785	553	6,565	6	1,569	(s)	NA	NA	2	1,571	15	8,158	
1965 Total	5,821	2,395	722	8,938	43	2,026	2	NA	NA	3	2,031	(s)	11,012	
1970 Total	7,227	4,054	2,117	13,399	239	2,600	6	NA	NA	4	2,609	7	16,253	
1975 Total	8,786	3,240	3,166	15,191	1,900	3,122	34	NA	NA	2	3,158	21	20,270	
1980 Total	12,123	3,778	2,634	18,534	2,739	2,867	53	NA	NA	4	2,925	71	24,269	
1985 Total	14,542	3,135	1,090	18,767	4,076	2,937	97	(s)	(s)	14	3,049	140	26,032	
1990 Total ^f	16,261	3,309	1,289	20,859	6,104	3,014	161	4	29	317	3,524	8	30,495	
1995 Total	17,466	4,302	755	22,523	7,075	3,149	138	5	33	422	3,747	134	33,479	
2000 Total	20,220	5,293	1,144	26,658	7,862	2,768	144	5	57	453	3,427	115	38,062	
2001 Total	19,614	5,458	1,276	26,348	8,029	2,209	142	6	70	337	2,763	75	37,215	
2002 Total	19,783	5,767	961	26,511	8,145	2,650	147	6	105	380	3,288	72	38,016	
2003 Total	20,185	5,246	1,205	26,636	7,960	2,749	146	5	113	397	3,411	22	38,028	
2004 Total	20,305	5,595	1,201	27,101	8,223	2,655	148	6	142	388	3,339	39	38,701	
2005 Total	20,737	6,015	1,222	27,974	8,161	2,670	147	6	178	406	3,406	85	39,626	
2006 Total	20,462	6,375	637	27,474	8,215	2,839	145	5	264	412	3,665	63	39,417	
2007 Total	20,808	7,005	648	28,461	8,459	2,430	145	6	341	423	3,345	107	40,371	
2008 Total	20,513	6,829	459	27,801	8,426	2,494	146	9	546	435	3,630	112	39,969	
2009 Total	18,225	7,022	382	25,630	8,355	2,650	146	9	721	441	3,967	116	38,069	
2010 Total	19,133	7,528	370	27,031	8,434	2,521	148	12	923	459	4,064	89	39,619	
2011 Total	18,035	7,712	295	26,042	8,269	3,085	149	17	1,167	437	4,855	127	39,293	
2012 January	1,356	662	23	2,041	758	217	12	1	130	39	398	11	3,209	
February	1,207	657	18	1,882	669	191	11	1	105	36	344	9	2,905	
March	1,100	687	14	1,802	647	244	12	2	133	37	429	10	2,888	
April	991	728	14	1,733	585	248	12	3	121	33	417	13	2,749	
May	1,204	828	17	2,048	651	271	12	4	119	36	442	15	3,156	
June	1,373	897	20	2,290	683	252	12	5	114	38	421	14	3,407	
July	1,658	1,102	23	2,783	724	251	13	5	84	40	392	19	3,919	
August	1,585	1,023	19	2,627	729	218	12	4	81	40	355	19	3,730	
September	1,331	818	16	2,166	676	166	12	4	84	38	304	14	3,159	
October	1,275	682	16	1,973	626	155	13	4	120	38	330	12	2,941	
November	1,340	591	16	1,947	594	176	13	3	111	38	341	13	2,895	
December	1,403	611	17	2,031	719	217	13	3	138	40	412	11	3,173	
Total	15,821	9,287	214	25,322	8,062	2,606	148	40	1,339	453	4,586	161	38,131	
2013 January	R 1,438	R 646	25	R 2,109	R 746	R 234	R 13	3	R 141	R 39	R 429	R 12	3,297	
February	R 1,286	R 582	19	R 1,886	R 642	R 191	12	4	R 134	R 35	R 376	R 12	R 2,917	
March	R 1,349	R 618	18	R 1,985	R 658	R 193	R 13	6	R 150	R 39	R 402	R 13	3,057	
April	R 1,164	R 577	18	R 1,759	R 593	R 237	R 12	R 6	R 167	R 35	R 457	R 8	R 2,817	
May	R 1,238	R 628	22	R 1,888	R 657	R 268	R 12	R 7	R 155	R 37	R 480	R 13	R 3,038	
June	R 1,437	R 753	22	R 2,212	R 694	R 258	R 12	R 8	R 131	R 39	R 448	R 15	R 3,369	
July	R 1,594	R 931	R 27	R 2,552	R 737	R 257	13	8	R 106	41	R 424	R 16	R 3,729	
August	R 1,570	R 921	23	R 2,513	R 745	204	13	9	R 92	R 42	R 360	R 17	R 3,636	
September	R 1,393	R 768	R 20	R 2,181	R 688	R 160	R 12	9	111	39	331	R 14	R 3,214	
October	R 1,270	R 651	R 20	R 1,941	R 660	R 162	R 13	9	130	39	R 353	R 12	R 2,966	
November	R 1,263	R 615	R 18	R 1,896	R 679	167	12	R 8	151	R 41	377	R 14	R 2,966	
December	R 1,481	R 684	R 24	R 2,189	R 745	R 198	R 13	R 8	R 133	R 43	R 396	R 12	R 3,341	
Total	R 16,481	R 8,376	255	R 25,113	R 8,244	2,529	R 151	R 83	R 1,600	R 470	R 4,833	R 159	R 38,349	
2014 January	R 1,600	R 681	R 68	R 2,349	R 763	R 203	R 14	R 8	R 172	43	R 439	13	R 3,565	
February	R 1,460	R 564	27	R 2,051	R 655	R 164	12	8	133	39	R 357	9	R 3,071	
March	R 1,383	R 574	31	R 1,988	R 652	229	13	13	169	44	R 469	11	R 3,120	
April	R 1,114	R 565	17	R 1,695	R 589	237	13	15	R 179	38	R 482	10	R 2,776	
May	R 1,225	R 665	R 20	R 1,910	R 658	250	13	17	148	40	468	14	R 3,050	
June	R 1,426	R 743	20	R 2,188	R 712	244	13	19	R 150	43	R 469	13	R 3,383	
July	R 1,562	R 866	20	R 2,448	R 752	R 230	13	17	115	45	R 420	16	R 3,636	
August	R 1,554	R 923	R 21	R 2,497	R 743	186	13	18	97	44	R 359	18	R 3,617	
September	R 1,325	R 793	19	R 2,137	R 706	R 150	13	R 17	109	41	R 331	16	R 3,190	
October	R 1,173	R 722	15	R 1,910	R 652	R 161	13	16	R 139	42	R 371	14	R 2,947	
November	R 1,237	R 617	17	R 1,872	R 681	R 176	R 14	13	R 182	R 43	R 427	16	R 2,996	
December	1,296	653	21	1,969	767	212	14	9	140	44	419	15	3,169	
Total	16,356	8,366	294	25,016	8,329	2,443	159	170	1,733	507	5,011	164	38,520	

^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: See end of section.

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.

Table 2.2 Sources

Coal

1949–2007: Residential sector coal consumption data from Table 6.2 are converted to Btu by multiplying by the

residential and commercial sectors coal consumption heat content factors in Table A5.

Natural Gas

1949–1979: Residential sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4.

1980 forward: Residential sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4. The residential sector portion of supplemental gaseous fuels data in Btu is estimated using the method described in Note 3, "Supplemental Gaseous Fuels," at the end of Section 4. Residential sector natural gas (excluding supplemental gaseous fuels) consumption is equal to residential sector natural gas (including supplemental gaseous fuels) consumption minus the residential sector portion of supplemental gaseous fuels.

Petroleum

1949 forward: Table 3.8a.

Fossil Fuels Total

1949–2007: Residential sector total fossil fuels consumption is the sum of the residential sector consumption values for coal, natural gas, and petroleum.

2008 forward: Residential sector total fossil fuels consumption is the sum of the residential sector consumption values for natural gas and petroleum.

Renewable Energy

1949 forward: Table 10.2a.

Total Primary Energy Consumption

1949 forward: Residential sector total primary energy consumption is the sum of the residential sector consumption values for fossil fuels and renewable energy.

Electricity Retail Sales

1949 forward: Residential sector electricity retail sales from Table 7.6 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

Electrical System Energy Losses

1949 forward: Total electrical system energy losses are equal to electric power sector total primary energy consumption from Table 2.6 minus total electricity retail sales from Table 7.6 (converted to Btu by multiplying by the electricity heat content factor in Table A6). Total electrical system energy losses are allocated to the residential sector in proportion to the residential sector's share of total electricity retail sales from Table 7.6. See Note 1, "Electrical System Energy Losses," at end of section.

Total Energy Consumption

1949 forward: Residential sector total energy consumption is the sum of the residential sector consumption values for

total primary energy, electricity retail sales, and electrical system energy losses.

Table 2.3 Sources

Coal

1949 forward: Commercial sector coal consumption data from Table 6.2 are converted to Btu by multiplying by the residential and commercial sectors coal consumption heat content factors in Table A5.

Natural Gas

1949–1979: Commercial sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4.

1980 forward: Commercial sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4. The commercial sector portion of supplemental gaseous fuels data in Btu is estimated using the method described in Note 3, “Supplemental Gaseous Fuels,” at the end of Section 4. Commercial sector natural gas (excluding supplemental gaseous fuels) consumption is equal to commercial sector natural gas (including supplemental gaseous fuels) consumption minus the commercial sector portion of supplemental gaseous fuels.

Petroleum

1949–1992: Table 3.8a.

1993–2008: The commercial sector share of motor gasoline consumption is equal to commercial sector motor gasoline consumption from Table 3.7a divided by motor gasoline product supplied from Table 3.5. Commercial sector fuel ethanol (including denaturant) consumption is equal to total fuel ethanol (including denaturant) consumption from Table 10.3 multiplied by the commercial sector share of motor gasoline consumption. Commercial sector petroleum (excluding biofuels) consumption is equal to commercial sector petroleum (including biofuels) consumption from Table 3.8a minus commercial sector fuel ethanol (including denaturant) consumption.

2009 forward: Commercial sector fuel ethanol (minus denaturant) consumption is equal to total fuel ethanol (minus denaturant) consumption from Table 10.3 multiplied by the commercial sector share of motor gasoline consumption (see 1993–2008 sources above). Commercial sector petroleum (excluding biofuels) consumption is equal to commercial sector petroleum (including biofuels) consumption from Table 3.8a minus commercial sector fuel ethanol (minus denaturant) consumption.

Fossil Fuels Total

1949 forward: Commercial sector total fossil fuels consumption is the sum of the commercial sector consumption values for coal, natural gas, and petroleum.

Renewable Energy

1949 forward: Table 10.2a.

Total Primary Energy Consumption

1949 forward: Commercial sector total primary energy consumption is the sum of the commercial sector consumption values for fossil fuels and renewable energy.

Electricity Retail Sales

1949 forward: Commercial sector electricity retail sales from Table 7.6 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

Electrical System Energy Losses

1949 forward: Total electrical system energy losses are equal to electric power sector total primary energy consumption from Table 2.6 minus total electricity retail sales from Table 7.6 (converted to Btu by multiplying by the electricity heat content factor in Table A6). Total electrical system energy losses are allocated to the commercial sector in proportion to the commercial sector’s share of total electricity retail sales from Table 7.6. See Note 1, “Electrical System Energy Losses,” at end of section.

Total Energy Consumption

1949 forward: Commercial sector total energy consumption is the sum of the commercial sector consumption values for total primary energy, electricity retail sales, and electrical system energy losses.

Table 2.4 Sources

Coal

1949 forward: Coke plants coal consumption from Table 6.2 is converted to Btu by multiplying by the coke plants coal consumption heat content factors in Table A5. Other industrial coal consumption from Table 6.2 is converted to Btu by multiplying by the other industrial coal consumption heat content factors in Table A5. Industrial sector coal consumption is equal to coke plants coal consumption and other industrial coal consumption.

Natural Gas

1949–1979: Industrial sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4.

1980 forward: Industrial sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4. The industrial sector portion of supplemental gaseous fuels data in Btu is estimated using the method described in Note 3, “Supplemental Gaseous Fuels,” at the end of Section 4. Industrial sector natural gas (excluding supplemental gaseous fuels) consumption is equal to industrial sector natural gas (including supplemental gaseous fuels) consumption minus the industrial sector portion of supplemental gaseous fuels.

Petroleum

1949–1992: Table 3.8b.

1993–2008: The industrial sector share of motor gasoline consumption is equal to industrial sector motor gasoline consumption from Table 3.7b divided by motor gasoline product supplied from Table 3.5. Industrial sector fuel ethanol (including denaturant) consumption is equal to total fuel ethanol (including denaturant) consumption from Table 10.3 multiplied by the industrial sector share of motor gasoline consumption. Industrial sector petroleum (excluding biofuels) consumption is equal to industrial sector petroleum (including biofuels) consumption from Table 3.8b minus industrial sector fuel ethanol (including denaturant) consumption.

2009 forward: Industrial sector fuel ethanol (minus denaturant) consumption is equal to total fuel ethanol (minus denaturant) consumption from Table 10.3 multiplied by the industrial sector share of motor gasoline consumption (see 1993–2008 sources above). Industrial sector petroleum (excluding biofuels) consumption is equal to industrial sector petroleum (including biofuels) consumption from Table 3.8b minus industrial sector fuel ethanol (minus denaturant) consumption.

Coal Coke Net Imports

1949 forward: Coal coke net imports are equal to coal coke imports from Table 1.4a minus coal coke exports from Table 1.4b.

Fossil Fuels Total

1949 forward: Industrial sector total fossil fuels consumption is the sum of the industrial sector consumption values for coal, natural gas, and petroleum, plus coal coke net imports.

Renewable Energy

1949 forward: Table 10.2b.

Total Primary Energy Consumption

1949 forward: Industrial sector total primary energy consumption is the sum of the industrial sector consumption values for fossil fuels and renewable energy.

Electricity Retail Sales

1949 forward: Industrial sector electricity retail sales from Table 7.6 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

Electrical System Energy Losses

1949 forward: Total electrical system energy losses are equal to electric power sector total primary energy consumption from Table 2.6 minus total electricity retail sales from Table 7.6 (converted to Btu by multiplying by the electricity heat content factor in Table A6). Total electrical system energy losses are allocated to the industrial sector in proportion to the industrial sector's share of total electricity retail sales from Table 7.6. See Note 1, "Electrical System Energy Losses," at end of section.

Total Energy Consumption

1949 forward: Industrial sector total energy consumption is the sum of the industrial sector consumption values for total primary energy, electricity retail sales, and electrical system energy losses.

Table 2.5 Sources

Coal

1949–1977: Transportation sector coal consumption data from Table 6.2 are converted to Btu by multiplying by the other industrial sector coal consumption heat content factors in Table A5.

Natural Gas

1949 forward: Transportation sector natural gas consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4.

Petroleum

1949–1992: Table 3.8c.

1993–2008: The transportation sector share of motor gasoline consumption is equal to transportation sector motor gasoline consumption from Table 3.7c divided by motor gasoline product supplied from Table 3.5. Transportation sector fuel ethanol (including denaturant) consumption is equal to total fuel ethanol (including denaturant) consumption from Table 10.3 multiplied by the transportation sector share of motor gasoline consumption. Transportation sector petroleum (excluding biofuels) consumption is equal to transportation sector petroleum (including biofuels) consumption from Table 3.8c minus transportation sector fuel ethanol (including denaturant) consumption.

2009 forward: Transportation sector fuel ethanol (minus denaturant) consumption is equal to total fuel ethanol (minus denaturant) consumption from Table 10.3 multiplied by the transportation sector share of motor gasoline consumption (see 1993–2008 sources above). Transportation sector petroleum (excluding biofuels) consumption is equal to: transportation sector petroleum (including biofuels) consumption from Table 3.8c; minus transportation sector fuel ethanol (minus denaturant) consumption; minus refinery and blender net inputs of renewable fuels (excluding fuel ethanol) from U.S. Energy Information Administration, *Petroleum Supply Annual/Petroleum Supply Monthly*, Table 1 (data are converted to Btu by multiplying by the biodiesel heat content factor in Table A1).

Fossil Fuels Total

1949–1977: Transportation sector total fossil fuels consumption is the sum of the transportation sector consumption values for coal, natural gas, and petroleum.

1978 forward: Transportation sector total fossil fuels consumption is the sum of the transportation sector consumption values for natural gas and petroleum.

Renewable Energy

1981 forward: Table 10.2b.

Total Primary Energy Consumption

1949–1980: Transportation sector total primary energy consumption is equal to transportation sector fossil fuels consumption.

1981 forward: Transportation sector total primary energy consumption is the sum of the transportation sector consumption values for fossil fuels and renewable energy.

Electricity Retail Sales

1949 forward: Transportation sector electricity retail sales from Table 7.6 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

Electrical System Energy Losses

1949 forward: Total electrical system energy losses are equal to electric power sector total primary energy consumption from Table 2.6 minus total electricity retail sales from Table 7.6 (converted to Btu by multiplying by the electricity heat content factor in Table A6). Total electrical system energy losses are allocated to the transportation sector in proportion to the transportation sector's share of total electricity retail sales from Table 7.6. See Note 1, "Electrical System Energy Losses," at end of section.

Total Energy Consumption

1949 forward: Transportation sector total energy consumption is the sum of the transportation sector consumption values for total primary energy, electricity retail sales, and electrical system energy losses.

Table 2.6 Sources

Coal

1949 forward: Electric power sector coal consumption data from Table 6.2 are converted to Btu by multiplying by the electric power sector coal consumption heat content factors in Table A5.

Natural Gas

1949–1979: Electric power sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas electric power sector consumption heat content factors in Table A4.

1980 forward: Electric power sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas electric power sector consumption heat content factors in Table A4. The electric power sector portion of supplemental gaseous fuels data in Btu is estimated using the method described in Note 3, "Supplemental Gaseous Fuels," at the end of Section 4. Electric power sector natural gas (excluding supplemental gaseous fuels) consumption is equal to electric power sector natural gas (including supplemental gaseous fuels) consumption minus the electric power sector portion of supplemental gaseous fuels.

Petroleum

1949 forward: Table 3.8c.

Fossil Fuels Total

1949 forward: Electric power sector total fossil fuels consumption is the sum of the electric power sector consumption values for coal, natural gas, and petroleum.

Nuclear Electric Power

1949 forward: Nuclear electricity net generation data from Table 7.2a are converted to Btu by multiplying by the nuclear heat rate factors in Table A6.

Renewable Energy

1949 forward: Table 10.2c.

Electricity Net Imports

1949 forward: Electricity net imports are equal to electricity imports from Table 1.4a minus electricity exports from Table 1.4b.

Total Primary Energy Consumption

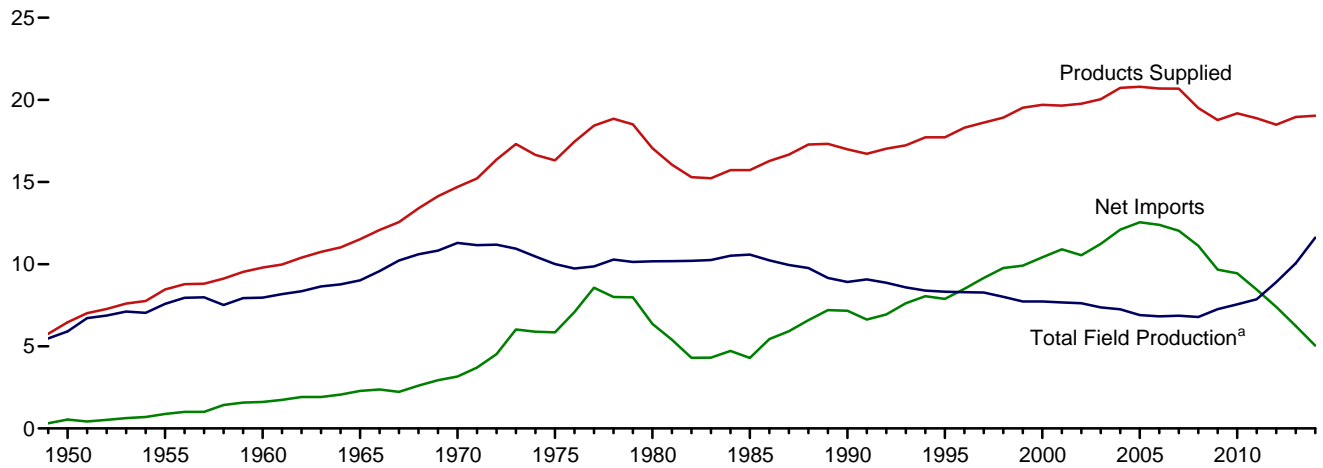
1949 forward: Electric power sector total primary energy consumption is the sum of the electric power sector consumption values for fossil fuels, nuclear electric power, and renewable energy, plus electricity net imports.

THIS PAGE INTENTIONALLY LEFT BLANK

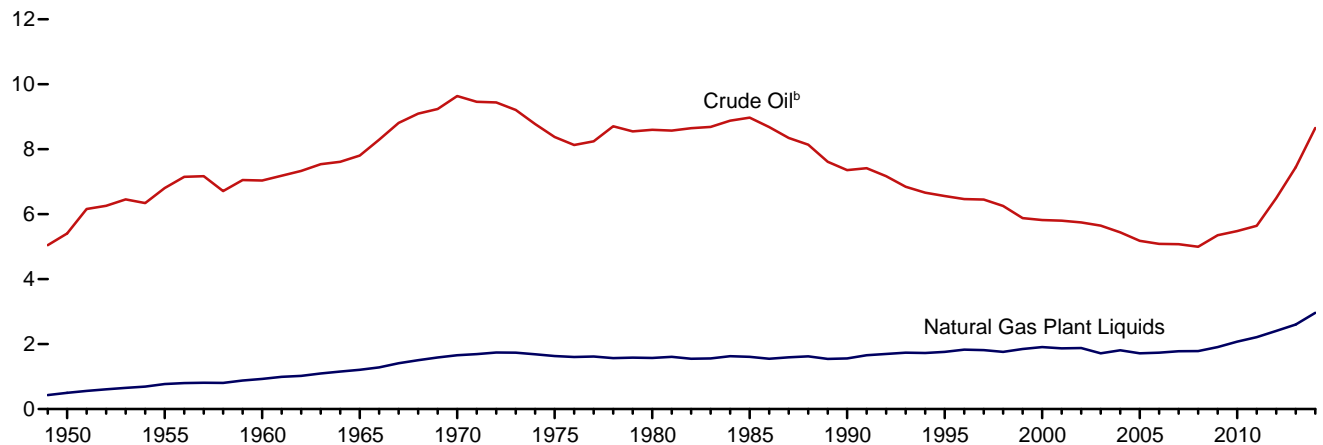
3. Petroleum

Figure 3.1 Petroleum Overview
(Million Barrels per Day)

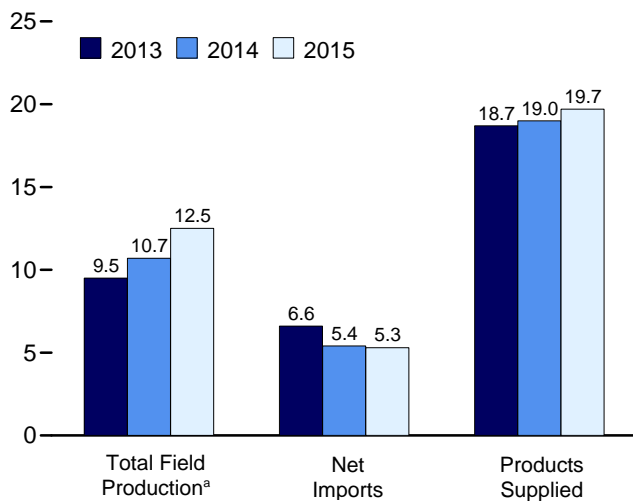
Overview, 1949–2014



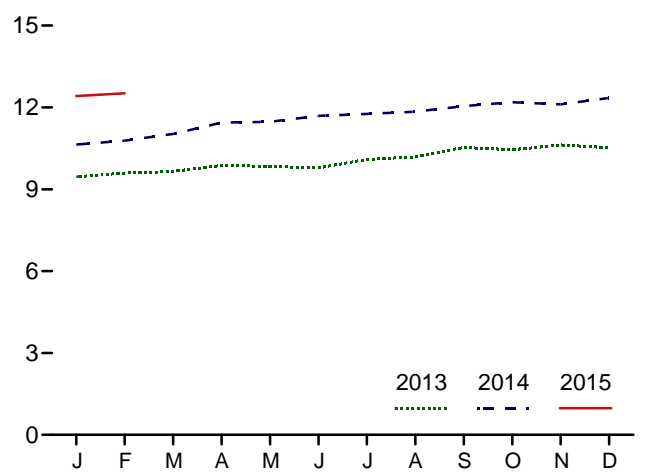
Crude Oil and Natural Gas Plant Liquids Field Production, 1949–2014



Overview, January–February



Total Field Production,^a Monthly



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

^b Includes lease condensate.

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

Table 3.1 Petroleum Overview
(Thousand Barrels per Day)

	Field Production ^a					Renewable Fuels and Oxygenates ^f	Processing Gain ^g	Trade			Stock Change ^j	Adjustments ^{c,k}	Petroleum Products Supplied
	Crude Oil ^{b,c}			NGL ^e	Total ^c			Im-ports ^h	Ex-ports	Net Imports ⁱ			
	48 States ^d	Alaska	Total										
1950 Average	5,407	0	5,407	499	5,906	NA	2	850	305	545	-56	-51	6,458
1955 Average	6,807	0	6,807	771	7,578	NA	34	1,248	368	880	(s)	-37	8,455
1960 Average	7,034	2	7,035	929	7,965	NA	146	1,815	202	1,613	-83	-8	9,797
1965 Average	7,774	30	7,804	1,210	9,014	NA	220	2,468	187	2,281	-8	-10	11,512
1970 Average	9,408	229	9,637	1,660	11,297	NA	359	3,419	259	3,161	103	-16	14,697
1975 Average	8,183	191	8,375	1,633	10,007	NA	460	6,056	209	5,846	32	41	16,322
1980 Average	6,980	1,617	8,597	1,573	10,170	NA	597	6,909	544	6,365	140	64	17,056
1985 Average	7,146	1,825	8,971	1,609	10,581	NA	557	5,067	781	4,286	-103	200	15,726
1990 Average	5,582	1,773	7,355	1,559	8,914	NA	683	8,018	857	7,161	107	338	16,988
1995 Average	5,076	1,484	6,560	1,762	8,322	NA	774	8,835	949	7,886	-246	496	17,725
2000 Average	4,851	970	5,822	1,911	7,733	NA	948	11,459	1,040	10,419	-69	532	19,701
2001 Average	4,839	963	5,801	1,868	7,670	NA	903	11,871	971	10,900	325	501	19,649
2002 Average	4,759	985	5,744	1,880	7,624	NA	957	11,530	984	10,546	-105	529	19,761
2003 Average	4,675	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	19,771
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 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 6,535	549	R 7,083	2,379	R 9,462	891	1,061	10,089	2,881	7,208	98	R 226	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 6,637	533	R 7,169	2,485	R 9,654	950	1,012	9,534	3,111	6,423	92	R 584	18,531
April	R 6,839	523	R 7,362	2,513	R 9,875	971	1,093	10,168	3,235	6,933	491	R 204	18,584
May	R 6,767	515	R 7,282	2,556	R 9,839	1,011	1,039	10,174	3,472	6,703	291	R 478	18,779
June	R 6,755	486	R 7,241	2,542	R 9,782	1,034	1,087	9,882	3,594	6,288	72	R 686	18,806
July	R 6,981	493	R 7,474	2,618	R 10,092	1,021	1,132	10,300	3,851	6,449	-37	R 526	19,257
August	R 7,039	428	R 7,467	2,715	R 10,183	1,004	1,115	10,249	3,725	6,524	162	R 461	19,125
September	R 7,231	511	R 7,742	2,791	R 10,533	998	1,136	10,036	3,632	6,405	353	R 532	19,252
October	R 7,161	521	R 7,682	2,766	R 10,448	1,052	1,085	9,608	4,074	5,535	-754	R 439	19,312
November	R 7,338	536	R 7,874	2,747	R 10,621	1,083	1,126	9,385	3,967	5,419	-688	R 554	19,491
December	R 7,314	546	R 7,860	2,660	R 10,520	1,102	1,179	9,539	4,602	4,938	-903	R 341	18,983
Average	R 6,931	515	R 7,446	2,606	R 10,052	1,002	1,087	9,859	3,621	6,237	-127	R 456	18,961
2014 January	RE 7,459	E 542	RE 8,001	2,639	RE 10,640	1,002	1,118	9,264	4,021	5,243	-561	R 356	18,921
February	RE 7,584	E 515	RE 8,099	2,684	RE 10,783	1,019	1,080	9,151	3,611	5,540	14	R 584	18,994
March	RE 7,704	E 530	RE 8,234	2,793	RE 11,027	1,025	1,009	9,240	3,858	5,382	323	R 406	18,526
April	RE 7,988	E 537	RE 8,524	2,919	RE 11,443	1,044	1,080	9,584	3,966	5,618	906	R 505	18,783
May	RE 8,067	E 524	RE 8,591	2,880	RE 11,471	1,058	1,027	9,380	4,121	5,260	935	R 634	18,516
June	RE 8,163	E 485	RE 8,647	3,044	RE 11,692	1,088	1,125	8,815	4,156	4,659	150	R 419	18,833
July	RE 8,274	E 422	RE 8,696	3,061	RE 11,758	1,092	1,108	9,472	4,479	4,994	130	R 342	19,164
August	RE 8,359	E 398	RE 8,757	3,087	RE 11,844	1,035	1,162	9,309	4,533	4,776	127	R 586	19,276
September	RE 8,446	E 477	RE 9,023	3,125	RE 12,049	1,048	1,010	9,152	3,962	5,190	445	R 187	19,039
October	RE 8,560	E 500	RE 9,060	3,126	RE 12,186	1,037	1,024	8,905	4,112	4,793	-158	R 431	19,630
November	RE 8,522	E 517	RE 9,039	3,073	RE 12,112	1,052	1,180	8,967	4,370	4,598	393	R 658	19,206
December	RE 8,706	RE 520	RE 9,226	R 3,121	RE 12,347	R 1,140	R 1,105	R 9,387	R 4,906	R 4,481	R 471	R 914	R 19,517
Average	RE 8,156	E 497	RE 8,653	R 2,964	RE 11,617	R 1,054	R 1,086	R 9,221	R 4,180	R 5,041	R 264	R 502	R 19,035
2015 January	E 8,688	E 504	E 9,192	E 3,226	E 12,418	E 1,052	E 1,066	E 9,496	E 3,931	E 5,565	E 929	E 462	E 19,634
February	E 8,795	E 494	E 9,289	E 3,228	E 12,517	E 1,009	E 1,058	E 9,240	E 4,283	E 4,957	E 225	E 477	E 19,793
2-Month Average	E 8,739	E 499	E 9,238	E 3,227	E 12,465	E 1,032	E 1,062	E 9,375	E 4,098	E 5,276	E 595	E 469	E 19,709
2014 2-Month Average	E 7,519	E 529	E 8,048	2,660	E 10,708	1,010	1,100	9,211	3,826	5,384	-288	464	18,956
2013 2-Month Average	6,545	545	7,090	2,431	9,522	898	1,016	9,708	3,070	6,638	-299	327	18,699

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

^b Includes lease condensate.

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

^d United States excluding Alaska and Hawaii.

^e Natural gas plant liquids.

^f Renewable fuels and oxygenate plant net production.

^g Refinery and blender net production minus refinery and blender net inputs.

See Table 3.2.

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

ⁱ Net imports equal imports minus exports.

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

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

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

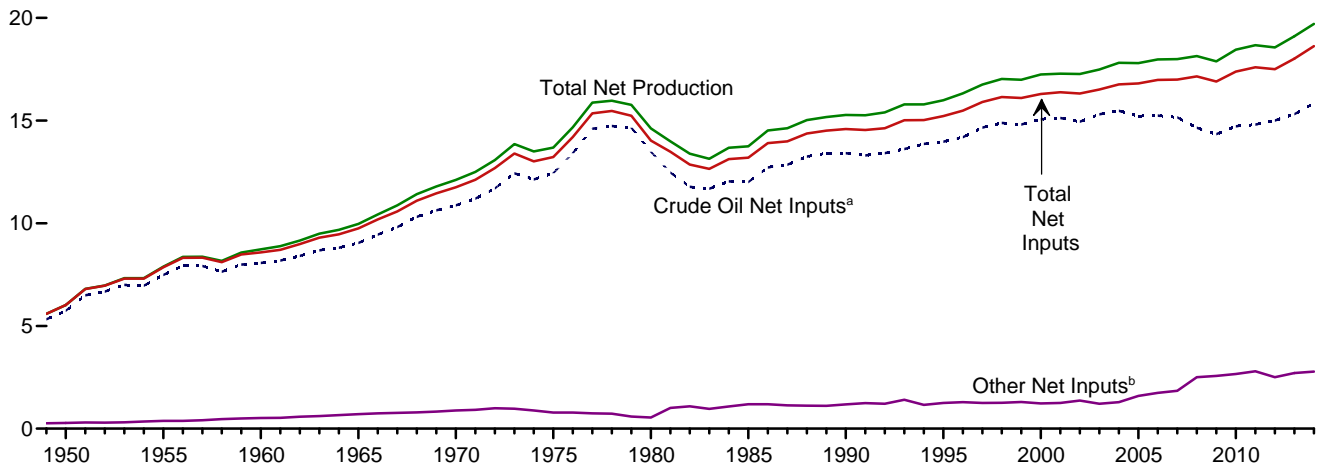
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web 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.

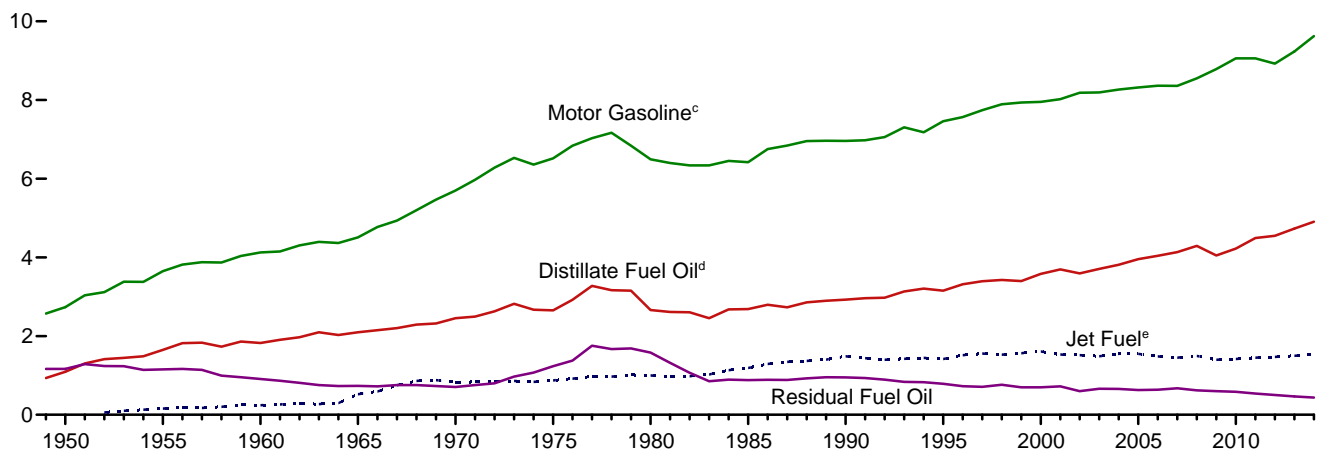
Sources: See end of section.

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

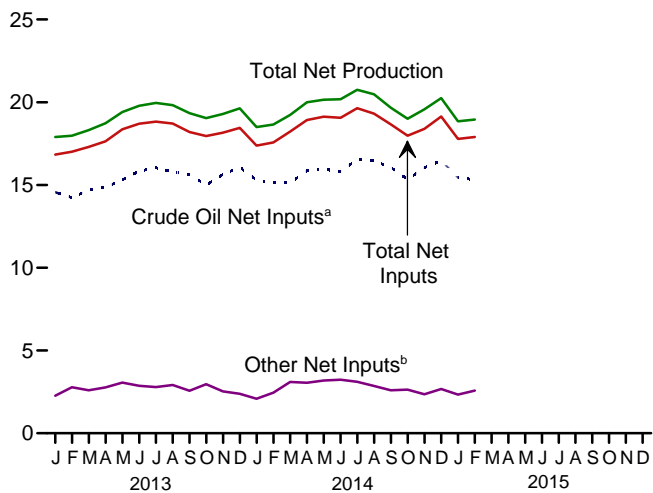
Net Inputs and Net Production, 1949–2014



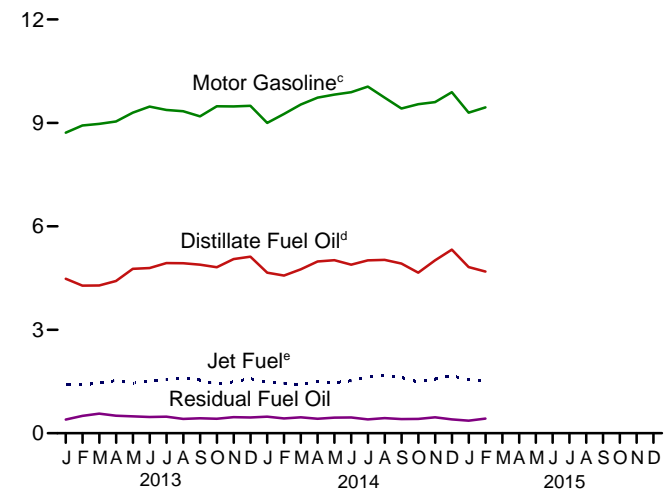
Net Production, Selected Products, 1949–2014



Net Inputs and Net Production, Monthly



Net Production, Selected Products, Monthly



^a Includes lease condensate.
^b Natural gas plant liquids and other liquids.
^c Beginning in 1993, includes fuel ethanol blended into motor gasoline.
^d Beginning in 2009, includes renewable diesel fuel (including biodie-

sel) blended into distillate fuel oil.
^e Beginning in 2005, includes kerosene-type jet fuel only.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
 Source: Table 3.2.

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

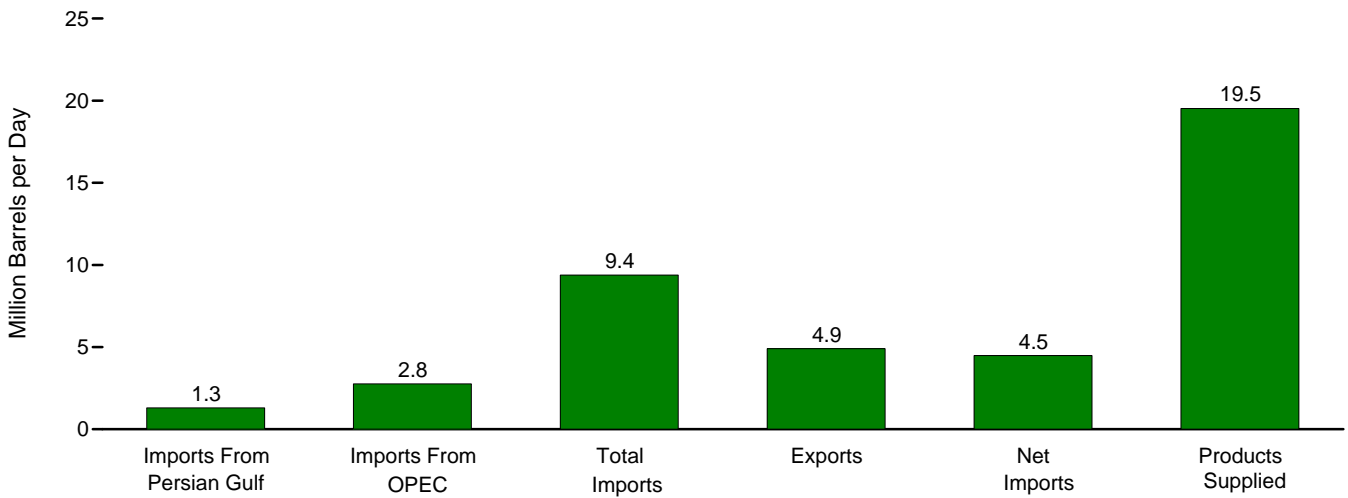
	Refinery and Blender Net Inputs ^a				Refinery and Blender Net Production ^b							
	Crude Oil ^d	NGL ^e	Other Liquids ^f	Total	Distillate Fuel Oil ^g	Jet Fuel ^h	LPG ^c		Motor Gasoline ⁱ	Residual Fuel Oil	Other Products ^k	Total
							Propane ^l	Total				
1950 Average	5,739	259	19	6,018	1,093	(^h)	NA	80	2,735	1,165	947	6,019
1955 Average	7,480	345	32	7,857	1,651	155	NA	119	3,648	1,152	1,166	7,891
1960 Average	8,067	455	61	8,583	1,823	241	NA	212	4,126	908	1,420	8,729
1965 Average	9,043	618	88	9,750	2,096	523	NA	293	4,507	736	1,814	9,970
1970 Average	10,870	763	121	11,754	2,454	827	NA	345	5,699	706	2,082	12,113
1975 Average	12,442	710	72	13,225	2,653	871	234	311	6,518	1,235	2,097	13,685
1980 Average	13,481	462	81	14,025	2,661	999	269	330	6,492	1,580	2,559	14,622
1985 Average	12,002	509	681	13,192	2,686	1,189	295	391	6,419	882	2,183	13,750
1990 Average	13,409	467	713	14,589	2,925	1,488	404	499	6,959	950	2,452	15,272
1995 Average	13,973	471	775	15,220	3,155	1,416	503	654	7,459	788	2,522	15,994
2000 Average	15,067	380	849	16,295	3,580	1,606	583	705	7,951	696	2,705	17,243
2001 Average	15,128	429	825	16,382	3,695	1,530	556	667	8,022	721	2,651	17,285
2002 Average	14,947	429	941	16,316	3,592	1,514	572	671	8,183	601	2,712	17,273
2003 Average	15,304	419	791	16,513	3,707	1,488	570	658	8,194	660	2,780	17,487
2004 Average	15,475	422	866	16,762	3,814	1,547	584	645	8,265	655	2,887	17,814
2005 Average	15,220	441	1,149	16,811	3,954	1,546	540	573	8,318	628	2,782	17,900
2006 Average	15,242	501	1,238	16,981	4,040	1,481	543	627	8,364	635	2,827	17,975
2007 Average	15,156	505	1,337	16,999	4,133	1,448	562	655	8,358	673	2,728	17,994
2008 Average	14,648	485	2,019	17,153	4,294	1,493	519	630	8,548	620	2,561	18,146
2009 Average	14,336	485	2,082	16,904	4,048	1,396	537	623	8,786	598	2,431	17,882
2010 Average	14,724	442	2,219	17,385	4,223	1,418	560	659	9,059	585	2,509	18,452
2011 Average	14,806	490	2,300	17,596	4,492	1,449	552	619	9,058	537	2,518	18,673
2012 Average	14,999	509	1,997	17,505	4,550	1,471	553	630	8,926	501	2,487	18,564
2013 January	14,567	543	1,727	16,838	4,480	1,414	543	410	8,718	395	2,481	17,898
February	14,230	506	2,270	17,007	4,281	1,402	536	477	8,926	504	2,383	17,973
March	14,703	490	2,108	17,301	4,284	1,461	559	648	8,971	569	2,379	18,312
April	14,864	429	2,342	17,636	4,416	1,524	561	814	9,042	508	2,424	18,729
May	15,305	379	2,683	18,367	4,767	1,450	574	860	9,299	488	2,542	19,407
June	15,833	426	2,443	18,702	4,792	1,522	566	841	9,472	469	2,694	19,789
July	16,042	427	2,358	18,827	4,934	1,561	575	858	9,374	481	2,750	19,959
August	15,793	444	2,471	18,708	4,930	1,605	584	829	9,340	417	2,702	19,823
September	15,636	560	2,006	18,202	4,888	1,544	574	630	9,190	434	2,652	19,338
October	14,991	567	2,398	17,956	4,815	1,426	542	418	9,484	420	2,478	19,041
November	15,633	595	1,935	18,163	5,050	1,491	557	301	9,476	466	2,505	19,290
December	16,069	589	1,791	18,449	5,122	1,586	600	376	9,495	455	2,594	19,628
Average	15,312	496	2,211	18,019	4,733	1,499	564	623	9,234	467	2,550	19,106
2014 January	15,300	524	1,555	17,379	4,656	1,477	584	414	8,999	480	2,471	18,497
February	15,122	531	1,919	17,572	4,572	1,450	573	518	9,259	428	2,426	18,652
March	15,126	495	2,605	18,226	4,754	1,417	564	676	9,533	463	2,393	19,235
April	15,867	433	2,620	18,919	4,980	1,496	600	864	9,733	422	2,504	19,999
May	15,945	427	2,757	19,129	5,020	1,468	597	887	9,823	455	2,504	20,156
June	15,818	430	2,808	19,055	4,889	1,519	597	872	9,890	456	2,553	20,180
July	16,532	415	2,694	19,641	5,014	1,637	614	910	10,052	402	2,733	20,749
August	16,455	426	2,432	19,314	5,030	1,672	602	890	9,734	439	2,712	20,476
September	16,060	543	2,058	18,660	4,923	1,616	552	619	9,418	410	2,684	19,670
October	15,338	593	2,046	17,977	4,656	1,481	528	451	9,541	416	2,457	19,002
November	16,043	656	1,695	18,394	5,012	1,570	603	387	9,603	461	2,542	19,574
December	R 16,470	R 659	R 2,012	R 19,141	R 5,323	R 1,665	R 635	R 404	R 9,891	R 401	R 2,562	R 20,246
Average	R 15,844	R 511	R 2,269	R 18,624	R 4,905	R 1,540	R 588	R 658	R 9,625	R 436	R 2,546	R 19,710
2015 January	E 15,444	F 585	E 1,753	F 17,782	E 4,818	E 1,551	E 553	F 405	E 9,298	E 362	E 2,414	E 18,848
February	E 15,322	F 543	E 2,034	F 17,898	E 4,688	E 1,538	E 513	F 493	E 9,448	E 424	E 2,366	E 18,956
2-Month Average	E 15,386	F 565	E 1,886	F 17,837	E 4,756	E 1,545	E 534	F 446	E 9,369	E 391	E 2,391	E 18,899
2014 2-Month Average	15,215	527	1,728	17,470	4,616	1,464	579	463	9,122	455	2,450	18,571
2013 2-Month Average	14,407	526	1,985	16,918	4,385	1,408	539	442	8,816	447	2,434	17,934

a See "Refinery and Blender Net Inputs" in Glossary.
b See "Refinery and Blender Net Production" in Glossary.
c Liquefied petroleum gases.
d Includes lease condensate.
e Natural gas plant liquids (liquefied petroleum gases and pentanes plus).
f Unfinished oils (net), other hydrocarbons, and hydrogen. Beginning in 1981, also includes aviation and motor gasoline blending components (net). Beginning in 1993, also includes oxygenates (net), including fuel ethanol. Beginning in 2009, also includes renewable diesel fuel (including biodiesel).
g Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
h Beginning in 1965, includes kerosene-type jet fuel. (Through 1964, kerosene-type jet fuel is included with kerosene in "Other Products.") For 1952–2004, also includes naphtha-type jet fuel. (Through 1951, naphtha-type jet fuel is included in the products from which it was blended—gasoline, kerosene, and distillate fuel oil. Beginning in 2005, naphtha-type jet fuel is included in "Other Products.")
i Includes propylene.
j Finished motor gasoline. Through 1963, also includes aviation gasoline and special naphthas. Beginning in 1993, also includes fuel ethanol blended into motor

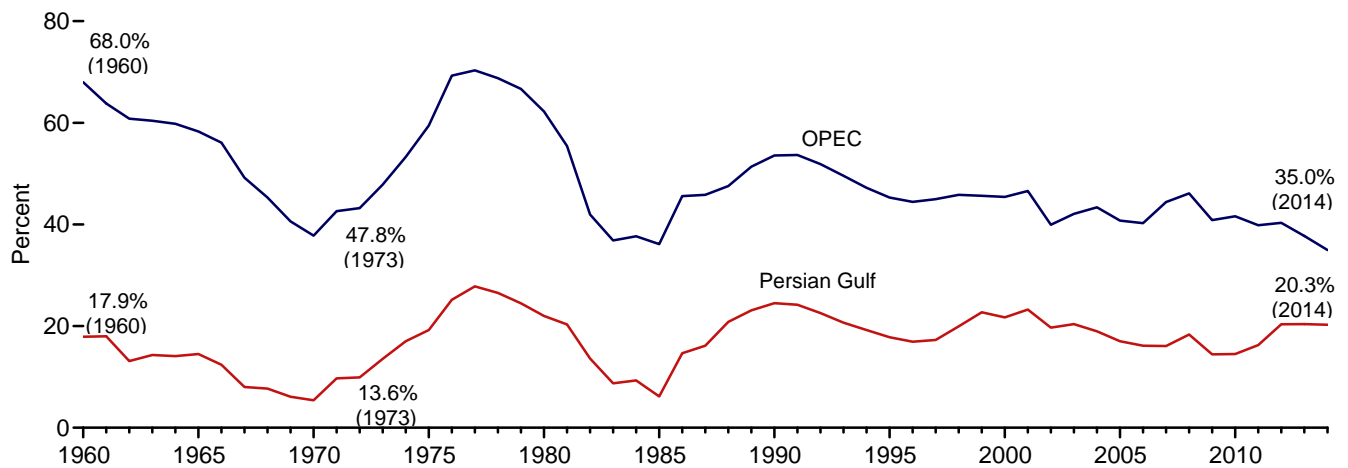
gasoline.
k Asphalt and road oil, kerosene, lubricants, petrochemical feedstocks, petroleum coke, still gas (refinery gas), waxes, and miscellaneous products. Through 1964, also includes kerosene-type jet fuel. Beginning in 1964, also includes finished aviation gasoline and special naphthas. Beginning in 2005, also includes naphtha-type jet fuel.
R=Revised. E=Estimate. F=Forecast. NA=Not available.
Notes: • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web 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 and 2015: 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 3.3a Petroleum Trade: Overview

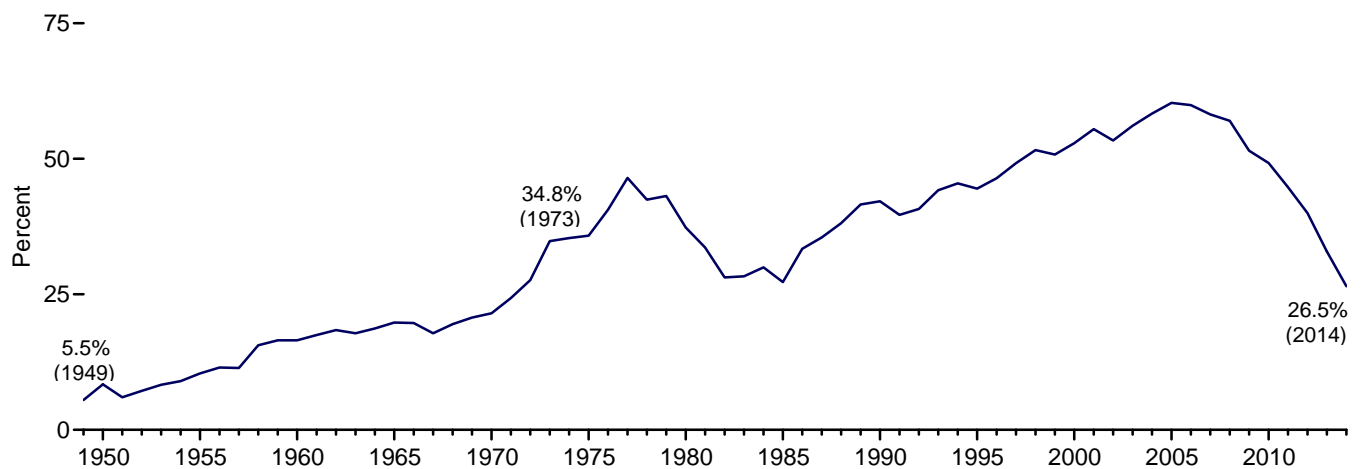
Overview, December 2014



Imports From OPEC and Persian Gulf as Share of Total Imports, 1960–2014



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.

Table 3.3a Petroleum Trade: Overview

	Imports From Persian Gulf ^a	Imports From OPEC ^b	Imports	Exports	Net Imports	Products Supplied	As Share of Products Supplied				As Share of Total Imports	
							Imports From Persian Gulf ^a	Imports From OPEC ^b	Imports	Net Imports	Imports From Persian Gulf ^a	Imports From OPEC ^b
							Thousand Barrels per Day						Percent
1950 Average	NA	NA	850	305	545	6,458	NA	NA	13.2	8.4	NA	NA
1955 Average	NA	NA	1,248	368	880	8,455	NA	NA	14.8	10.4	NA	NA
1960 Average	326	1,233	1,815	202	1,613	9,797	3.3	12.6	18.5	16.5	17.9	68.0
1965 Average	359	1,439	2,468	187	2,281	11,512	3.1	12.5	21.4	19.8	14.5	58.3
1970 Average	184	1,294	3,419	259	3,161	14,697	1.3	8.8	23.3	21.5	5.4	37.8
1975 Average	1,165	3,601	6,056	209	5,846	16,322	7.1	22.1	37.1	35.8	19.2	59.5
1980 Average	1,519	4,300	6,909	544	6,365	17,056	8.9	25.2	40.5	37.3	22.0	62.2
1985 Average	311	1,830	5,067	781	4,286	15,726	2.0	11.6	32.2	27.3	6.1	36.1
1990 Average	1,966	4,296	8,018	857	7,161	16,988	11.6	25.3	47.2	42.2	24.5	53.6
1995 Average	1,573	4,002	8,835	949	7,886	17,725	8.9	22.6	49.8	44.5	17.8	45.3
2000 Average	2,488	5,203	11,459	1,040	10,419	19,701	12.6	26.4	58.2	52.9	21.7	45.4
2001 Average	2,761	5,528	11,871	971	10,900	19,649	14.1	28.1	60.4	55.5	23.3	46.6
2002 Average	2,269	4,605	11,530	984	10,546	19,761	11.5	23.3	58.3	53.4	19.7	39.9
2003 Average	2,501	5,162	12,264	1,027	11,238	20,034	12.5	25.8	61.2	56.1	20.4	42.1
2004 Average	2,493	5,701	13,145	1,048	12,097	20,731	12.0	27.5	63.4	58.4	19.0	43.4
2005 Average	2,334	5,587	13,714	1,165	12,549	20,802	11.2	26.9	65.9	60.3	17.0	40.7
2006 Average	2,211	5,517	13,707	1,317	12,390	20,687	10.7	26.7	66.3	59.9	16.1	40.2
2007 Average	2,163	5,980	13,468	1,433	12,036	20,680	10.5	28.9	65.1	58.2	16.1	44.4
2008 Average	2,370	5,954	12,915	1,802	11,114	19,498	12.2	30.5	66.2	57.0	18.4	46.1
2009 Average	1,689	4,776	11,691	2,024	9,667	18,771	9.0	25.4	62.3	51.5	14.4	40.9
2010 Average	1,711	4,906	11,793	2,353	9,441	19,180	8.9	25.6	61.5	49.2	14.5	41.6
2011 Average	1,861	4,555	11,436	2,986	8,450	18,882	9.9	24.1	60.6	44.8	16.3	39.8
2012 Average	2,156	4,271	10,598	3,205	7,393	18,490	11.7	23.1	57.3	40.0	20.3	40.3
2013 January	1,798	3,866	10,089	2,881	7,208	18,749	9.6	20.6	53.8	38.4	17.8	38.3
February	1,838	3,115	9,286	3,280	6,007	18,643	9.9	16.7	49.8	32.2	19.8	33.5
March	2,087	3,741	9,534	3,111	6,423	18,531	11.3	20.2	51.5	34.7	21.9	39.2
April	1,804	3,799	10,168	3,235	6,933	18,584	9.7	20.4	54.7	37.3	17.7	37.4
May	2,135	4,064	10,174	3,472	6,703	18,779	11.4	21.6	54.2	35.7	21.0	39.9
June	1,894	3,837	9,882	3,594	6,288	18,806	10.1	20.4	52.5	33.4	19.2	38.8
July	1,927	3,789	10,300	3,851	6,449	19,257	10.0	19.7	53.5	33.5	18.7	36.8
August	2,160	3,901	10,249	3,725	6,524	19,125	11.3	20.4	53.6	34.1	21.1	38.1
September	2,146	3,921	10,036	3,632	6,405	19,252	11.1	20.4	52.1	33.3	21.4	39.1
October	1,933	3,411	9,608	4,074	5,535	19,312	10.0	17.7	49.8	28.7	20.1	35.5
November	2,143	3,535	9,385	3,967	5,419	19,491	11.0	18.1	48.2	27.8	22.8	37.7
December	2,225	3,613	9,539	4,602	4,938	18,983	11.7	19.0	50.3	26.0	23.3	37.9
Average	2,009	3,720	9,859	3,621	6,237	18,961	10.6	19.6	52.0	32.9	20.4	37.7
2014 January	2,187	3,314	9,264	4,021	5,243	18,921	11.6	17.5	49.0	27.7	23.6	35.8
February	2,172	3,398	9,151	3,611	5,540	18,994	11.4	17.9	48.2	29.2	23.7	37.1
March	2,117	3,380	9,240	3,858	5,382	18,526	11.4	18.2	49.9	29.0	22.9	36.6
April	2,274	3,668	9,584	3,966	5,618	18,783	12.1	19.5	51.0	29.9	23.7	38.3
May	1,929	3,313	9,380	4,121	5,260	18,516	10.4	17.9	50.7	28.4	20.6	35.3
June	1,941	3,251	8,815	4,156	4,659	18,833	10.3	17.3	46.8	24.7	22.0	36.9
July	2,145	3,598	9,472	4,479	4,994	19,164	11.2	18.8	49.4	26.1	22.6	38.0
August	1,778	3,272	9,309	4,533	4,776	19,276	9.2	17.0	48.3	24.8	19.1	35.1
September	1,644	3,215	9,152	3,962	5,190	19,039	8.6	16.9	48.1	27.3	18.0	35.1
October	1,381	2,628	8,905	4,112	4,793	19,630	7.0	13.4	45.4	24.4	15.5	29.5
November	1,584	2,911	8,967	4,370	4,598	19,206	8.2	15.2	46.7	23.9	17.7	32.5
December	^R 1,303	^R 2,758	^R 9,387	^R 4,906	^R 4,481	^R 19,517	^R 6.7	^R 14.1	^R 48.1	^R 23.0	^R 13.9	^R 29.4
Average	^R 1,869	^R 3,224	^R 9,221	^R 4,180	^R 5,041	^R 19,035	^R 9.8	^R 16.9	^R 48.4	^R 26.5	^R 20.3	^R 35.0
2015 January	NA	NA	^E 9,496	^E 3,931	^E 5,565	^E 19,634	NA	NA	^E 48.4	^E 28.3	NA	NA
February	NA	NA	^E 9,240	^E 4,283	^E 4,957	^E 19,793	NA	NA	^E 46.7	^E 25.0	NA	NA
2-Month Average	NA	NA	^E 9,375	^E 4,098	^E 5,276	^E 19,709	NA	NA	^E 47.6	^E 26.8	NA	NA
2014 2-Month Average	2,180	3,354	9,211	3,826	5,384	18,956	11.5	17.7	48.6	28.4	23.7	36.4
2013 2-Month Average	1,817	3,510	9,708	3,070	6,638	18,699	9.7	18.8	51.9	35.5	18.7	36.2

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

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

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

Notes: • For the feature article "Measuring Dependence on Imported Oil," published in the August 1995 *Monthly Energy Review*, see http://www.eia.gov/totalenergy/data/monthly/pdf/historical/imported_oil.pdf. • Beginning in October 1977, data include Strategic Petroleum Reserve imports. See Table 3.3b. • Annual averages may not equal average of months due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia. U.S. exports include shipments to U.S. territories, and imports include

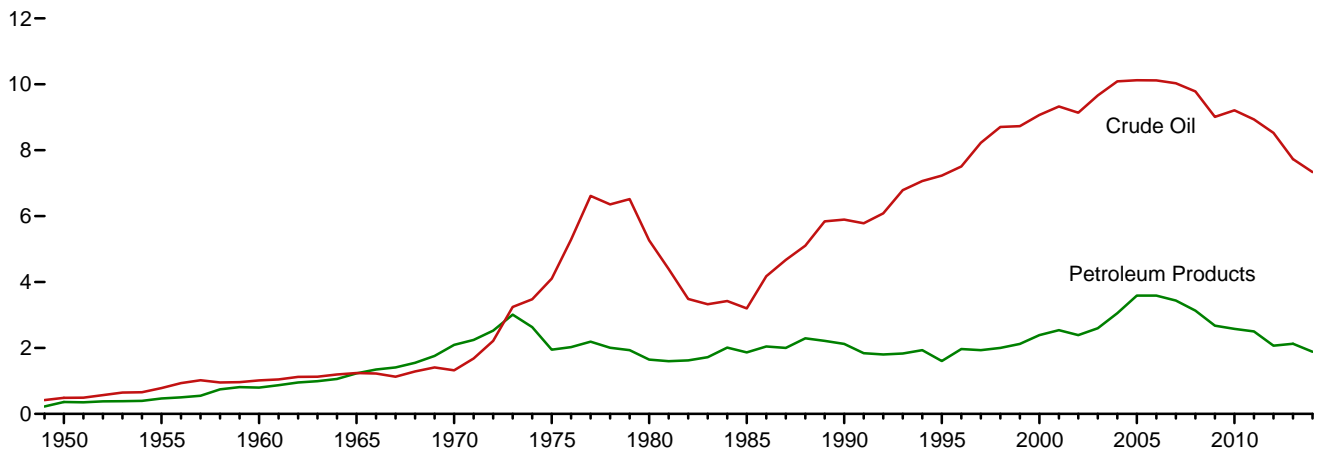
receipts from U.S. territories.

Web 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.

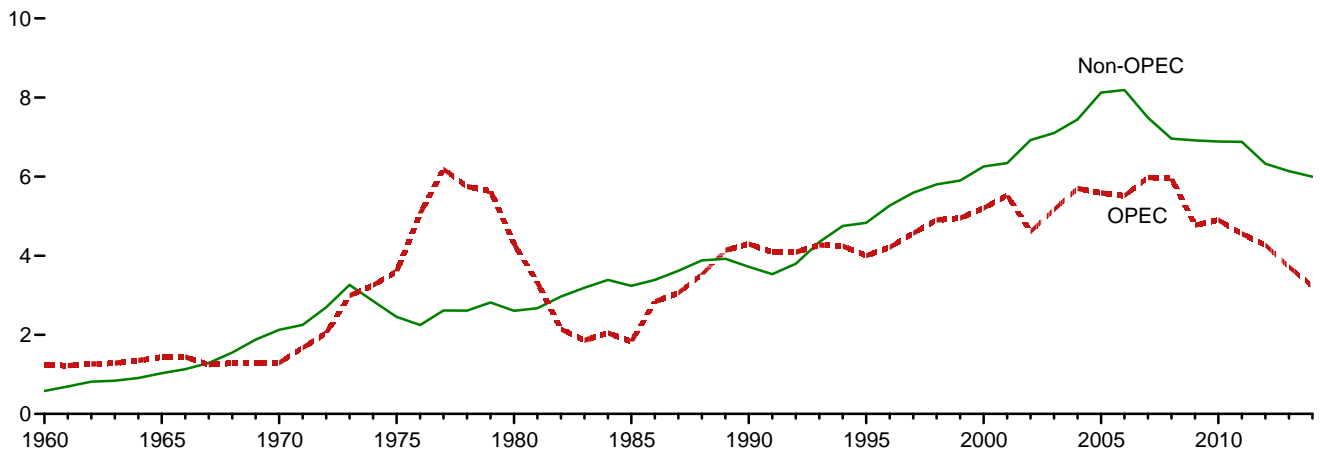
Sources: • **1949–1975**: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976–1980**: U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • **1981–2013**: EIA, *Petroleum Supply Annual*, annual reports, and unpublished revisions. • **2014 and 2015**: 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.

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

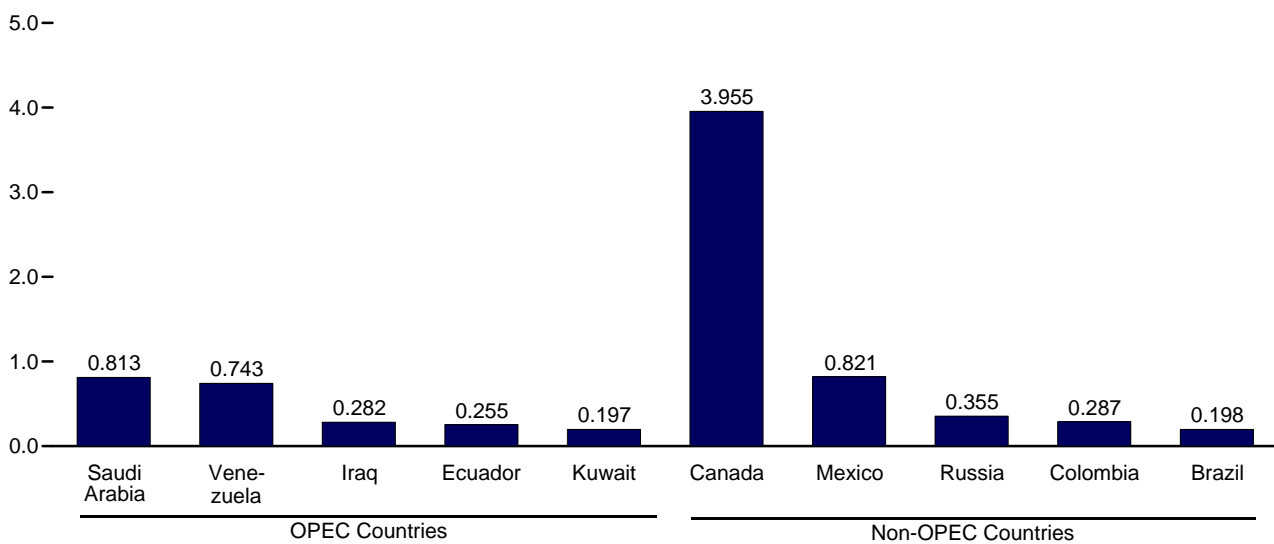
Overview, 1949–2014



OPEC and Non-OPEC, 1960–2014



From Selected Countries, December 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 ^a		Distillate Fuel Oil	Jet Fuel ^d	LPG ^b		Motor Gasoline ^f	Residual Fuel Oil	Other ^g	Total	Crude Oil ^a	Petroleum Products	Total
	SPR ^c	Total			Propane ^e	Total							
1950 Average	--	487	7	(^d)	0	0	(s)	329	27	850	95	210	305
1955 Average	--	782	12	(^d)	0	0	13	417	24	1,248	32	336	368
1960 Average	--	1,015	35	34	NA	4	27	637	62	1,815	8	193	202
1965 Average	--	1,238	36	81	NA	21	28	946	119	2,468	3	184	187
1970 Average	--	1,324	147	144	26	52	67	1,528	157	3,419	14	245	259
1975 Average	--	4,105	155	133	60	112	184	1,223	144	6,056	6	204	209
1980 Average	44	5,263	142	80	69	216	140	939	130	6,909	287	258	544
1985 Average	118	3,201	200	39	67	187	381	510	550	5,067	204	577	781
1990 Average	27	5,894	278	108	115	188	342	504	705	8,018	109	748	857
1995 Average	--	7,230	193	106	102	146	265	187	708	8,835	95	855	949
2000 Average	8	9,071	295	162	161	215	427	352	938	11,459	50	990	1,040
2001 Average	11	9,328	344	148	145	206	454	295	1,095	11,871	20	951	971
2002 Average	16	9,140	267	107	145	183	498	249	1,085	11,530	9	975	984
2003 Average	--	9,665	333	109	168	225	518	327	1,087	12,264	12	1,014	1,027
2004 Average	77	10,088	325	127	209	263	496	426	1,419	13,145	27	1,021	1,048
2005 Average	52	10,126	329	190	233	328	603	530	1,609	13,714	32	1,133	1,165
2006 Average	8	10,118	365	186	228	332	475	350	1,881	13,707	25	1,292	1,317
2007 Average	7	10,031	304	217	182	247	413	372	1,885	13,468	27	1,405	1,433
2008 Average	19	9,783	213	103	185	253	302	349	1,913	12,915	29	1,773	1,802
2009 Average	56	9,013	225	81	147	182	223	331	1,635	11,691	44	1,980	2,024
2010 Average	--	9,213	228	98	121	153	134	366	1,600	11,793	42	2,311	2,353
2011 Average	--	8,935	179	69	110	135	105	328	1,686	11,436	47	2,939	2,986
2012 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	--	7,457	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	--	7,130	120	90	97	121	64	249	1,131	8,905	376	3,736	4,112
November	--	7,274	136	80	90	110	41	156	1,170	8,967	502	3,868	4,370
December	--	R 7,209	R 245	R 102	R 129	R 153	R 29	R 152	R 1,496	R 9,387	R 442	R 4,464	R 4,906
Average	--	R 7,337	R 194	R 94	R 107	R 128	R 49	R 172	R 1,247	R 9,221	R 346	R 3,834	R 4,180
2015 January	--	E 7,357	E 331	E 120	E 151	NA	E 58	E 177	NA	E 9,496	E 447	E 3,484	E 3,931
February	--	E 7,224	E 319	E 122	E 142	NA	E 24	E 223	NA	E 9,240	E 488	E 3,795	E 4,283
2-Month Average	--	E 7,294	E 325	E 121	E 147	NA	E 42	E 199	NA	E 9,375	E 466	E 3,632	E 4,098
2014 2-Month Average	--	7,401	308	66	203	224	28	169	1,014	9,211	243	3,584	3,826
2013 2-Month Average	--	7,641	195	65	175	197	30	220	1,360	9,708	120	2,950	3,070

^a Includes lease condensate.

^b Liquefied petroleum gases.

^c "SPR" is the Strategic Petroleum Reserve, which began in October 1977.

Through 2003, includes crude oil imports by SPR only; beginning in 2004, includes crude oil imports by SPR, and crude oil imports into SPR by others.

^d Beginning in 1965, includes kerosene-type jet fuel. (Through 1964, kerosene-type jet fuel is included with kerosene in "Other.") For 1956-2004, also includes naphtha-type jet fuel. (Through 1955, naphtha-type jet fuel is included in "Motor Gasoline." Beginning in 2005, naphtha-type jet fuel is included in "Other.")

^e Includes propylene.

^f Finished motor gasoline. Through 1955, also includes naphtha-type jet fuel. Through 1963, also includes aviation gasoline and special naphthas. Through 1980, also includes motor gasoline blending components.

^g Asphalt and road oil, aviation gasoline blending components, kerosene, lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, unfinished oils, waxes, other hydrocarbons and oxygenates, and miscellaneous products. Through 1964, also includes kerosene-type jet fuel. Beginning in 1964, also

includes finished aviation gasoline and special naphthas. Beginning in 1981, also includes motor gasoline blending components. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. E=Estimate. NA=Not available. -- =Not applicable. -- =No data reported. (s)=Less than 500 barrels per day.

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

Web 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 and 2015: 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 ^a	Angola ^b	Ecuador ^c	Iraq	Kuwait ^d	Libya ^e	Nigeria ^f	Saudi Arabia ^d	Venezuela	Other ^g	Total OPEC
1960 Average	(a)	(b)	(c)	22	182	(e)	(f)	84	911	34	1,233
1965 Average	(a)	(b)	(c)	16	74	42	(f)	158	994	155	1,439
1970 Average	8	(b)	(c)	0	48	47	(f)	30	989	172	1,294
1975 Average	282	(b)	57	2	16	232	762	715	702	832	3,601
1980 Average	488	(b)	27	28	27	554	857	1,261	481	577	4,300
1985 Average	187	(b)	67	46	21	4	293	168	605	439	1,830
1990 Average	280	(b)	49	518	86	0	800	1,339	1,025	199	4,296
1995 Average	234	(b)	(c)	0	218	0	627	1,344	1,480	98	4,002
2000 Average	225	(b)	(c)	620	272	0	896	1,572	1,546	72	5,203
2001 Average	278	(b)	(c)	795	250	0	885	1,662	1,553	105	5,528
2002 Average	264	(b)	(c)	459	228	0	621	1,552	1,398	83	4,605
2003 Average	382	(b)	(c)	481	220	0	867	1,774	1,376	61	5,162
2004 Average	452	(b)	(c)	656	250	20	1,140	1,558	1,554	70	5,701
2005 Average	478	(b)	(c)	531	243	56	1,166	1,537	1,529	47	5,587
2006 Average	657	(b)	(c)	553	185	87	1,114	1,463	1,419	38	5,517
2007 Average	670	508	(c)	484	181	117	1,134	1,485	1,361	39	5,980
2008 Average	548	513	221	627	210	103	988	1,529	1,189	26	5,954
2009 Average	493	460	185	450	182	79	809	1,004	1,063	50	4,776
2010 Average	510	393	212	415	197	70	1,023	1,096	988	3	4,906
2011 Average	358	346	206	459	191	15	818	1,195	951	16	4,555
2012											
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
Average	242	233	180	476	305	61	441	1,365	960	9	4,271
2013											
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
Average	115	216	236	341	328	59	281	1,329	806	10	3,720
2014											
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
November	88	209	120	421	137	57	55	1,014	800	10	2,911
December	125	180	255	282	197	11	144	813	743	10	2,758
Average	109	151	212	364	311	6	92	1,166	789	23	3,224

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

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

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

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

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

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

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

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

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

Web 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 ^a	United Kingdom	U.S. Virgin Islands	Other	Total Non-OPEC
1960 Average	1	120	42	16	NA	NA	0	(s)	NA	NA	581
1965 Average	0	323	51	48	1	0	0	(s)	0	606	1,029
1970 Average	2	766	46	42	39	0	3	11	189	1,027	2,126
1975 Average	5	846	9	71	19	17	14	14	406	1,052	2,454
1980 Average	3	455	4	533	2	144	1	176	388	903	2,609
1985 Average	61	770	23	816	58	32	8	310	247	913	3,237
1990 Average	49	934	182	755	55	102	45	189	282	1,128	3,721
1995 Average	8	1,332	219	1,068	15	273	25	383	278	1,233	4,833
2000 Average	51	1,807	342	1,373	30	343	72	366	291	1,581	6,257
2001 Average	82	1,828	296	1,440	43	341	90	324	268	1,631	6,343
2002 Average	116	1,971	260	1,547	66	393	210	478	236	1,649	6,925
2003 Average	108	2,072	195	1,623	87	270	254	440	288	1,766	7,103
2004 Average	104	2,138	176	1,665	101	244	298	380	330	2,008	7,444
2005 Average	156	2,181	196	1,662	151	233	410	396	328	2,413	8,127
2006 Average	193	2,353	155	1,705	174	196	369	272	328	2,446	8,190
2007 Average	200	2,455	155	1,532	128	142	414	277	346	1,839	7,489
2008 Average	258	2,493	200	1,302	168	102	465	236	320	1,416	6,961
2009 Average	309	2,479	276	1,210	140	108	563	245	277	1,307	6,915
2010 Average	272	2,535	365	1,284	108	89	612	256	253	1,112	6,887
2011 Average	253	2,729	433	1,206	100	113	624	159	186	1,077	6,881
2012 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	127	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
Average	226	2,946	433	1,035	99	75	477	149	12	874	6,327
2013 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
Average	151	3,142	389	919	89	54	460	147	-	786	6,138
2014 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
November	224	3,443	427	945	68	35	170	110	-	635	6,057
December	198	3,955	287	821	129	42	355	119	-	723	6,629
Average	160	3,388	317	842	85	45	327	116	-	717	5,997

^a Through 1992, may include imports from republics other than Russia in the former U.S.S.R. See "Union of Soviet Socialist Republics (U.S.S.R.," in Glossary. NA=Not available. - =No data reported. (s)=Less than 500 barrels per day.

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

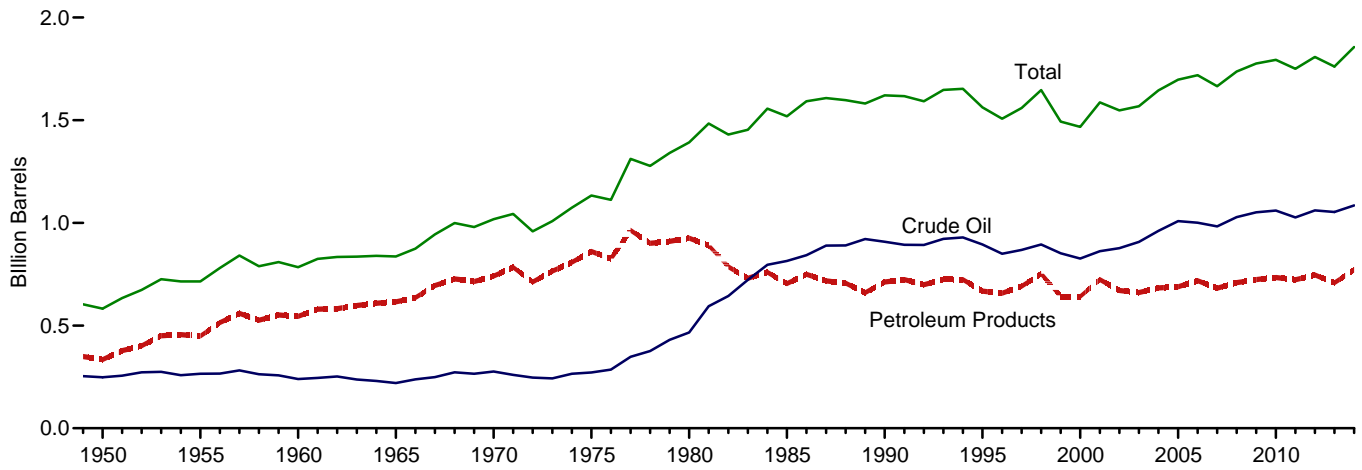
states and the District of Columbia.

Web 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.

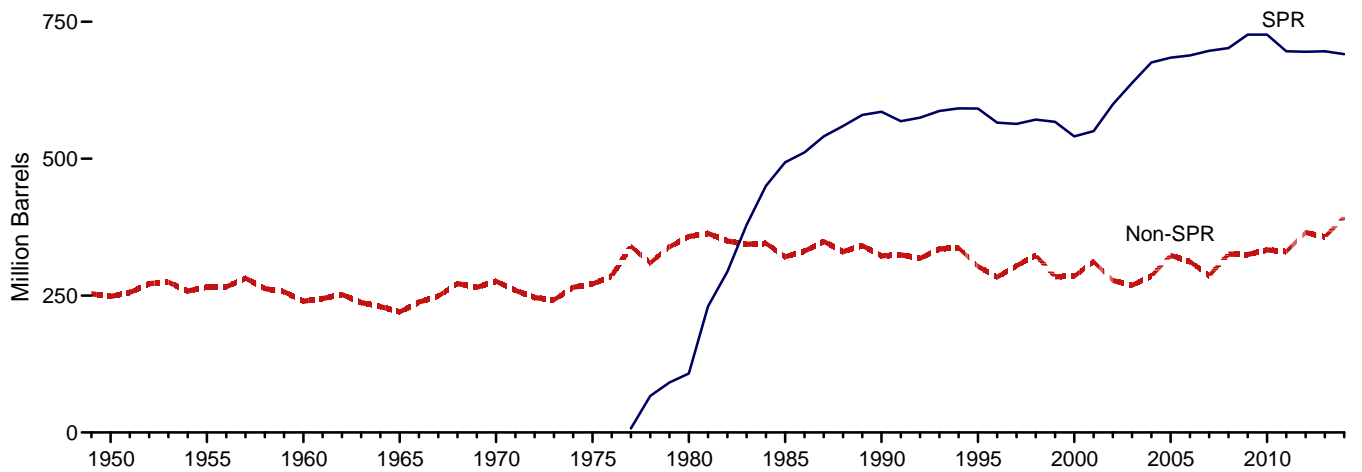
Sources: • **1960-1972:** Bureau of Mines, *Minerals Yearbook*, annual reports. • **1973-1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976-1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*,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

Figure 3.4 Petroleum Stocks

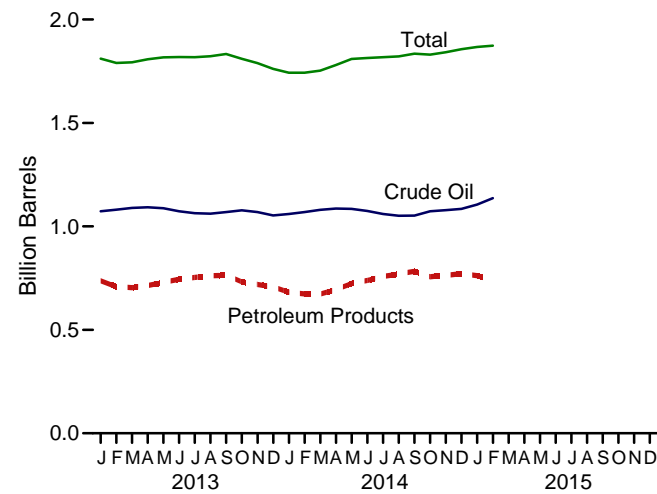
Overview, 1949–2014



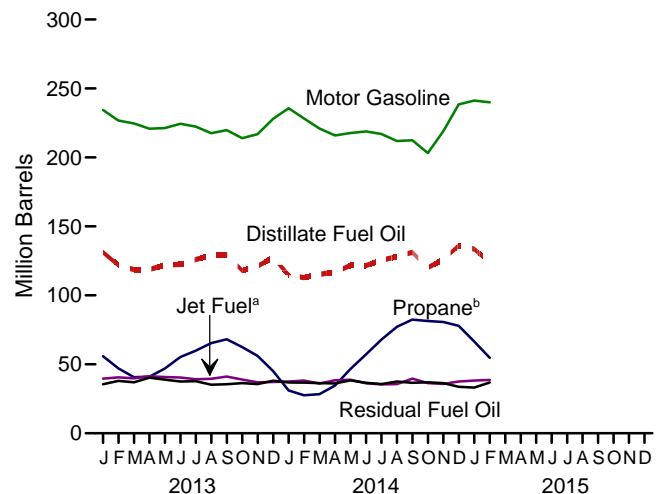
SPR and Non-SPR Crude Oil Stocks, 1949–2014



Overview, Monthly



Selected Products, Monthly



^a Includes kerosene-type jet fuel only.

^b Includes propylene.

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

period.

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

Source: Table 3.4.

Table 3.4 Petroleum Stocks
(Million Barrels)

	Crude Oil ^a			Distillate Fuel Oil ^f	Jet Fuel ^g	LPG ^b		Motor Gasoline ⁱ	Residual Fuel Oil	Other ^j	Total
	SPR ^c	Non-SPR ^{d,e}	Total ^e			Propane ^h	Total				
1950 Year	--	248	248	72	(^g)	NA	2	116	41	104	583
1955 Year	--	266	266	111	3	NA	7	165	39	123	715
1960 Year	--	240	240	138	7	NA	23	195	45	137	785
1965 Year	--	220	220	155	19	NA	30	175	56	181	836
1970 Year	--	276	276	195	28	NA	67	209	54	188	1,018
1975 Year	--	271	271	209	30	82	125	235	74	188	1,133
1980 Year	108	358	466	205	42	65	120	261	92	205	1,392
1985 Year	493	321	814	144	40	39	74	223	50	174	1,519
1990 Year	586	323	908	132	52	49	98	220	49	162	1,621
1995 Year	592	303	895	130	40	43	93	202	37	165	1,563
2000 Year	541	286	826	118	45	41	83	196	36	164	1,468
2001 Year	550	312	862	145	42	66	121	210	41	166	1,586
2002 Year	599	278	877	134	39	53	106	209	31	152	1,548
2003 Year	638	269	907	137	39	50	94	207	38	147	1,568
2004 Year	676	286	961	126	40	55	104	218	42	153	1,645
2005 Year	685	324	1,008	136	42	57	109	208	37	157	1,698
2006 Year	689	312	1,001	144	39	62	113	212	42	169	1,720
2007 Year	697	286	983	134	39	52	96	218	39	156	1,665
2008 Year	702	326	1,028	146	38	55	113	214	36	162	1,737
2009 Year	727	325	1,052	166	43	50	102	223	37	153	1,776
2010 Year	727	333	1,060	164	43	49	108	219	41	158	1,794
2011 Year	696	331	1,027	149	41	55	112	223	34	164	1,750
2012 Year	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	382	1,073	120	36	81	185	203	37	175	1,830
November	691	388	1,078	126	36	81	172	219	36	174	1,842
December	691	R 394	R 1,085	R 136	38	R 78	R 155	R 238	R 34	R 171	R 1,856
2015 January	E 691	E 414	E 1,105	E 134	E 38	E 67	F 133	E 241	E 33	E 183	E 1,867
February	E 691	E 446	E 1,137	E 124	E 39	E 55	F 114	E 240	E 37	E 184	E 1,874

^a Includes lease condensate.

^b Liquefied petroleum gases.

^c "SPR" is the Strategic Petroleum Reserve, which began in October 1977. Crude oil stocks in the SPR include non-U.S. stocks held under foreign or commercial storage agreements.

^d All crude oil stocks other than those in "SPR."

^e Beginning in 1981, includes stocks of Alaskan crude oil in transit.

^f Excludes stocks in the Northeast Home Heating Oil Reserve. Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

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

^h Includes propylene.

ⁱ Includes finished motor gasoline and motor gasoline blending components; excludes oxygenates. Through 1963, also includes aviation gasoline and special naphthas.

^j Asphalt and road oil, aviation gasoline blending components, kerosene,

lubricants, pentanes plus, petrochemical feedstocks, petroleum coke, unfinished oils, waxes, miscellaneous products, oxygenates, renewable fuels, and other hydrocarbons. Through 1964, also includes kerosene-type jet fuel. Beginning in 1964, also includes finished aviation gasoline and special naphthas. Beginning in 2005, also includes naphtha-type jet fuel.

R=Revised. E=Estimate. F=Forecast. NA=Not available. -- =Not applicable.

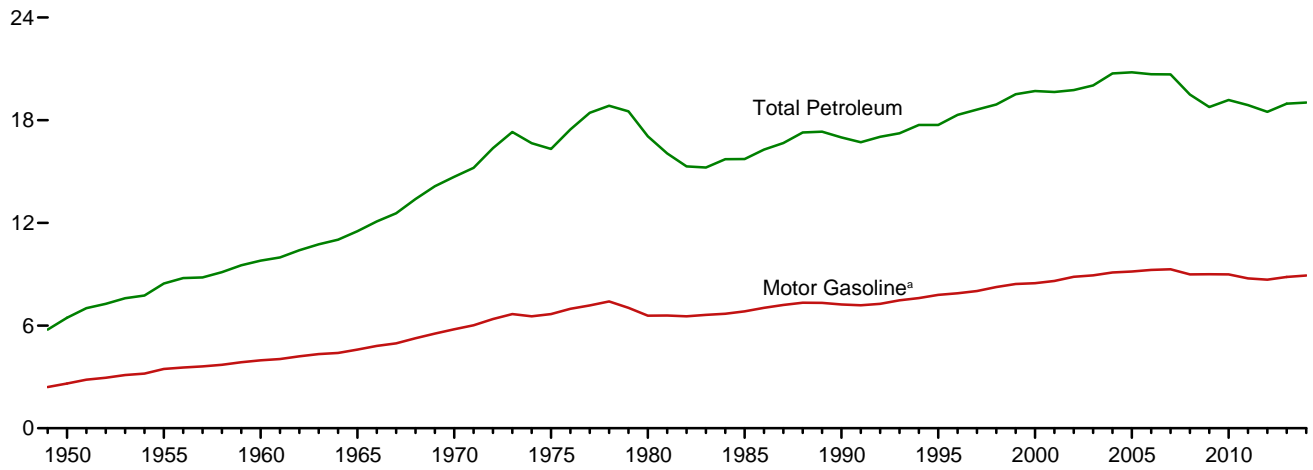
Notes: • Stocks are at end of period. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web 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.

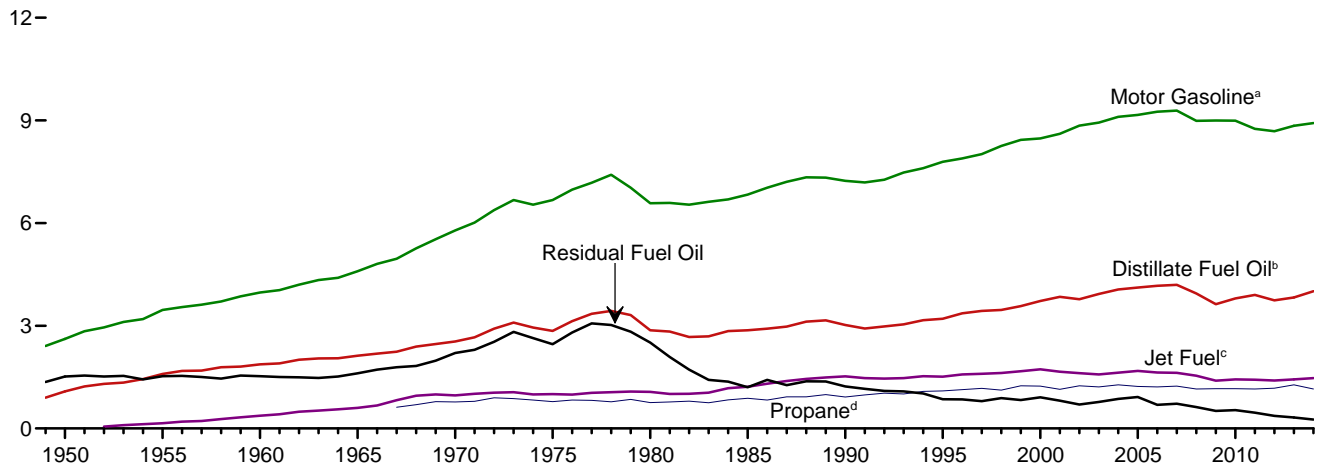
Sources: • 1949–1975: Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • 1976–1980: U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • 1981–2013: EIA, *Petroleum Supply Annual*, annual reports. • 2014 and 2015: 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)

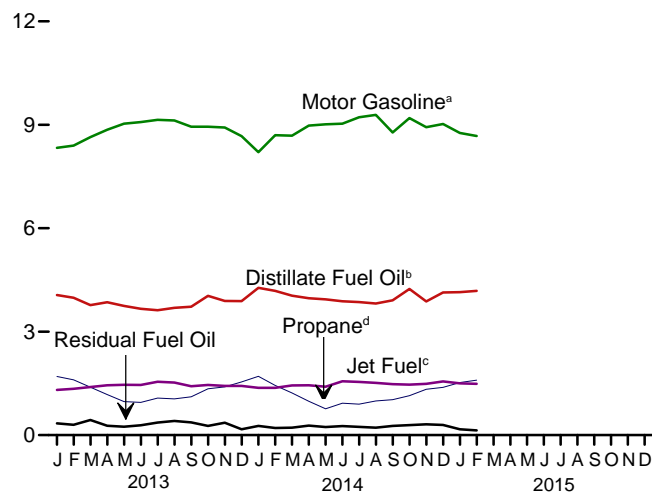
Total Petroleum and Motor Gasoline, 1949–2014



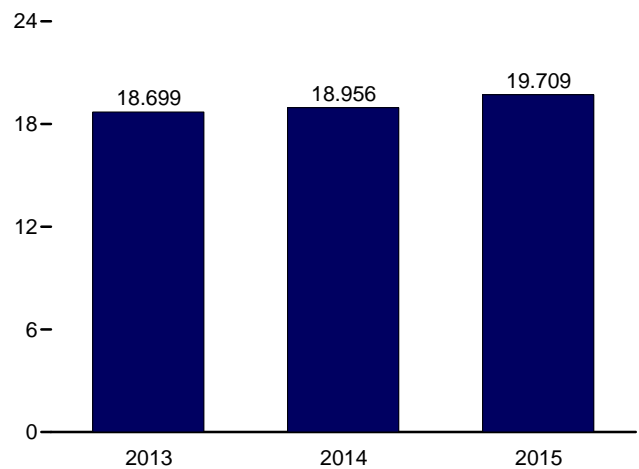
Selected Products, 1949–2014



Selected Products, Monthly



Total, January–February



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

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

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

	Asphalt and Road Oil	Aviation Gasoline	Distillate Fuel Oil ^b	Jet Fuel ^c	Kerosene	LPG ^a		Lubricants	Motor Gasoline ^e	Petroleum Coke	Residual Fuel Oil	Other ^f	Total
						Propane ^d	Total						
1950 Average	180	108	1,082	(^c)	323	NA	234	106	2,616	41	1,517	250	6,458
1955 Average	254	192	1,592	154	320	NA	404	116	3,463	67	1,526	366	8,455
1960 Average	302	161	1,872	371	271	NA	621	117	3,969	149	1,529	435	9,797
1965 Average	368	120	2,126	602	267	NA	841	129	4,593	202	1,608	657	11,512
1970 Average	447	55	2,540	967	263	776	1,224	136	5,785	212	2,204	866	14,697
1975 Average	419	39	2,851	1,001	159	783	1,333	137	6,675	247	2,462	1,001	16,322
1980 Average	396	35	2,866	1,068	158	754	1,469	159	6,579	237	2,508	1,581	17,056
1985 Average	425	27	2,868	1,218	114	883	1,599	145	6,831	264	1,202	1,032	15,726
1990 Average	483	24	3,021	1,522	43	917	1,556	164	7,235	339	1,229	1,373	16,988
1995 Average	486	21	3,207	1,514	54	1,096	1,899	156	7,789	365	852	1,381	17,725
2000 Average	525	20	3,722	1,725	67	1,235	2,231	166	8,472	406	909	1,458	19,701
2001 Average	519	19	3,847	1,655	72	1,142	2,044	153	8,610	437	811	1,481	19,649
2002 Average	512	18	3,776	1,614	43	1,248	2,163	151	8,848	463	700	1,474	19,761
2003 Average	503	16	3,927	1,578	55	1,215	2,074	140	8,935	455	772	1,579	20,034
2004 Average	537	17	4,058	1,630	64	1,276	2,132	141	9,105	524	865	1,657	20,731
2005 Average	546	19	4,118	1,679	70	1,229	2,030	141	9,159	515	920	1,605	20,802
2006 Average	521	18	4,169	1,633	54	1,215	2,052	137	9,253	522	689	1,640	20,687
2007 Average	494	17	4,196	1,622	32	1,235	2,085	142	9,286	490	723	1,593	20,680
2008 Average	417	15	3,945	1,539	14	1,154	1,954	131	8,989	464	622	1,408	19,498
2009 Average	360	14	3,631	1,393	18	1,160	2,051	118	8,997	427	511	1,251	18,771
2010 Average	362	15	3,800	1,432	20	1,160	2,173	131	8,993	376	535	1,343	19,180
2011 Average	355	15	3,899	1,425	12	1,153	2,204	125	8,753	361	461	1,272	18,882
2012 Average	340	14	3,741	1,398	5	1,175	2,251	114	8,682	360	369	1,215	18,490
2013 January	224	11	4,062	1,311	11	1,701	2,757	127	8,331	404	341	1,171	18,749
February	215	8	3,984	1,344	2	1,605	2,775	127	8,395	281	297	1,214	18,643
March	236	12	3,769	1,393	15	1,390	2,493	127	8,641	292	440	1,114	18,531
April	290	12	3,854	1,444	5	1,174	2,283	113	8,855	267	272	1,189	18,584
May	308	15	3,749	1,459	1	973	2,081	128	9,033	397	244	1,363	18,779
June	406	15	3,663	1,454	1	949	2,048	141	9,078	403	287	1,311	18,806
July	453	16	3,621	1,546	1	1,074	2,279	122	9,146	374	363	1,336	19,257
August	464	14	3,693	1,524	1	1,052	2,181	120	9,124	401	409	1,192	19,125
September	461	11	3,725	1,417	4	1,112	2,276	119	8,946	402	370	1,521	19,252
October	377	11	4,039	1,455	1	1,345	2,607	116	8,944	315	267	1,178	19,312
November	262	14	3,893	1,429	(s)	1,401	2,689	100	8,923	393	361	1,426	19,491
December	180	7	3,887	1,428	19	1,543	2,822	115	8,670	308	170	1,377	18,983
Average	323	12	3,827	1,434	5	1,275	2,440	121	8,843	354	319	1,282	18,961
2014 January	177	10	4,272	1,371	18	1,703	2,916	108	8,206	432	269	1,143	18,921
February	205	7	4,182	1,373	5	1,442	2,600	117	8,699	299	207	1,301	18,994
March	218	12	4,046	1,440	(s)	1,223	2,378	137	8,684	227	216	1,168	18,526
April	282	11	3,972	1,446	2	983	2,149	115	8,979	327	276	1,225	18,783
May	350	14	3,937	1,404	1	764	1,909	132	9,016	373	235	1,145	18,516
June	402	11	3,880	1,560	(s)	927	2,049	101	9,034	347	261	1,189	18,833
July	463	17	3,860	1,543	12	898	2,066	135	9,220	395	239	1,212	19,164
August	458	14	3,817	1,516	3	993	2,310	132	9,287	378	213	1,147	19,276
September	444	11	3,909	1,477	18	1,027	2,260	133	8,775	407	267	1,337	19,039
October	393	11	4,238	1,464	16	1,143	2,390	125	9,196	359	292	1,148	19,630
November	261	11	3,879	1,488	7	1,328	2,608	139	8,930	411	313	1,159	19,206
December	R 239	R 12	R 4,136	R 1,556	R 22	R 1,387	R 2,660	R 112	R 9,023	R 271	R 296	R 1,189	R 19,517
Average	R 325	12	R 4,010	R 1,470	R 9	R 1,150	R 2,357	124	R 8,922	R 352	R 257	R 1,196	R 19,035
2015 January	F 183	F 10	E 4,145	E 1,499	F 12	E 1,526	F 2,896	F 126	E 8,765	F 349	E 170	E 1,480	E 19,634
February	F 209	F 9	E 4,183	E 1,487	F 43	E 1,595	F 2,870	F 116	E 8,676	F 313	E 138	E 1,750	E 19,793
2-Month Average	F 195	F 9	E 4,163	E 1,493	F 27	E 1,559	F 2,884	F 121	E 8,723	F 332	E 155	E 1,608	E 19,709
2014 2-Month Average	190	9	4,229	1,372	12	1,579	2,766	112	8,440	369	240	1,218	18,956
2013 2-Month Average	219	10	4,025	1,326	7	1,655	2,766	127	8,362	346	320	1,191	18,699

^a Liquefied petroleum gases.

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

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

^d Includes propylene.

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

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

R=Revised. E=Estimate. F=Forecast. NA=Not available. (s)=Less than 500

barrels per day and greater than -500 barrels per day.

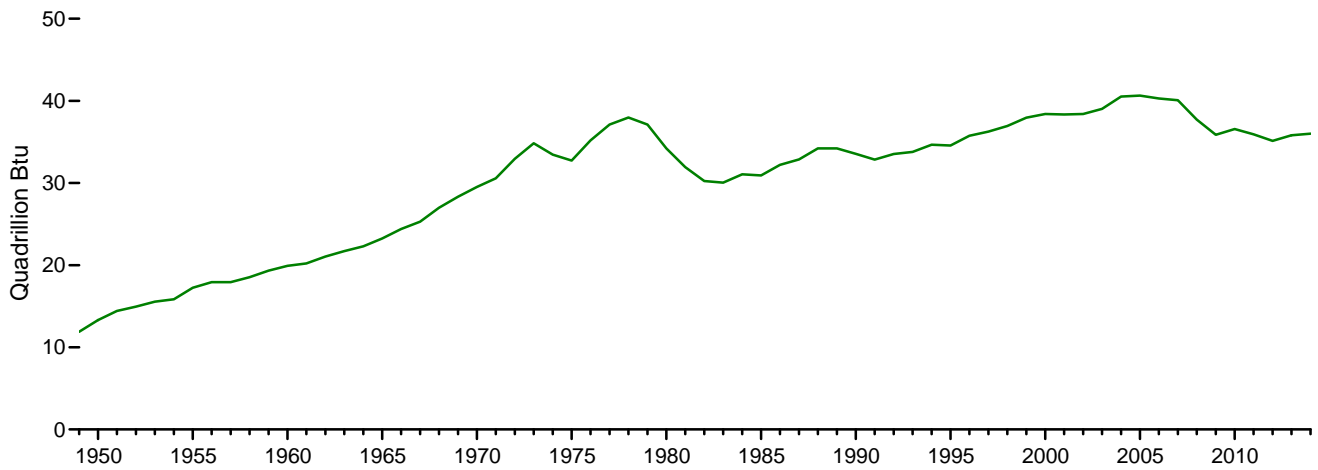
Notes: • Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent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

Web 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.

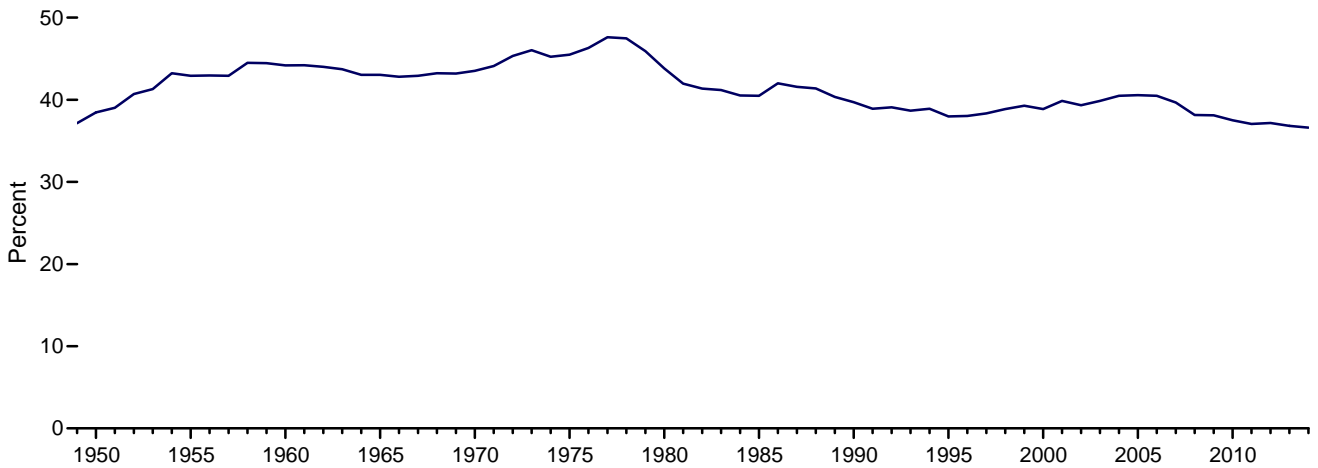
Sources: • **1949–1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976–1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • **1981–2013:** EIA, *Petroleum Supply Annual*, annual reports, and unpublished revisions. • **2014 and 2015:** 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 3.6 Heat Content of Petroleum Products Supplied by Type

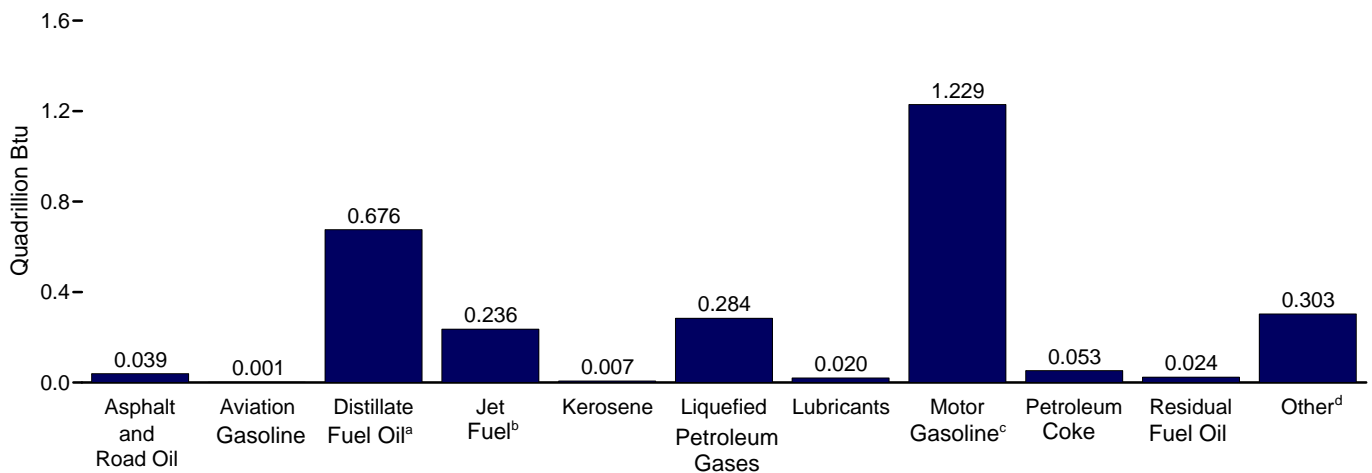
Total, 1949–2014



Petroleum Products Supplied as Share of Total Energy Consumption, 1949–2014



By Product, February 2015



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

^b Includes kerosene-type jet fuel only.

^c Includes fuel ethanol blended into motor gasoline.

^d All petroleum products not separately displayed.

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

Sources: Tables 1.1 and 3.6.

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

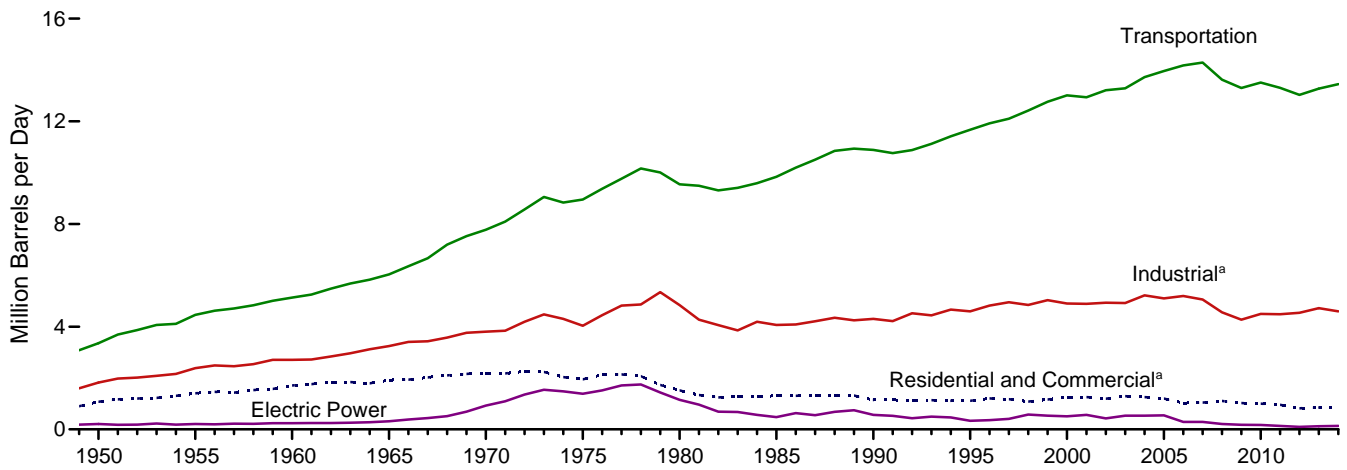
	Asphalt and Road Oil	Aviation Gasoline	Distillate Fuel Oil ^b	Jet Fuel ^c	Kerosene	LPG ^a		Lubricants	Motor Gasoline ^e	Petroleum Coke	Residual Fuel Oil	Other ^f	Total
						Propane ^d	Total						
1950 Total	435	199	2,300	(^c)	668	NA	343	236	5,015	90	3,482	546	13,315
1955 Total	615	354	3,385	301	662	NA	592	258	6,640	147	3,502	798	17,255
1960 Total	734	298	3,992	739	563	NA	912	259	7,631	328	3,517	947	19,919
1965 Total	890	222	4,519	1,215	553	NA	1,232	286	8,806	444	3,691	1,390	23,246
1970 Total	1,082	100	5,401	1,973	544	1,086	1,689	301	11,091	465	5,057	1,817	29,521
1975 Total	1,014	71	6,061	2,047	329	1,097	1,807	304	12,798	542	5,649	2,109	32,732
1980 Total	962	64	6,110	2,190	329	1,059	1,976	354	12,648	522	5,772	3,278	34,205
1985 Total	1,029	50	6,098	2,497	236	1,236	2,103	322	13,098	582	2,759	2,152	30,925
1990 Total	1,170	45	6,422	3,129	88	1,284	2,059	362	13,872	745	2,820	2,839	33,552
1995 Total	1,178	40	6,812	3,132	112	1,534	2,512	346	14,834	802	1,955	2,837	34,558
2000 Total	1,276	36	7,927	3,580	140	1,734	2,945	369	16,167	895	2,091	2,979	38,406
2001 Total	1,257	35	8,170	3,426	150	1,598	2,697	338	16,386	961	1,861	3,056	38,337
2002 Total	1,240	34	8,020	3,340	90	1,747	2,852	334	16,829	1,018	1,605	3,040	38,401
2003 Total	1,220	30	8,341	3,265	113	1,701	2,748	309	16,968	1,000	1,772	3,264	39,030
2004 Total	1,304	31	8,642	3,383	133	1,791	2,824	313	17,333	1,148	1,990	3,428	40,528
2005 Total	1,323	35	8,745	3,475	144	1,721	2,682	312	17,378	1,125	2,111	3,318	40,647
2006 Total	1,261	33	8,831	3,379	111	1,701	2,700	303	17,531	1,141	1,581	3,416	40,289
2007 Total	1,197	32	8,860	3,358	67	1,729	2,733	313	17,472	1,072	1,659	3,313	40,075
2008 Total	1,012	28	8,346	3,193	30	1,620	2,574	291	16,865	1,017	1,432	2,941	37,728
2009 Total	873	27	7,661	2,883	36	1,624	2,664	262	16,750	937	1,173	2,611	35,877
2010 Total	878	27	8,014	2,963	41	1,624	2,821	291	16,668	831	1,228	2,800	36,561
2011 Total	859	27	8,217	2,950	25	1,614	2,839	276	16,191	801	1,058	2,676	35,920
2012 Total	827	25	7,903	2,901	11	1,649	2,912	254	16,089	802	849	2,558	35,130
2013 January	46	2	727	230	2	202	306	24	1,307	76	66	208	2,995
February	40	1	644	213	(s)	172	279	22	1,190	48	52	196	2,686
March	48	2	674	245	3	165	277	24	1,356	55	86	197	2,966
April	58	2	667	246	1	135	244	21	1,345	49	51	204	2,887
May	63	2	670	256	(s)	116	228	24	1,418	75	47	241	3,026
June	81	2	634	247	(s)	109	217	26	1,379	74	54	223	2,936
July	93	3	647	272	(s)	128	251	23	1,435	71	71	241	3,106
August	95	2	660	268	(s)	125	239	23	1,432	76	80	212	3,086
September	92	2	644	241	1	128	240	22	1,359	74	70	258	3,001
October	78	2	722	256	(s)	160	287	22	1,403	60	52	211	3,093
November	52	2	674	243	(s)	161	287	18	1,355	72	68	243	3,014
December	37	1	695	251	3	183	312	22	1,360	58	33	244	3,016
Total	783	22	8,058	2,969	11	1,785	3,167	268	16,339	786	731	2,677	35,811
2014 January	36	2	764	241	3	203	325	20	R 1,287	R 82	52	206	3,018
February	38	1	675	218	1	155	260	20	R 1,232	51	37	210	R 2,742
March	45	2	723	253	(s)	145	261	26	R 1,362	43	42	210	R 2,967
April	56	2	687	246	(s)	113	228	21	R 1,363	60	52	214	2,929
May	72	2	704	247	(s)	91	207	25	R 1,414	R 71	46	207	2,994
June	80	2	671	265	(s)	107	215	18	R 1,371	63	49	204	2,940
July	95	3	690	271	2	107	223	25	R 1,446	75	47	215	3,093
August	94	2	R 682	266	(s)	118	250	25	1,457	71	42	205	3,096
September	88	2	676	251	3	118	238	24	R 1,332	74	50	230	R 2,969
October	81	2	758	257	3	136	263	24	R 1,442	68	57	205	3,159
November	52	2	671	253	1	153	278	25	1,356	75	59	201	R 2,973
December	R 49	R 2	R 740	R 273	R 4	R 165	294	21	R 1,415	R 51	R 58	R 209	R 3,117
Total	R 788	R 22	R 8,442	3,043	R 18	R 1,610	3,041	R 274	R 16,479	R 784	R 590	R 2,514	R 35,996
2015 January	F 38	F 2	E 741	E 263	F 2	E 181	F 317	F 24	E 1,375	F 66	E 33	E 293	E 3,154
February	F 39	F 1	E 676	E 236	F 7	E 171	F 284	F 20	E 1,229	F 53	E 24	E 303	E 2,872
2-Month Total	F 76	F 3	E 1,417	E 500	F 9	E 353	F 601	F 43	E 2,604	F 119	E 57	E 596	E 6,026
2014 2-Month Total	75	3	1,439	459	4	357	584	40	2,520	133	89	415	5,760
2013 2-Month Total	86	3	1,370	444	2	375	586	46	2,497	124	119	404	5,680

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

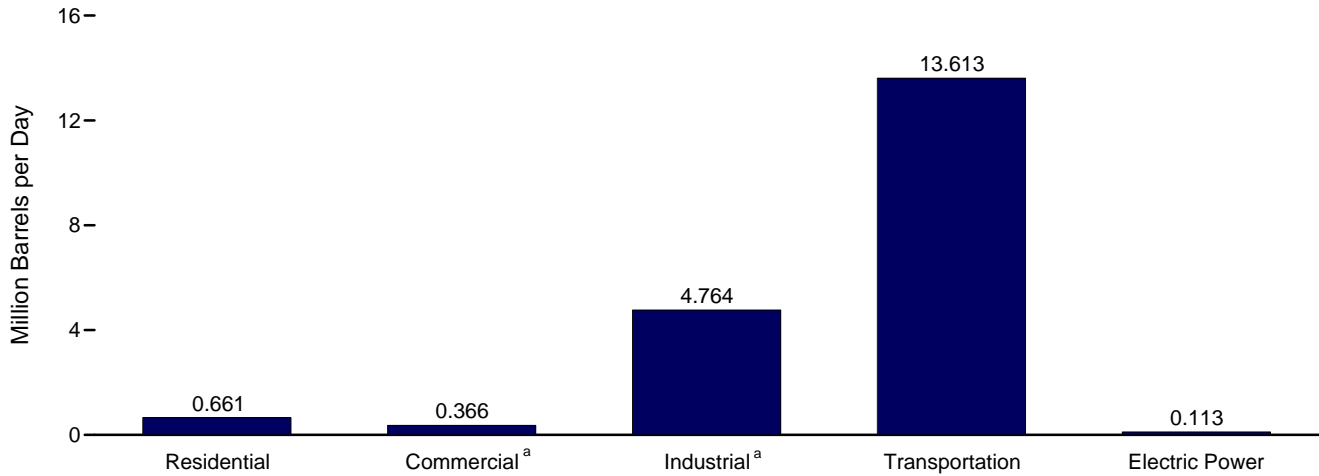
Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.
R=Revised. E=Estimate. F=Forecast. NA=Not available. (s)=Less than 0.5 trillion Btu and greater than -0.5 trillion Btu.
Notes: • Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web 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 3.7 Petroleum Consumption by Sector

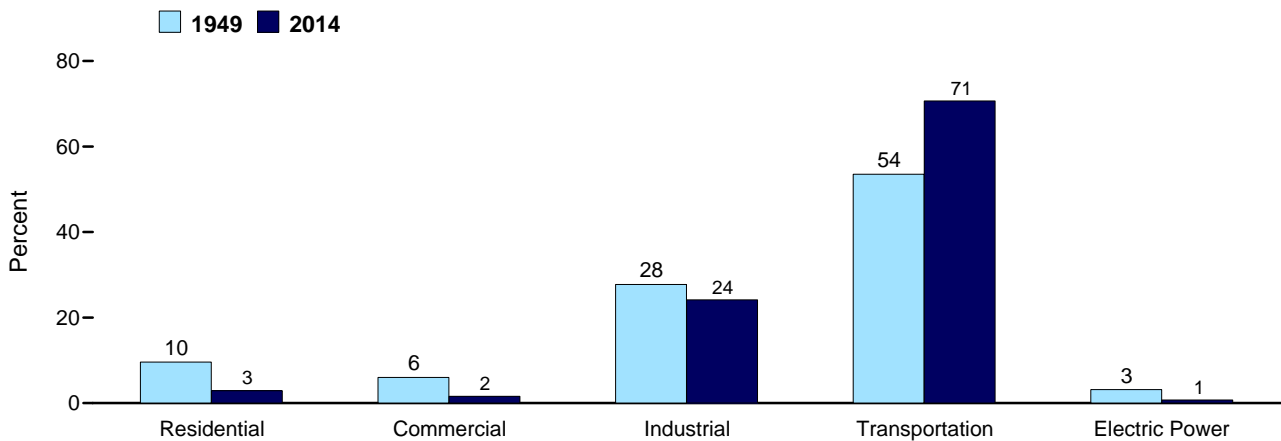
By Sector, 1949–2014



By Sector, December 2014



Sector Shares 1949 and 2014



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

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

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

	Residential Sector				Commercial Sector ^a						
	Distillate Fuel Oil	Kero-sene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kero-sene	Liquefied Petroleum Gases	Motor Gasoline ^b	Petro-leum Coke	Residual Fuel Oil	Total
1950 Average	390	168	104	662	123	23	28	52	NA	185	411
1955 Average	562	179	144	885	177	24	38	69	NA	209	519
1960 Average	736	171	217	1,123	232	23	58	35	NA	243	590
1965 Average	805	161	275	1,242	251	26	74	40	NA	281	672
1970 Average	883	144	392	1,419	276	30	102	45	NA	311	764
1975 Average	850	78	365	1,293	276	24	92	46	NA	214	653
1980 Average	617	51	222	890	243	20	63	56	NA	245	626
1985 Average	514	77	224	815	297	16	68	50	NA	99	530
1990 Average	460	31	252	742	252	6	73	58	0	100	489
1995 Average	426	36	282	743	225	11	78	10	(s)	62	385
2000 Average	424	46	395	865	230	14	107	23	(s)	40	415
2001 Average	427	46	375	849	239	15	102	20	(s)	30	406
2002 Average	404	29	384	817	209	8	101	24	(s)	35	376
2003 Average	438	34	389	861	233	9	112	32	(s)	48	434
2004 Average	433	41	364	839	221	10	108	23	(s)	53	416
2005 Average	402	40	366	809	210	10	94	24	(s)	50	389
2006 Average	335	32	318	685	189	7	88	26	(s)	33	343
2007 Average	342	21	345	708	181	4	87	32	(s)	33	337
2008 Average	354	10	394	758	181	2	113	24	(s)	31	351
2009 Average	276	13	391	680	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
2012 January	380	4	317	701	280	1	109	20	(s)	23	431
February	319	19	310	648	235	3	106	21	(s)	19	384
March	259	5	284	548	191	1	97	21	(s)	15	325
April	190	1	267	458	140	(s)	91	21	(s)	11	263
May	188	6	265	459	138	1	91	22	0	11	263
June	195	1	259	455	143	(s)	89	22	0	12	266
July	182	(s)	262	443	134	(s)	90	21	(s)	11	256
August	228	(s)	271	500	168	(s)	93	22	(s)	14	297
September	184	3	273	460	135	(s)	94	21	(s)	11	261
October	163	2	298	463	120	(s)	102	21	(s)	10	253
November	215	2	304	521	158	(s)	104	20	(s)	13	296
December	238	2	324	564	176	(s)	111	20	(s)	14	321
Average	228	4	286	518	168	1	98	21	(s)	14	301
2013 January	433	8	350	791	303	1	120	20	(s)	20	464
February	444	2	353	798	R 310	(s)	121	21	(s)	20	473
March	348	11	317	676	244	2	109	21	(s)	16	391
April	270	3	290	R 563	189	1	99	22	(s)	12	323
May	171	1	264	436	119	(s)	91	22	0	8	240
June	125	1	260	386	87	(s)	89	22	0	6	204
July	122	1	290	412	85	(s)	99	22	(s)	6	212
August	157	1	277	435	110	(s)	95	22	(s)	7	235
September	178	3	289	470	124	(s)	99	22	(s)	8	254
October	127	1	331	459	89	(s)	114	22	(s)	6	230
November	200	(s)	342	542	140	(s)	117	22	(s)	9	288
December	239	14	359	R 611	167	2	123	21	(s)	11	325
Average	233	4	310	547	163	1	106	22	(s)	11	302
2014 January	R 318	13	370	R 702	R 222	2	127	20	(s)	R 11	R 382
February	R 391	4	330	R 725	R 273	1	113	21	(s)	R 13	R 421
March	R 316	(s)	302	R 618	R 221	(s)	104	21	(s)	R 10	R 356
April	R 158	1	273	R 433	R 111	(s)	94	22	(s)	R 5	R 232
May	R 207	1	243	R 450	R 145	(s)	83	22	(s)	R 7	R 257
June	R 184	(s)	260	R 444	R 129	(s)	89	22	0	R 6	R 246
July	R 149	8	263	R 420	R 104	1	90	23	(s)	R 5	R 223
August	R 156	2	294	R 451	R 109	(s)	101	23	(s)	R 5	R 238
September	R 225	13	287	R 525	R 157	2	98	22	(s)	R 7	R 287
October	R 235	11	304	R 550	R 165	2	104	23	(s)	R 8	R 301
November	R 286	5	331	R 623	R 200	1	114	22	(s)	R 9	R 346
December	307	16	338	661	215	2	116	22	(s)	10	366
Average	244	6	299	549	170	1	103	22	(s)	8	304

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

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

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

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

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

Web 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 ^a									
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline ^b	Petroleum Coke	Residual Fuel Oil	Other ^c	Total
1950 Average	180	328	132	100	43	131	41	617	250	1,822
1955 Average	254	466	116	212	47	173	67	686	366	2,387
1960 Average	302	476	78	333	48	198	149	689	435	2,708
1965 Average	368	541	80	470	62	179	202	689	657	3,247
1970 Average	447	577	89	699	70	150	203	708	866	3,808
1975 Average	419	630	58	844	68	116	246	658	1,001	4,038
1980 Average	396	621	87	1,172	82	82	234	586	1,581	4,842
1985 Average	425	526	21	1,285	75	114	261	326	1,032	4,065
1990 Average	483	541	6	1,215	84	97	325	179	1,373	4,304
1995 Average	486	532	7	1,527	80	105	328	147	1,381	4,594
2000 Average	525	563	8	1,720	86	79	361	105	1,458	4,903
2001 Average	519	611	11	1,557	79	155	390	89	1,481	4,892
2002 Average	512	566	7	1,668	78	163	383	83	1,474	4,934
2003 Average	503	551	12	1,560	72	171	375	96	1,579	4,918
2004 Average	537	570	14	1,646	73	195	423	108	1,657	5,222
2005 Average	546	594	19	1,549	72	187	404	123	1,605	5,100
2006 Average	521	594	14	1,627	71	198	425	104	1,640	5,193
2007 Average	494	595	6	1,637	73	161	412	84	1,593	5,056
2008 Average	417	637	2	1,419	67	131	394	84	1,408	4,559
2009 Average	360	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
2012 January	201	721	1	2,041	62	128	338	38	1,253	4,784
February	220	808	5	1,994	71	135	250	33	1,238	4,754
March	234	631	1	1,825	57	135	288	35	1,160	4,365
April	327	619	(s)	1,715	64	137	317	36	1,067	4,283
May	383	598	1	1,705	63	141	351	27	1,128	4,396
June	455	513	(s)	1,665	55	141	347	28	1,219	4,425
July	464	393	(s)	1,683	55	138	304	36	1,228	4,300
August	497	454	(s)	1,746	56	144	368	33	1,221	4,518
September	445	552	1	1,757	55	134	332	31	1,010	4,317
October	374	699	1	1,917	58	136	272	27	1,331	4,815
November	282	722	1	1,954	62	133	338	27	1,309	4,828
December	201	524	(s)	2,084	47	132	327	15	1,408	4,738
Average	340	602	1	1,841	59	136	319	30	1,215	4,543
2013 January	224	R 749	2	2,254	65	134	R 351	22	1,171	R 4,973
February	215	621	(s)	2,269	65	135	R 230	20	1,214	4,769
March	236	525	3	2,038	65	139	241	R 28	1,114	4,390
April	290	R 571	1	1,866	58	143	219	18	1,189	R 4,355
May	308	565	(s)	1,702	66	146	331	R 16	1,363	4,497
June	406	500	(s)	1,675	73	146	R 334	19	1,311	R 4,463
July	453	R 449	(s)	1,863	63	148	R 307	23	1,336	4,640
August	464	R 453	(s)	1,784	62	147	331	R 26	1,192	4,459
September	461	R 544	1	1,861	61	144	R 337	R 23	1,521	R 4,953
October	377	809	(s)	2,132	60	144	R 257	R 17	1,178	R 4,974
November	262	721	(s)	2,199	51	144	R 346	24	1,426	R 5,171
December	180	705	4	2,308	59	140	251	R 17	1,377	R 5,040
Average	323	601	1	1,995	62	143	R 295	21	1,282	4,723
2014 January	177	R 867	3	2,384	55	132	365	R 19	1,143	R 5,146
February	205	R 727	1	2,126	60	140	238	R 15	1,301	R 4,812
March	218	R 654	(s)	1,944	71	140	162	14	1,168	R 4,371
April	282	R 698	(s)	1,757	59	145	281	R 17	1,225	R 4,464
May	350	R 573	(s)	1,561	68	145	316	R 14	1,145	R 4,172
June	402	R 499	(s)	1,675	52	146	285	R 16	1,189	R 4,264
July	463	R 503	2	1,690	70	149	340	R 14	1,212	R 4,443
August	458	R 455	(s)	1,889	68	150	R 323	R 12	1,147	R 4,502
September	444	R 535	3	1,848	68	142	350	R 16	1,337	R 4,744
October	393	R 746	3	1,954	64	148	R 325	R 17	1,148	R 4,798
November	261	R 548	1	2,133	72	144	367	R 19	1,159	R 4,704
December	239	729	4	2,175	58	146	207	18	1,189	4,764
Average	325	628	2	1,927	64	144	297	16	1,196	4,598

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

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

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

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

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 ^a				
	Aviation Gasoline	Distillate Fuel Oil ^b	Jet Fuel ^c	Liquefied Petroleum Gases	Lubricants	Motor Gasoline ^d	Residual Fuel Oil	Total	Distillate Fuel Oil ^e	Petroleum Coke	Residual Fuel Oil ^f	Total
1950 Average	108	226	(^c)	2	64	2,433	524	3,356	15	NA	192	207
1955 Average	192	372	154	9	70	3,221	440	4,458	15	NA	191	206
1960 Average	161	418	371	13	68	3,736	367	5,135	10	NA	231	241
1965 Average	120	514	602	23	67	4,374	336	6,036	14	NA	302	316
1970 Average	55	738	967	32	66	5,589	332	7,778	66	9	853	928
1975 Average	39	998	992	31	70	6,512	310	8,951	107	1	1,280	1,388
1980 Average	35	1,311	1,062	13	77	6,441	608	9,546	79	2	1,069	1,151
1985 Average	27	1,491	1,218	21	71	6,667	342	9,838	40	3	435	478
1990 Average	24	1,722	1,522	16	80	7,080	443	10,888	45	14	507	566
1995 Average	21	1,973	1,514	13	76	7,674	397	11,668	51	37	247	334
2000 Average	20	2,422	1,725	8	81	8,370	386	13,012	82	45	378	505
2001 Average	19	2,489	1,655	10	74	8,435	255	12,938	80	47	437	564
2002 Average	18	2,536	1,614	10	73	8,662	295	13,208	60	80	287	427
2003 Average	16	2,629	1,578	13	68	8,733	249	13,286	76	79	379	534
2004 Average	17	2,783	1,630	14	69	8,887	321	13,720	52	101	382	535
2005 Average	19	2,858	1,679	20	68	8,948	365	13,957	54	111	382	547
2006 Average	18	3,017	1,633	20	67	9,029	395	14,178	35	97	157	289
2007 Average	17	3,037	1,622	16	69	9,093	433	14,287	42	78	173	293
2008 Average	15	2,738	1,539	29	64	8,834	402	13,621	34	70	104	209
2009 Average	14	2,626	1,393	20	57	8,841	344	13,297	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
2012 January	12	2,454	1,308	29	59	8,042	357	12,262	27	65	34	126
February	11	2,538	1,351	29	67	8,442	314	12,752	23	55	27	105
March	14	2,614	1,381	26	54	8,427	333	12,849	20	29	29	77
April	14	2,748	1,350	25	61	8,582	348	13,129	23	28	28	79
May	17	2,804	1,409	25	59	8,817	251	13,381	28	34	28	91
June	13	2,852	1,546	24	52	8,833	279	13,600	29	38	45	112
July	20	2,818	1,468	24	52	8,651	359	13,393	30	41	52	123
August	13	2,869	1,470	25	53	8,988	317	13,736	24	43	38	105
September	15	2,782	1,378	25	52	8,406	305	12,961	21	42	29	92
October	14	2,848	1,353	28	55	8,543	243	13,084	22	37	31	90
November	10	2,728	1,381	28	59	8,329	255	12,791	24	40	28	92
December	9	2,564	1,381	30	45	8,237	138	12,404	27	38	28	93
Average	14	2,719	1,398	27	56	8,525	291	13,029	25	41	33	99
2013 January	11	R 2,542	1,311	32	62	8,176	R 250	R 12,384	R 35	R 53	50	R 138
February	8	R 2,584	1,344	33	62	8,239	R 221	R 12,490	R 26	R 52	37	R 114
March	12	R 2,630	1,393	29	62	8,480	367	12,973	R 22	R 50	28	R 101
April	12	R 2,801	1,444	27	55	8,691	212	R 13,241	R 24	R 48	R 30	R 102
May	15	R 2,867	1,459	25	62	8,866	191	R 13,485	R 27	R 66	28	R 121
June	15	2,928	1,454	24	69	8,909	R 231	R 13,629	R 23	R 69	R 31	124
July	16	2,932	1,546	27	59	8,976	R 291	R 13,847	R 34	R 67	R 44	R 146
August	14	2,952	1,524	26	59	8,955	R 343	R 13,872	R 21	R 60	33	R 124
September	11	2,858	1,417	27	58	8,780	R 310	13,459	R 21	R 65	R 29	R 116
October	11	R 2,993	1,455	31	56	8,778	216	R 13,540	R 21	R 58	28	R 108
November	14	R 2,807	1,429	32	48	8,757	R 302	R 13,389	R 26	48	27	R 100
December	7	R 2,741	1,428	33	56	8,508	R 104	R 12,878	R 35	57	R 38	R 129
Average	12	R 2,804	1,434	29	59	8,679	253	R 13,270	R 26	59	34	R 119
2014 January	10	R 2,703	1,371	34	52	8,053	R 102	R 12,326	R 161	67	138	R 366
February	7	R 2,743	1,373	31	57	8,537	R 125	R 12,872	R 48	R 61	55	R 163
March	12	R 2,807	1,440	28	67	8,523	R 135	R 13,012	47	64	57	168
April	11	R 2,983	1,446	25	56	8,812	R 226	R 13,560	R 21	46	28	R 95
May	14	R 2,985	1,404	23	64	8,848	R 190	R 13,528	R 27	58	24	R 109
June	11	R 3,045	1,560	24	49	8,866	R 212	R 13,767	R 24	62	R 26	R 112
July	17	R 3,082	1,543	24	66	9,048	R 188	R 13,970	R 22	55	32	R 109
August	14	R 3,074	1,516	27	64	9,115	R 162	R 13,973	R 23	56	R 33	112
September	11	R 2,967	1,477	27	65	8,612	R 216	R 13,373	R 24	56	29	R 109
October	11	R 3,070	1,464	28	61	9,025	R 240	R 13,899	R 21	34	27	R 81
November	11	R 2,816	1,488	31	68	8,764	R 258	R 13,436	R 28	44	26	R 98
December	12	2,859	1,556	31	54	8,856	244	13,613	26	63	25	113
Average	12	2,929	1,470	28	60	8,757	192	13,448	39	55	42	136

^a Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

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

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

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

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

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

R=Revised. NA=Not available.

Notes: • Transportation sector data are estimates. • For total petroleum consumption by all sectors, see petroleum products supplied data in Table 3.5. Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section.

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

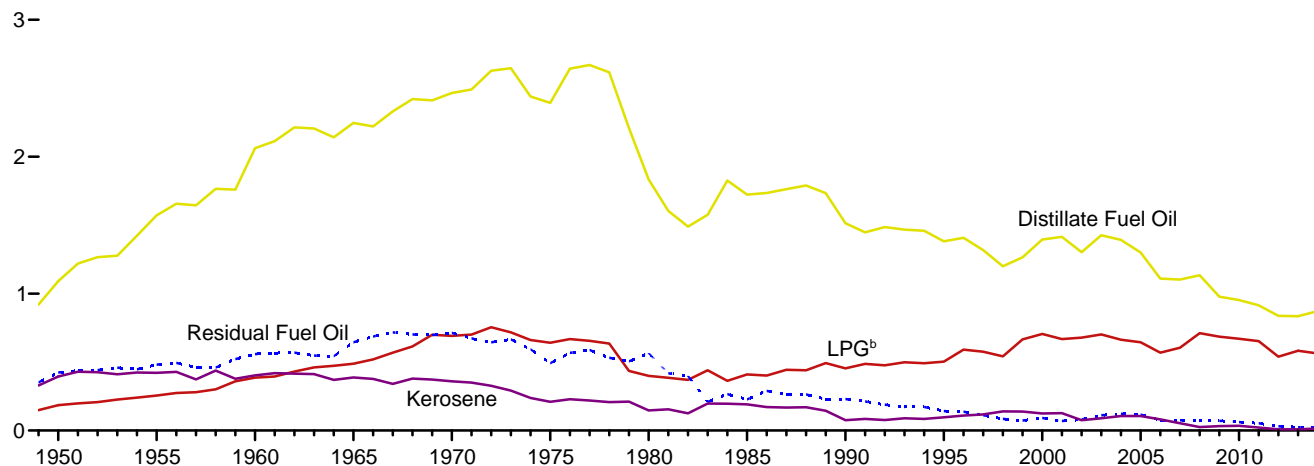
• Geographic coverage is the 50 states and the District of Columbia.

Web 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.

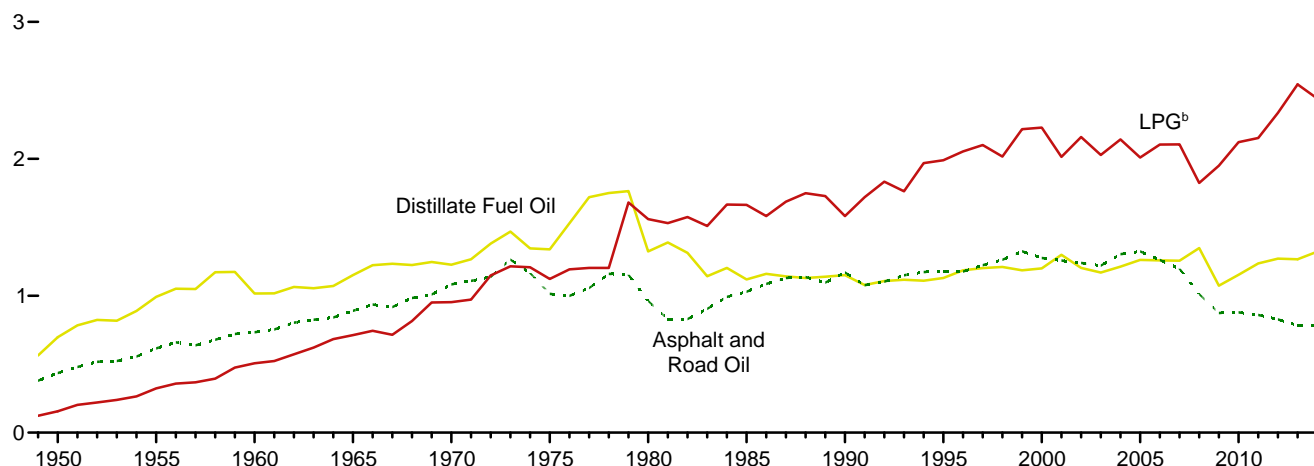
Sources: See end of section.

Figure 3.8a Heat Content of Petroleum Consumption by End-Use Sector, 1949–2014
(Quadrillion Btu)

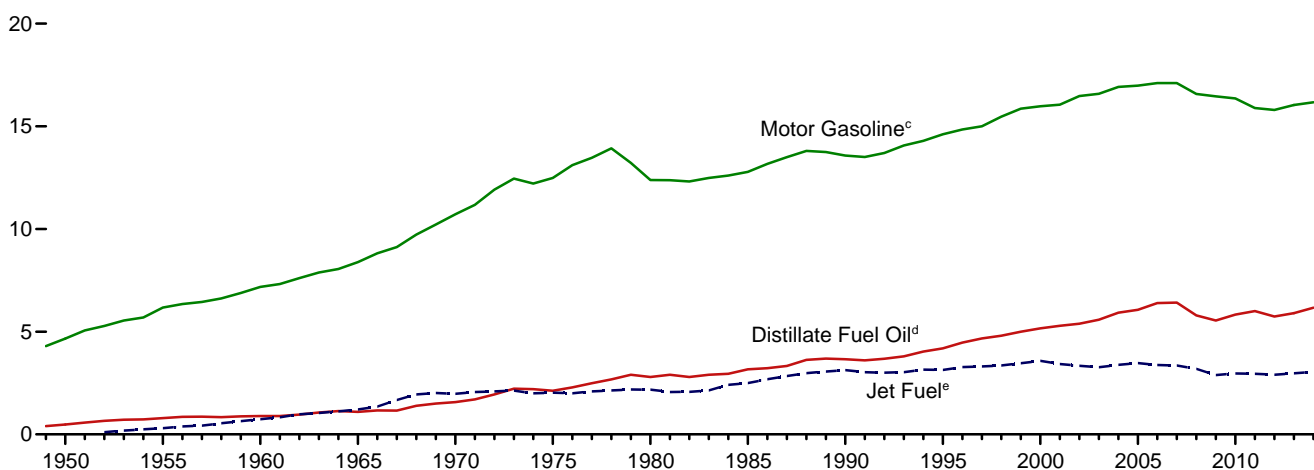
Residential and Commercial^a Sectors, Selected Products



Industrial^a Sector, Selected Products



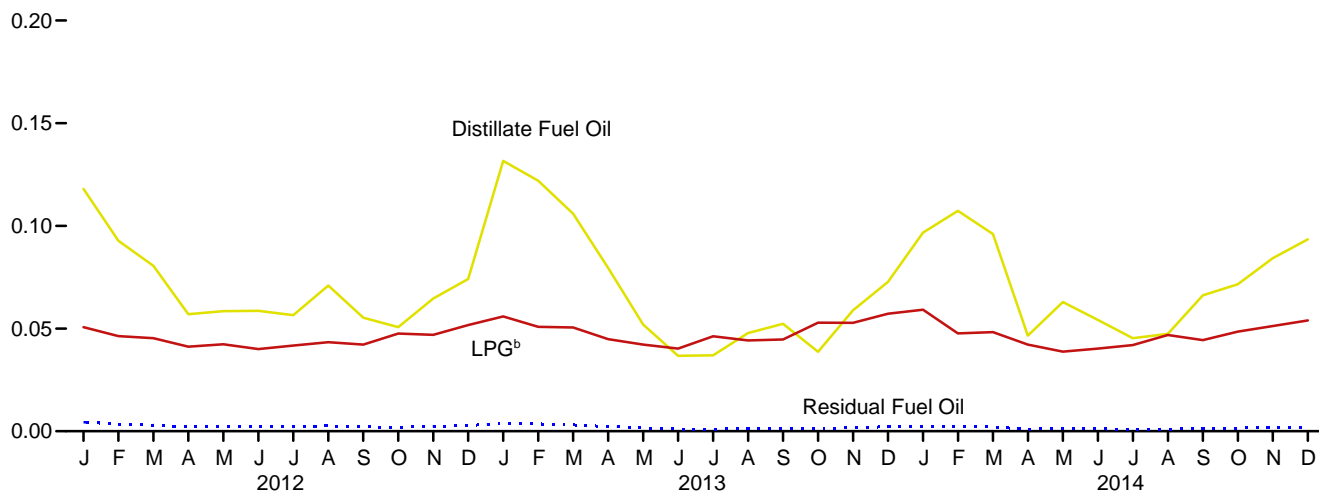
Transportation Sector, Selected Products



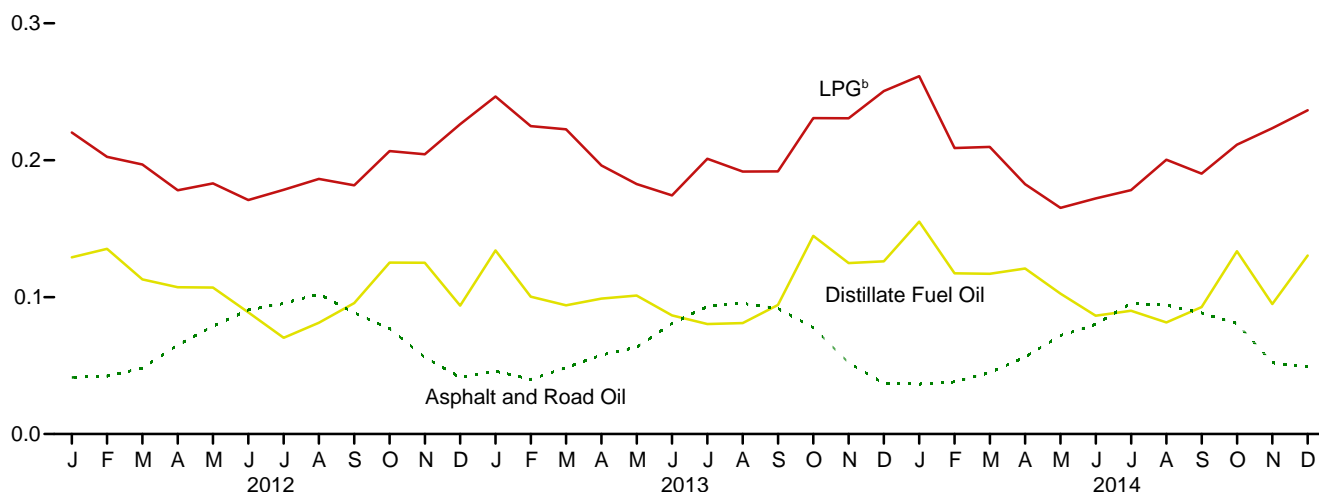
^a Includes combined-heat-and-power plants and a small number of electricity-only plants.
^b Liquefied petroleum gases.
^c Beginning in 1993, includes fuel ethanol blended into motor gasoline.
^d Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.
^e Beginning in 2005, includes kerosene-type jet fuel only.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.
 Sources: Tables 3.8a–3.8c.

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

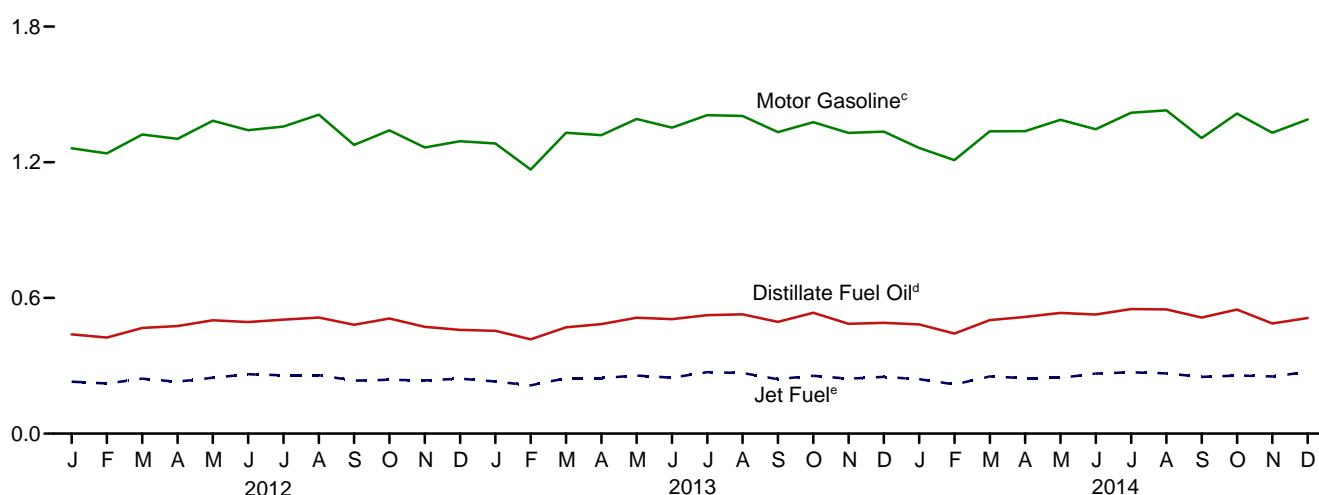
Residential and Commercial^a Sectors, Selected Products



Industrial^a Sector, Selected Products



Transportation Sector, Selected Products



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

^b Liquefied petroleum gases.

^c Includes fuel ethanol blended into motor gasoline.

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

distillate fuel oil.

^e Includes kerosene-type jet fuel only.

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

Sources: Tables 3.8a–3.8c.

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

	Residential Sector				Commercial Sector ^a						
	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Motor Gasoline ^b	Petroleum Coke	Residual Fuel Oil	Total
1950 Total	829	347	146	1,322	262	47	39	100	NA	424	872
1955 Total	1,194	371	202	1,767	377	51	54	133	NA	480	1,095
1960 Total	1,568	354	305	2,227	494	48	81	67	NA	559	1,248
1965 Total	1,713	334	385	2,432	534	54	103	77	NA	645	1,413
1970 Total	1,878	298	549	2,725	587	61	143	86	NA	714	1,592
1975 Total	1,807	161	512	2,479	587	49	129	89	NA	492	1,346
1980 Total	1,316	107	311	1,734	518	41	88	107	NA	565	1,318
1985 Total	1,092	159	314	1,565	631	33	95	96	NA	228	1,083
1990 Total	978	64	352	1,394	536	12	102	111	0	230	991
1995 Total	904	74	395	1,373	478	22	109	18	(s)	141	769
2000 Total	904	95	555	1,553	490	30	150	45	(s)	92	807
2001 Total	907	95	526	1,528	508	31	143	37	(s)	70	789
2002 Total	859	60	537	1,456	444	16	141	45	(s)	80	726
2003 Total	931	70	544	1,546	496	19	157	60	(s)	111	842
2004 Total	923	85	512	1,519	470	20	152	45	(s)	122	810
2005 Total	853	84	513	1,450	447	22	131	46	(s)	116	762
2006 Total	709	66	446	1,221	400	15	123	48	(s)	75	662
2007 Total	721	44	484	1,249	381	9	121	60	(s)	75	648
2008 Total	750	21	553	1,324	384	4	158	45	(s)	71	663
2009 Total	582	28	547	1,157	395	4	139	52	(s)	71	662
2010 Total	562	29	530	1,121	391	5	140	52	(s)	62	650
2011 Total	523	19	506	1,048	391	3	146	44	(s)	54	639
2012 January	68	1	38	106	50	(s)	13	3	(s)	4	71
February	53	3	34	91	39	(s)	12	3	(s)	3	58
March	46	1	34	81	34	(s)	12	3	(s)	3	52
April	33	(s)	31	64	24	(s)	11	3	(s)	2	40
May	34	1	32	66	25	(s)	11	3	0	2	41
June	34	(s)	30	64	25	(s)	10	3	0	2	41
July	33	(s)	31	64	24	(s)	11	3	(s)	2	40
August	41	(s)	32	73	30	(s)	11	3	(s)	3	47
September	32	1	31	64	23	(s)	11	3	(s)	2	40
October	29	(s)	35	65	21	(s)	12	3	(s)	2	39
November	37	(s)	35	73	27	(s)	12	3	(s)	2	45
December	43	(s)	39	81	31	(s)	13	3	(s)	3	51
Total	482	8	402	892	355	1	138	39	(s)	31	564
2013 January	^R 77	1	42	^R 120	54	(s)	14	3	(s)	4	76
February	72	(s)	38	110	50	(s)	13	3	(s)	4	70
March	62	2	38	102	44	(s)	13	3	(s)	3	63
April	47	1	33	81	33	(s)	11	3	(s)	2	50
May	31	(s)	31	62	21	(s)	11	3	0	2	37
June	22	(s)	30	52	15	(s)	10	3	0	1	30
July	22	(s)	34	56	15	(s)	12	4	(s)	1	32
August	28	(s)	33	61	20	(s)	11	4	(s)	1	36
September	31	(s)	33	65	22	(s)	11	3	(s)	2	38
October	23	(s)	39	62	16	(s)	13	3	(s)	1	34
November	35	(s)	39	74	24	(s)	13	3	(s)	2	43
December	43	2	43	88	30	(s)	15	3	(s)	2	50
Total	^R 491	8	434	933	344	1	149	40	(s)	24	558
2014 January	^R 57	2	44	^R 103	^R 40	(s)	15	3	(s)	2	^R 61
February	^R 63	1	35	^R 99	^R 44	(s)	12	3	(s)	^R 2	^R 62
March	^R 57	(s)	36	^R 93	^R 40	(s)	12	3	(s)	2	^R 57
April	^R 27	(s)	31	^R 59	^R 19	(s)	11	3	(s)	1	^R 34
May	^R 37	(s)	29	^R 66	^R 26	(s)	10	3	(s)	^R 1	^R 41
June	^R 32	(s)	30	^R 62	^R 22	(s)	10	3	0	1	^R 37
July	^R 27	1	31	^R 59	^R 19	(s)	11	4	(s)	1	^R 34
August	^R 28	(s)	35	^R 63	^R 20	(s)	12	4	(s)	1	^R 36
September	^R 39	2	33	^R 74	^R 27	(s)	11	3	(s)	^R 1	^R 44
October	^R 42	2	36	^R 80	^R 29	(s)	12	4	(s)	2	^R 47
November	^R 50	1	38	^R 89	^R 35	(s)	13	3	(s)	2	^R 53
December	55	3	40	98	38	(s)	14	3	(s)	2	58
Total	513	13	419	945	359	2	144	40	1	18	564

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

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

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

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

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

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

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

	Industrial Sector ^a									
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline ^b	Petroleum Coke	Residual Fuel Oil	Other ^c	Total
1950 Total	435	698	274	156	94	251	90	1,416	546	3,960
1955 Total	615	991	241	323	103	332	147	1,573	798	5,123
1960 Total	734	1,016	161	507	107	381	328	1,584	947	5,766
1965 Total	890	1,150	165	712	137	342	444	1,582	1,390	6,813
1970 Total	1,082	1,226	185	953	155	288	446	1,624	1,817	7,776
1975 Total	1,014	1,339	119	1,123	149	223	540	1,509	2,109	8,127
1980 Total	962	1,324	181	1,559	182	158	516	1,349	3,278	9,509
1985 Total	1,029	1,119	44	1,664	166	218	575	748	2,152	7,714
1990 Total	1,170	1,150	12	1,582	186	185	714	411	2,839	8,251
1995 Total	1,178	1,130	15	1,990	178	200	721	337	2,837	8,587
2000 Total	1,276	1,199	16	2,228	190	150	796	241	2,979	9,075
2001 Total	1,257	1,299	23	2,014	174	295	858	203	3,056	9,179
2002 Total	1,240	1,203	14	2,160	172	309	842	190	3,040	9,170
2003 Total	1,220	1,169	24	2,028	159	324	825	220	3,264	9,233
2004 Total	1,304	1,213	28	2,141	161	371	937	249	3,428	9,832
2005 Total	1,323	1,262	39	2,009	160	355	894	281	3,318	9,641
2006 Total	1,261	1,258	30	2,104	156	374	938	239	3,416	9,777
2007 Total	1,197	1,256	13	2,106	161	302	910	193	3,313	9,452
2008 Total	1,012	1,348	4	1,823	150	246	870	194	2,941	8,588
2009 Total	873	1,073	4	1,950	135	238	805	130	2,611	7,819
2010 Total	878	1,153	7	2,121	149	260	694	120	2,800	8,183
2011 Total	859	1,236	4	2,152	142	255	663	135	2,676	8,121
2012										
January	41	129	(s)	220	12	20	64	7	221	716
February	42	135	1	203	13	20	45	6	208	671
March	48	113	(s)	197	11	21	55	7	208	660
April	65	107	(s)	178	12	21	58	7	184	632
May	79	107	(s)	183	12	22	67	5	200	674
June	91	89	(s)	171	10	21	64	5	212	663
July	95	70	(s)	178	10	22	58	7	219	660
August	102	81	(s)	186	11	23	70	6	217	696
September	89	96	(s)	182	10	20	61	6	176	639
October	77	125	(s)	207	11	21	52	5	236	734
November	56	125	(s)	204	11	20	62	5	226	710
December	41	94	(s)	226	9	21	62	3	252	708
Total	827	1,271	2	2,335	130	252	717	70	2,558	8,163
2013										
January	46	134	(s)	247	12	21	67	4	208	739
February	40	100	(s)	225	11	19	40	R 3	196	635
March	48	94	(s)	223	12	22	46	6	197	R 648
April	58	99	(s)	196	11	22	41	3	204	633
May	63	101	(s)	183	12	23	63	3	241	690
June	81	87	(s)	174	13	22	62	R 3	223	R 665
July	93	80	(s)	201	12	23	59	R 4	241	713
August	95	81	(s)	192	12	23	63	5	212	683
September	92	94	(s)	192	11	22	62	R 4	258	736
October	78	145	(s)	231	11	23	49	3	211	R 750
November	52	125	(s)	231	9	22	64	R 4	243	750
December	37	126	1	251	11	22	48	R 3	244	R 742
Total	783	R 1,266	2	2,544	138	264	R 663	48	2,677	R 8,386
2014										
January	36	R 155	1	261	10	21	70	R 4	206	R 764
February	38	R 117	(s)	209	10	20	41	3	210	R 648
March	45	R 117	(s)	210	13	22	31	3	210	R 651
April	56	R 121	(s)	183	11	22	52	R 3	214	R 661
May	72	R 103	(s)	165	13	23	60	3	207	R 645
June	80	R 86	(s)	172	9	22	53	3	204	R 630
July	95	R 90	(s)	178	13	23	65	3	215	R 683
August	94	R 81	(s)	200	13	24	62	R 2	205	R 681
September	88	R 93	1	190	12	R 21	65	3	230	R 703
October	81	R 134	1	211	12	23	62	R 3	205	R 731
November	52	R 95	(s)	223	13	22	68	4	201	R 678
December	49	130	1	236	11	23	40	3	209	703
Total	788	1,323	3	2,440	141	266	668	37	2,514	8,179

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

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

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

R=Revised. (s)=Less than 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.

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

	Transportation Sector								Electric Power Sector ^a			
	Aviation Gasoline	Distillate Fuel Oil ^b	Jet Fuel ^c	Liquefied Petroleum Gases	Lubricants	Motor Gasoline ^d	Residual Fuel Oil	Total	Distillate Fuel Oil ^e	Petroleum Coke	Residual Fuel Oil ^f	Total
1950 Total	199	480	(C)	3	141	4,664	1,201	6,690	32	NA	440	472
1955 Total	354	791	301	13	155	6,175	1,009	8,799	32	NA	439	471
1960 Total	298	892	739	19	152	7,183	844	10,125	22	NA	530	553
1965 Total	222	1,093	1,215	32	149	8,386	770	11,866	29	NA	693	722
1970 Total	100	1,569	1,973	44	147	10,716	761	15,310	141	19	1,958	2,117
1975 Total	71	2,121	2,029	43	155	12,485	711	17,615	226	2	2,937	3,166
1980 Total	64	2,795	2,179	18	172	12,383	1,398	19,009	169	5	2,459	2,634
1985 Total	50	3,170	2,497	30	156	12,784	786	19,472	85	7	998	1,090
1990 Total	45	3,661	3,129	23	176	13,575	1,016	21,626	97	30	1,163	1,289
1995 Total	40	4,191	3,132	18	168	14,616	911	23,075	108	81	566	755
2000 Total	36	5,159	3,580	12	179	15,973	888	25,827	175	99	871	1,144
2001 Total	35	5,286	3,426	14	164	16,053	586	25,564	170	103	1,003	1,276
2002 Total	34	5,387	3,340	14	162	16,474	677	26,089	127	175	659	961
2003 Total	30	5,584	3,265	18	150	16,585	571	26,203	161	175	869	1,205
2004 Total	31	5,925	3,383	19	152	16,917	740	27,166	111	211	879	1,201
2005 Total	35	6,068	3,475	28	151	16,977	837	27,573	114	231	876	1,222
2006 Total	33	6,390	3,379	27	147	17,108	906	27,991	73	203	361	637
2007 Total	32	6,413	3,358	22	152	17,109	994	28,078	89	163	397	648
2008 Total	28	5,792	3,193	40	141	16,574	926	26,695	73	146	240	459
2009 Total	27	5,541	2,883	28	127	16,460	791	25,857	70	132	181	382
2010 Total	27	5,828	2,963	29	141	16,356	892	26,236	80	137	154	370
2011 Total	27	6,003	2,950	34	134	15,892	776	25,817	64	138	93	295
2012												
January	2	439	230	3	11	1,262	70	2,017	5	11	7	23
February	2	425	222	3	12	1,240	57	1,960	4	9	5	18
March	2	468	243	3	10	1,323	65	2,113	4	5	6	14
April	2	476	230	3	11	1,304	66	2,091	4	5	5	14
May	3	502	248	3	11	1,384	49	2,199	5	6	6	17
June	2	494	263	3	10	1,342	53	2,165	5	7	9	20
July	3	504	258	3	10	1,358	70	2,206	5	7	10	23
August	2	513	258	3	10	1,411	62	2,259	4	8	7	19
September	2	481	234	3	9	1,277	57	2,065	4	7	6	16
October	2	509	238	3	10	1,341	47	2,151	4	7	6	16
November	2	472	235	3	11	1,265	48	2,036	4	7	5	16
December	1	459	243	4	8	1,293	27	2,035	5	7	6	17
Total	25	5,741	2,901	37	123	15,798	671	25,297	52	85	77	214
2013												
January	2	455	230	4	12	1,283	49	2,034	6	R 9	10	25
February	1	417	213	4	11	1,168	39	1,852	4	8	6	19
March	2	470	245	3	12	1,331	72	2,134	4	9	6	18
April	2	485	246	3	10	1,320	40	2,105	4	8	6	18
May	2	513	256	3	12	1,391	37	R 2,214	5	12	R 6	22
June	2	R 506	247	3	12	1,353	R 44	R 2,168	4	12	6	22
July	3	524	272	3	11	1,409	R 57	R 2,278	6	12	9	R 27
August	2	R 527	268	3	11	1,405	67	R 2,284	4	12	6	23
September	2	494	241	3	11	1,333	58	2,142	4	11	6	R 20
October	2	535	256	4	11	1,377	42	2,226	R 4	10	5	R 20
November	2	R 485	243	4	9	1,330	57	2,130	4	8	5	R 18
December	1	490	251	4	10	1,335	R 20	R 2,112	6	10	R 7	R 24
Total	22	R 5,901	2,969	40	130	16,035	R 581	R 25,679	R 55	123	R 77	255
2014												
January	2	R 483	241	4	10	R 1,263	20	R 2,023	R 29	12	27	R 68
February	1	R 443	218	3	10	1,210	22	R 1,906	R 8	10	10	27
March	2	R 502	253	3	13	1,337	26	R 2,136	8	11	11	31
April	2	R 516	246	3	10	1,338	R 43	R 2,157	R 4	8	5	17
May	2	R 534	247	3	12	1,388	37	R 2,222	R 5	10	5	R 20
June	2	R 527	265	3	9	1,346	R 40	R 2,191	4	11	5	20
July	3	R 551	271	3	12	R 1,419	R 37	R 2,296	4	10	6	20
August	2	R 549	266	3	12	1,430	R 32	R 2,295	4	10	7	R 21
September	2	R 513	251	3	12	R 1,307	R 41	R 2,129	4	10	5	19
October	2	R 549	257	3	11	1,416	R 47	R 2,285	R 4	6	5	15
November	2	R 487	253	4	12	R 1,330	R 49	R 2,137	5	8	5	17
December	2	511	273	4	10	1,389	48	2,237	5	11	5	21
Total	22	6,165	3,043	39	133	16,173	440	26,014	83	116	95	294

^a Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

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

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

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

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

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

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

R=Revised. NA=Not available.

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

Web 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.

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 and 2015: 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 in 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 coke 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 coke 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

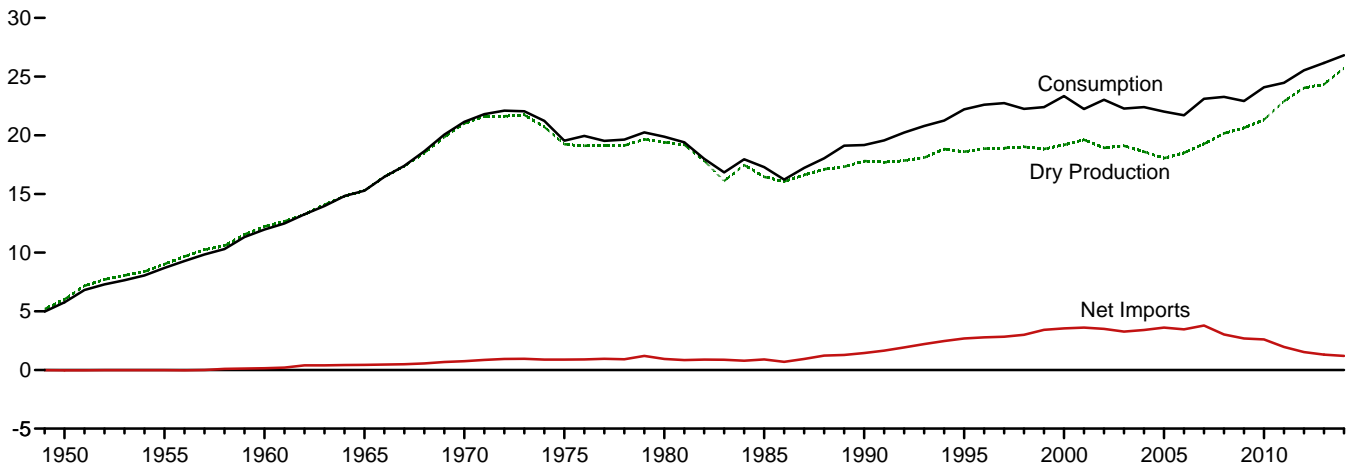
Transportation sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under “Transportation Sector” in Table 3.8c. Electric power sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under “Electric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

THIS PAGE INTENTIONALLY LEFT BLANK

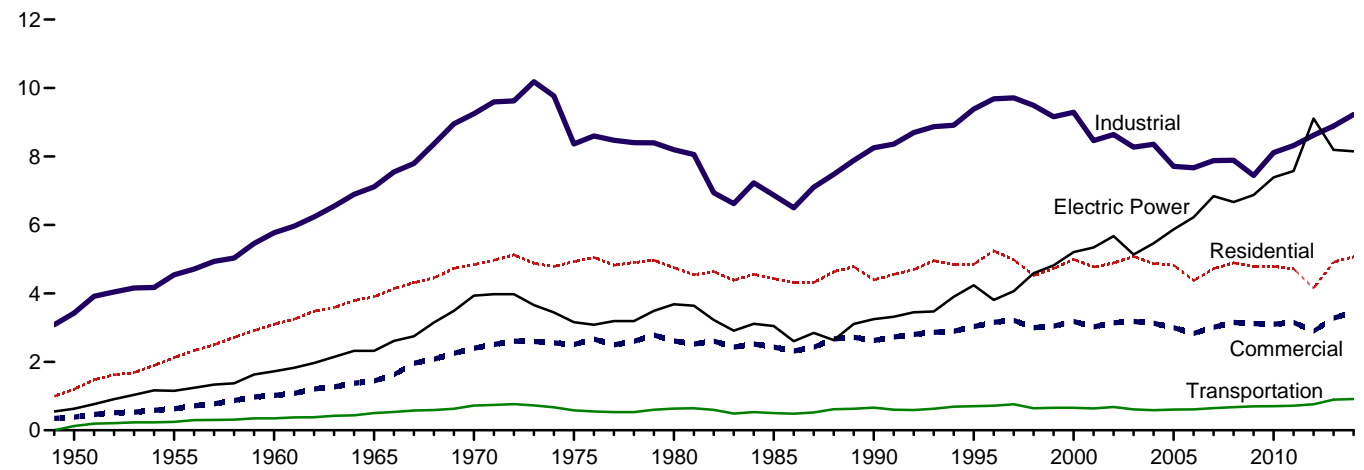
4. Natural Gas

Figure 4.1 Natural Gas
(Trillion Cubic Feet)

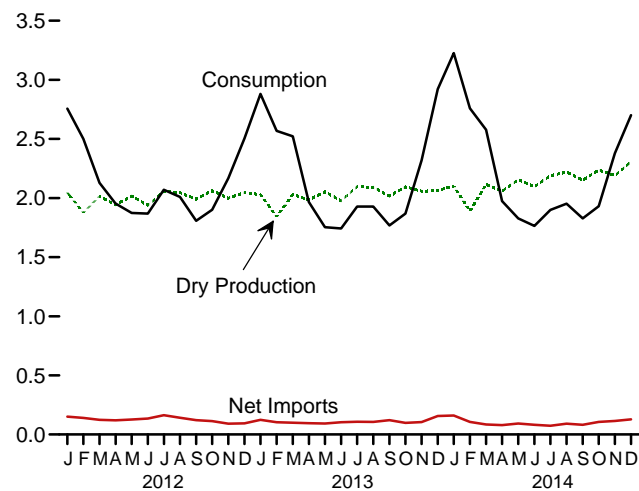
Overview, 1949–2014



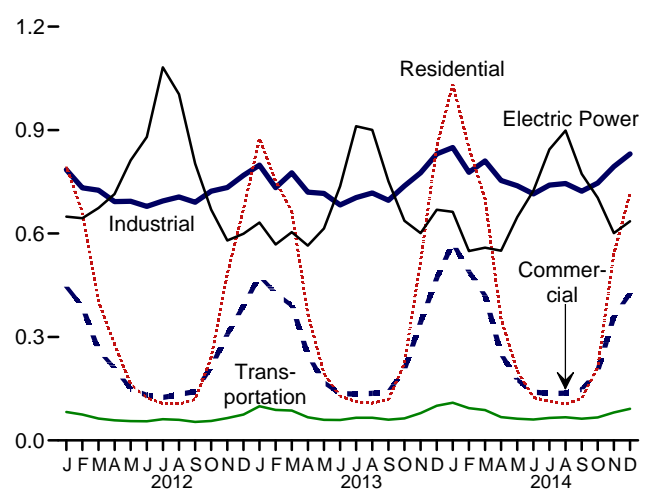
Consumption by Sector, 1949–2014



Overview, Monthly



Consumption by Sector, Monthly



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

Table 4.1 Natural Gas Overview
(Billion Cubic Feet)

	Gross Withdrawals ^a	Marketed Production (Wet) ^b	NGPL Production ^c	Dry Gas Production ^d	Supplemental Gaseous Fuels ^e	Trade			Net Storage Withdrawals ^f	Balancing Item ^g	Consumption ^h
						Imports	Exports	Net Imports			
1950 Total	8,480	i 6,282	260	i 6,022	NA	0	26	-26	-54	-175	5,767
1955 Total	11,720	i 9,405	377	i 9,029	NA	11	31	-20	-68	-247	8,694
1960 Total	15,088	i 12,771	543	i 12,228	NA	156	11	144	-132	-274	11,967
1965 Total	17,963	i 16,040	753	i 15,286	NA	456	26	430	-118	-319	15,280
1970 Total	23,786	i 21,921	906	i 21,014	NA	821	70	751	-398	-228	21,139
1975 Total	21,104	i 20,109	872	i 19,236	NA	953	73	880	-344	-235	19,538
1980 Total	21,870	20,180	777	19,403	155	985	49	936	23	-640	19,877
1985 Total	19,607	17,270	816	16,454	126	950	55	894	235	-428	17,281
1990 Total	21,523	18,594	784	17,810	123	1,532	86	1,447	-513	307	i 19,174
1995 Total	23,744	19,506	908	18,599	110	2,841	154	2,687	415	396	22,207
2000 Total	24,174	20,198	1,016	19,182	90	3,782	244	3,538	829	-306	23,333
2001 Total	24,501	20,570	954	19,616	86	3,977	373	3,604	-1,166	99	22,239
2002 Total	23,941	19,885	957	18,928	68	4,015	516	3,499	467	65	23,027
2003 Total	24,119	19,974	876	19,099	68	3,944	680	3,264	-197	44	22,277
2004 Total	23,970	19,517	927	18,591	60	4,259	854	3,404	-114	461	22,403
2005 Total	23,457	18,927	876	18,051	64	4,341	729	3,612	52	236	22,014
2006 Total	23,535	19,410	906	18,504	66	4,186	724	3,462	-436	103	21,699
2007 Total	24,664	20,196	930	19,266	63	4,608	822	3,785	192	-203	23,104
2008 Total	25,636	21,112	953	20,159	61	3,984	963	3,021	34	2	23,277
2009 Total	26,057	21,648	1,024	20,624	65	3,751	1,072	2,679	-355	-103	22,910
2010 Total	26,816	22,382	1,066	21,316	65	3,741	1,137	2,604	-13	115	24,087
2011 Total	28,479	24,036	1,134	22,902	60	3,469	1,506	1,963	-354	-94	24,477
2012 January	2,571	2,153	106	2,046	5	281	130	151	553	1	2,756
February	2,360	1,974	98	1,877	5	270	130	140	467	12	2,501
March	2,524	2,119	105	2,014	5	265	141	124	-38	22	2,128
April	2,417	2,045	101	1,943	5	243	123	120	-141	25	1,953
May	2,491	2,121	105	2,016	5	259	133	126	-288	15	1,874
June	2,377	2,040	101	1,939	5	260	125	135	-236	26	1,868
July	2,465	2,162	107	2,055	5	281	118	163	-137	-16	2,070
August	2,374	2,152	106	2,045	5	281	139	142	-169	-14	2,009
September	2,410	2,094	104	1,991	5	258	137	121	-295	-15	1,807
October	2,557	2,169	107	2,062	5	253	140	113	-246	-34	1,901
November	2,471	2,102	104	1,998	5	234	142	92	129	-56	2,168
December	2,524	2,153	106	2,046	5	252	159	94	392	-33	2,504
Total	29,542	25,283	1,250	24,033	61	3,138	1,619	1,519	-9	-66	25,538
2013 January	2,552	2,142	113	2,029	5	278	154	124	732	R -8	R 2,881
February	2,308	1,944	103	1,842	4	237	133	104	613	R 6	R 2,568
March	2,543	2,145	113	2,031	5	248	149	100	387	R (s)	R 2,522
April	2,477	2,094	111	1,984	4	221	126	95	-141	R 26	R 1,968
May	2,530	2,166	114	2,052	5	234	142	92	-426	R 30	R 1,753
June	2,418	2,087	110	1,977	4	237	134	103	-379	R 38	R 1,743
July	2,559	2,212	117	2,096	5	236	129	108	-281	R (s)	R 1,927
August	2,540	2,208	117	2,092	5	236	130	106	-278	R 4	R 1,929
September	2,453	2,129	112	2,016	5	244	122	121	-361	R -121	R 1,768
October	2,557	2,211	117	2,095	5	220	122	98	-261	-69	R 1,868
November	2,512	2,173	115	2,058	5	219	114	105	216	R -64	R 2,319
December	2,556	2,179	115	2,064	5	273	117	156	725	R -27	R 2,922
Total	30,005	25,691	1,357	24,334	55	2,883	1,572	1,311	546	R -77	R 26,168
2014 January	E 2,641	RE 2,220	118	RE 2,102	5	295	135	161	971	R -11	R 3,227
February	E 2,370	RE 1,997	108	RE 1,889	6	245	139	107	728	R 30	R 2,759
March	E 2,657	RE 2,240	125	RE 2,115	4	234	150	85	354	R 19	R 2,577
April	E 2,576	RE 2,184	126	RE 2,058	5	201	122	79	-217	R 49	R 1,974
May	E 2,668	RE 2,284	129	RE 2,155	5	207	114	93	-478	R 53	R 1,828
June	E 2,597	RE 2,225	130	RE 2,095	5	202	120	82	-462	R 45	R 1,765
July	E 2,649	RE 2,325	136	RE 2,190	5	201	127	74	-400	R 30	R 1,899
August	E 2,676	RE 2,355	137	RE 2,219	3	207	115	91	-374	13	R 1,953
September	E 2,668	RE 2,285	134	RE 2,151	4	202	120	82	-422	12	R 1,828
October	E 2,775	RE 2,376	139	RE 2,237	5	221	115	106	-400	R -16	R 1,931
November	RE 2,731	RE 2,324	132	RE 2,192	5	228	113	114	161	R -93	R 2,379
December	E 2,875	E 2,443	139	E 2,304	5	254	126	128	286	-23	2,700
Total	E 31,883	E 27,260	1,553	E 25,707	56	2,695	1,496	1,200	-252	109	26,819

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

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

^c Natural gas plant liquids (NGPL) production, gaseous equivalent. This data series was previously called "Extraction Loss." See Note 2, "Natural Gas Plant Liquids Production," at end of section.

^d Marketed production (wet) minus NGPL production.

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

^f Net withdrawals from underground storage. For 1980–2013, also includes net withdrawals of liquefied natural gas in above-ground tanks. See Note 4, "Natural Gas Storage," at end of section.

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

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

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

^j For 1989–1992, a small amount of consumption at independent power producers may be counted in both "Other Industrial" and "Electric Power Sector" on

Table 4.3. See Note 7, "Natural Gas Consumption, 1989–1992," at end of section. R=Revised. E=Estimate. (s)=Less than 0.5 billion cubic feet and greater than -0.5 billion cubic feet. NA=Not available.

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

Web 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: • Imports and Exports: Table 4.2. • Consumption: Table 4.3. • Balancing Item: Calculated as consumption minus dry gas production, supplemental gaseous fuels, net imports, and net storage withdrawals. • All Other Data: 1949–2011—U.S. Energy Information Administration (EIA), *Natural Gas Annual*, annual reports. 2012 forward—EIA, *Natural Gas Monthly*, February 2015, Table 1.

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

	Imports									Exports				
	Algeria ^a	Canada ^b	Egypt ^a	Mexico ^b	Nigeria ^a	Qatar ^a	Trinidad and Tobago ^a	Other ^{a,c}	Total	Canada ^b	Japan ^a	Mexico ^b	Other ^{a,d}	Total
1950 Total	0	0	0	0	0	0	0	0	0	3	0	23	0	26
1955 Total	0	11	0	(s)	0	0	0	0	11	11	0	20	0	31
1960 Total	0	109	0	47	0	0	0	0	156	6	0	6	0	11
1965 Total	0	405	0	52	0	0	0	0	456	18	0	8	0	26
1970 Total	1	779	0	(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	1	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
November	0	227	0	(s)	0	0	0	0	228	61	0	52	0	113
December	0	246	0	(s)	0	0	5	3	254	72	0	54	0	126
Total	0	2,635	0	1	0	0	43	16	2,695	767	13	712	3	1,496

^a As liquefied natural gas.

^b 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.

^c Australia in 1997–2001 and 2004; Brunei in 2002; Equatorial Guinea in 2007; Indonesia in 1986 and 2000; Malaysia in 1999 and 2002–2005; Norway in 2008 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.

^d 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*, February 2015, 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 ^a	Volume	Percent	Withdrawals	Injections	Net ^{b,c}
1950 Total	NA	NA	NA	NA	NA	175	230	-54
1955 Total	863	505	1,368	40	8.7	437	505	-68
1960 Total	NA	NA	2,184	NA	NA	713	844	-132
1965 Total	1,848	1,242	3,090	83	7.2	960	1,078	-118
1970 Total	2,326	1,678	4,004	257	18.1	1,459	1,857	-398
1975 Total	3,162	2,212	5,374	162	7.9	1,760	2,104	-344
1980 Total	3,642	2,655	6,297	-99	-3.6	1,910	1,896	14
1985 Total	3,842	2,607	6,448	-270	-9.4	2,359	2,128	231
1990 Total	3,868	3,068	6,936	555	22.1	1,934	2,433	-499
1995 Total	4,349	2,153	6,503	-453	-17.4	2,974	2,566	408
2000 Total	4,352	1,719	6,071	-806	-31.9	3,498	2,684	814
2001 Total	4,301	2,904	7,204	1,185	68.9	2,309	3,464	-1,156
2002 Total	4,340	2,375	6,715	-528	-18.2	3,138	2,670	468
2003 Total	4,303	2,563	6,866	187	7.9	3,099	3,292	-193
2004 Total	4,201	2,696	6,897	133	5.2	3,037	3,150	-113
2005 Total	4,200	2,635	6,835	-61	-2.3	3,057	3,002	55
2006 Total	4,211	3,070	7,281	435	16.5	2,493	2,924	-431
2007 Total	4,234	2,879	7,113	-191	-6.2	3,325	3,133	192
2008 Total	4,232	2,840	7,073	-39	-1.4	3,374	3,340	34
2009 Total	4,277	3,130	7,407	290	10.2	2,966	3,315	-349
2010 Total	4,301	3,111	7,412	-19	-6	3,274	3,291	-17
2011 Total	4,302	3,462	7,764	351	11.3	3,074	3,422	-348
2012								
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
Total	4,372	3,413	7,785	-49	-1.4	2,818	2,825	-7
2013								
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
Total	4,365	2,890	7,255	-523	-15.3	3,702	3,156	546
2014								
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	2,400	6,761	-537	-18.3	63	463	-400
August	4,366	2,768	7,135	-444	-13.8	73	447	-374
September	4,369	3,187	7,556	-378	-10.6	47	469	-422
October	4,367	3,587	7,955	-230	-6.0	52	452	-400
November	4,367	3,426	7,794	-179	-5.0	361	200	161
December	4,365	3,141	7,506	251	8.7	429	143	286
Total	4,365	3,141	7,506	251	8.7	3,586	3,838	-252

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

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

^c Positive numbers indicate that withdrawals are greater than injections. Negative numbers indicate that injections are greater than withdrawals. Net withdrawals or injections may not equal the difference between applicable ending stocks. See Note 4, "Natural Gas Storage," at end of section.
-- = 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, February 2015, 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, NGA, annual reports. **2012 forward**—EIA, NGM, February 2015, 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	2014	...	^P 9,233
1987	...	8,124	2001	...	8,182			
1988	...	8,124	2002	...	8,207			

P=Preliminary

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) 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.

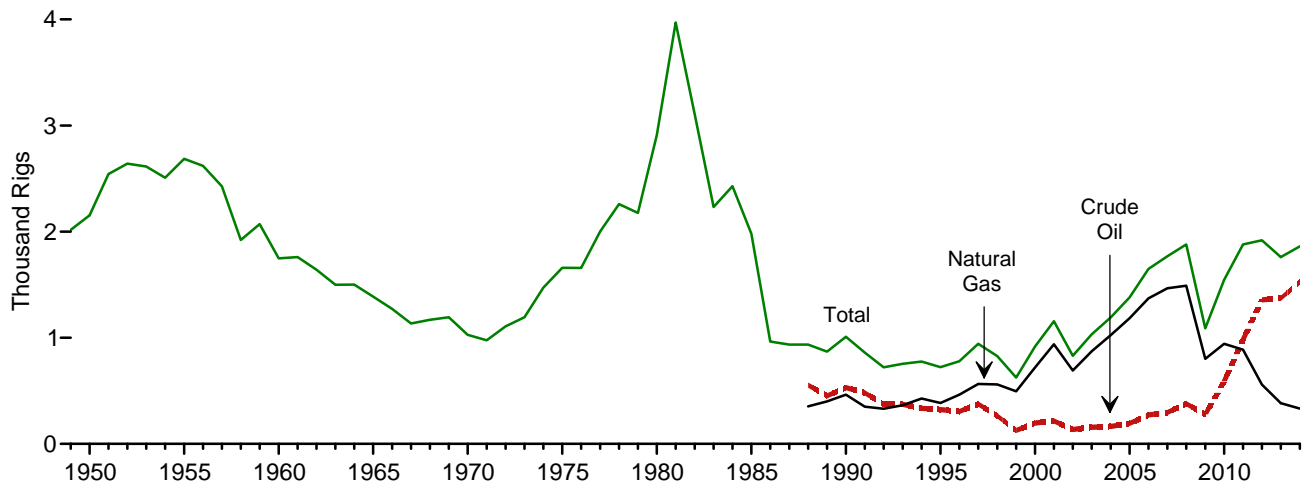
Annual and final monthly data are from the annual EIA Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," which requires data to be reported by month for the calendar year.

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*.

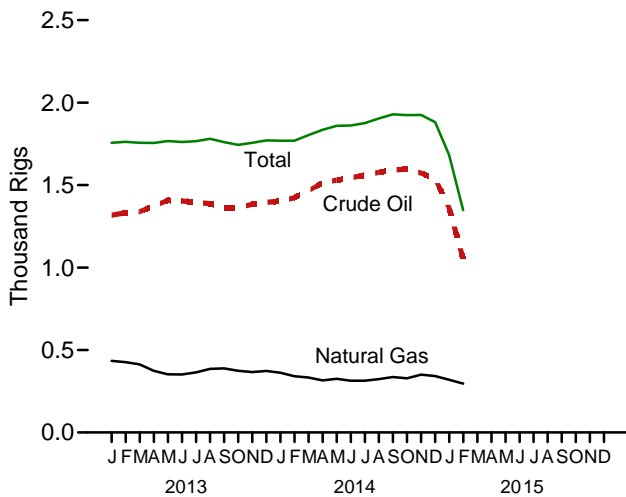
5. Crude Oil and Natural Gas Resource Development

Figure 5.1 Crude Oil and Natural Gas Resource Development Indicators

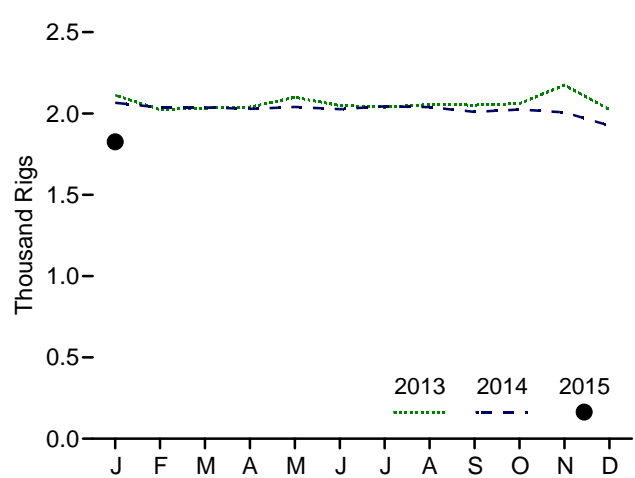
Rotary Rigs in Operation by Type, 1949–2014



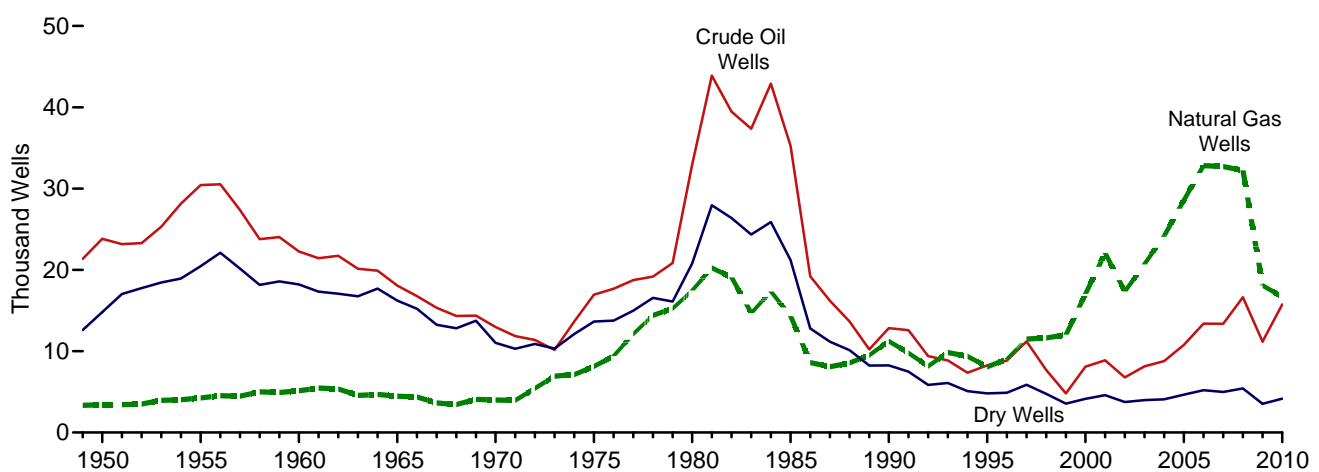
Rotary Rigs in Operation by Type, Monthly



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 ^a					Active Well Service Rig Count ^c
	By Site		By Type		Total ^b	
	Onshore	Offshore	Crude Oil	Natural Gas		
1950 Average	NA	NA	NA	NA	2,154	NA
1955 Average	NA	NA	NA	NA	2,686	NA
1960 Average	NA	NA	NA	NA	1,748	NA
1965 Average	NA	NA	NA	NA	1,388	NA
1970 Average	NA	NA	NA	NA	1,028	NA
1975 Average	1,554	106	NA	NA	1,660	2,486
1980 Average	2,678	231	NA	NA	2,909	4,089
1985 Average	1,774	206	NA	NA	1,980	4,716
1990 Average	902	108	532	464	1,010	3,658
1995 Average	622	101	323	385	723	3,041
2000 Average	778	140	197	720	918	2,692
2001 Average	1,003	153	217	939	1,156	2,267
2002 Average	717	113	137	691	830	1,830
2003 Average	924	108	157	872	1,032	1,967
2004 Average	1,095	97	165	1,025	1,192	2,064
2005 Average	1,287	94	194	1,184	1,381	2,222
2006 Average	1,559	90	274	1,372	1,649	2,364
2007 Average	1,695	72	297	1,466	1,768	2,388
2008 Average	1,814	65	379	1,491	1,879	2,515
2009 Average	1,046	44	278	801	1,089	1,722
2010 Average	1,514	31	591	943	1,546	1,854
2011 Average	1,846	32	984	887	1,879	2,075
2012 Average	1,871	48	1,357	558	1,919	2,113
2013 January	1,704	52	1,318	434	1,756	2,112
February	1,708	54	1,332	426	1,762	2,024
March	1,705	51	1,339	413	1,756	2,033
April	1,707	49	1,374	374	1,755	2,039
May	1,715	52	1,407	353	1,767	2,099
June	1,706	55	1,404	352	1,761	2,049
July	1,708	58	1,396	364	1,766	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	1,384	366	1,756	2,175
December	1,710	61	1,396	373	1,771	2,024
Average	1,705	56	1,373	383	1,761	2,064
2014 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	2,007
December	1,824	59	1,539	342	1,882	1,925
Average	1,804	57	1,527	333	1,862	2,024
2015 January	1,629	53	1,362	320	1,683	^R 1,826
February	1,296	52	1,050	296	1,348	NA
2-Month Average	1,481	53	1,223	309	1,534	NA
2014 2-Month Average	1,712	56	1,412	353	1,769	2,051
2013 2-Month Average	1,706	53	1,325	430	1,759	2,068

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

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

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

R=Revised. NA=Not available.

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

Web 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>.

Table 5.2 Crude Oil and Natural Gas Exploratory and Development Wells

	Wells Drilled												Total Footage Drilled Thousand Feet
	Exploratory				Development				Total				
	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total	
Number													
1950 Total	1,583	431	8,292	10,306	22,229	3,008	6,507	31,744	23,812	3,439	14,799	42,050	157,358
1955 Total	2,236	874	11,832	14,942	28,196	3,392	8,620	40,208	30,432	4,266	20,452	55,150	226,182
1960 Total	1,321	868	9,515	11,704	20,937	4,281	8,697	33,915	22,258	5,149	18,212	45,619	192,176
1965 Total	946	515	8,005	9,466	17,119	3,967	8,221	29,307	18,065	4,482	16,226	38,773	174,882
1970 Total	757	477	6,162	7,396	12,211	3,534	4,869	20,614	12,968	4,011	11,031	28,010	138,556
1975 Total	982	1,248	7,129	9,359	15,966	6,879	6,517	29,362	16,948	8,127	13,646	38,721	180,494
1980 Total	1,777	2,099	9,081	12,957	31,182	15,362	11,704	58,248	32,959	17,461	20,785	71,205	316,943
1985 Total	1,680	1,200	8,954	11,834	33,581	13,124	12,257	58,962	35,261	14,324	21,211	70,796	314,409
1990 Total	778	811	3,652	5,241	12,061	10,435	4,593	27,089	12,839	11,246	8,245	32,330	156,044
1995 Total	570	558	2,024	3,152	7,678	7,524	2,790	17,992	8,248	8,082	4,814	21,144	117,156
2000 Total	288	657	1,341	2,286	7,802	16,394	2,805	27,001	8,090	17,051	4,146	29,287	144,425
2001 Total	357	1,052	1,733	3,142	8,531	21,020	2,865	32,416	8,888	22,072	4,598	35,558	180,141
2002 Total	258	844	1,282	2,384	6,517	16,498	2,472	25,487	6,775	17,342	3,754	27,871	145,159
2003 Total	350	997	1,297	2,644	7,779	19,725	2,685	30,189	8,129	20,722	3,982	32,833	177,239
2004 Total	383	1,671	1,350	3,404	8,406	22,515	2,732	33,653	8,789	24,186	4,082	37,057	204,279
2005 Total	539	2,141	1,462	4,142	10,240	26,449	3,191	39,880	10,779	28,590	4,653	44,022	240,307
2006 Total	646	2,456	1,547	4,649	12,739	30,382	3,659	46,780	13,385	32,838	5,206	51,429	282,675
2007 Total	808	2,794	1,582	5,184	12,563	29,925	3,399	45,887	13,371	32,719	4,981	51,071	301,515
2008 January	88	208	144	440	1,111	2,321	272	3,704	1,199	2,529	416	4,144	25,306
February	82	230	107	419	1,080	2,261	247	3,588	1,162	2,491	354	4,007	24,958
March	66	216	127	409	1,132	2,363	271	3,766	1,198	2,579	398	4,175	26,226
April	68	189	130	387	1,177	2,415	281	3,873	1,245	2,604	411	4,260	26,920
May	88	206	124	418	1,317	2,449	240	4,006	1,405	2,655	364	4,424	27,947
June	63	195	139	397	1,428	2,540	299	4,267	1,491	2,735	438	4,664	28,739
July	79	163	171	413	1,439	2,695	344	4,478	1,518	2,858	515	4,891	29,140
August	67	165	144	376	1,448	2,735	379	4,562	1,515	2,900	523	4,938	28,942
September	52	166	164	382	1,488	2,667	355	4,510	1,540	2,833	519	4,892	28,960
October	80	243	173	496	1,549	2,841	373	4,763	1,629	3,084	546	5,259	31,505
November	97	192	160	449	1,361	2,418	334	4,113	1,458	2,610	494	4,562	29,276
December	67	172	132	371	1,206	2,196	313	3,715	1,273	2,368	445	4,086	26,222
Total	897	2,345	1,715	4,957	15,736	29,901	3,708	49,345	16,633	32,246	5,423	54,302	334,141
2009 January	80	171	99	350	1,192	2,253	250	3,695	1,272	2,424	349	4,045	28,077
February	62	125	88	275	991	1,925	195	3,111	1,053	2,050	283	3,386	25,440
March	59	146	88	293	867	1,771	210	2,848	926	1,917	298	3,141	25,304
April	36	68	93	197	755	1,396	205	2,356	791	1,464	298	2,553	21,406
May	47	90	80	217	584	1,136	156	1,876	631	1,226	236	2,093	20,055
June	44	91	75	210	804	1,297	189	2,290	848	1,388	264	2,500	16,301
July	40	100	101	241	789	1,188	217	2,194	829	1,288	318	2,435	13,543
August	49	84	88	221	867	1,372	207	2,446	916	1,456	295	2,667	15,970
September	61	71	96	228	945	1,170	207	2,322	1,006	1,241	303	2,550	15,547
October	55	79	78	212	966	1,167	222	2,355	1,021	1,246	300	2,567	17,261
November	38	83	85	206	931	1,133	199	2,263	969	1,216	284	2,469	16,236
December	34	98	84	216	894	1,074	213	2,181	928	1,172	297	2,397	16,424
Total	605	1,206	1,055	2,866	10,585	16,882	2,470	29,937	11,190	18,088	3,525	32,803	231,562
2010 January	55	91	81	227	898	1,264	169	2,331	953	1,355	250	2,558	15,304
February	44	71	67	182	871	1,096	144	2,111	915	1,167	211	2,293	16,862
March	59	85	88	232	1,062	1,224	216	2,502	1,121	1,309	304	2,734	15,102
April	49	78	77	204	1,173	1,152	249	2,574	1,222	1,230	326	2,778	17,904
May	48	107	86	241	1,282	1,208	255	2,745	1,330	1,315	341	2,986	17,987
June	61	100	90	251	1,385	1,250	302	2,937	1,446	1,350	392	3,188	19,408
July	46	103	105	254	1,386	1,443	390	3,219	1,432	1,546	495	3,473	20,847
August	56	104	94	254	1,434	1,402	314	3,150	1,490	1,506	408	3,404	22,923
September	57	73	88	218	1,374	1,358	268	3,000	1,431	1,431	356	3,218	23,037
October	75	87	117	279	1,502	1,463	283	3,248	1,577	1,550	400	3,527	22,123
November	62	114	103	279	1,400	1,352	263	3,015	1,462	1,466	366	3,294	24,561
December	57	92	70	219	1,317	1,379	243	2,939	1,374	1,471	313	3,158	23,189
Total	669	1,105	1,066	2,840	15,084	15,591	3,096	33,771	15,753	16,696	4,162	36,611	239,247

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

Natural Gas Exploratory and Development Wells," at end of section. • Geographic coverage is the 50 states and the District of Columbia.

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

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

Crude Oil and Natural Gas Resource Development

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

Prior to the March 1985 MER, drilling statistics consisted of

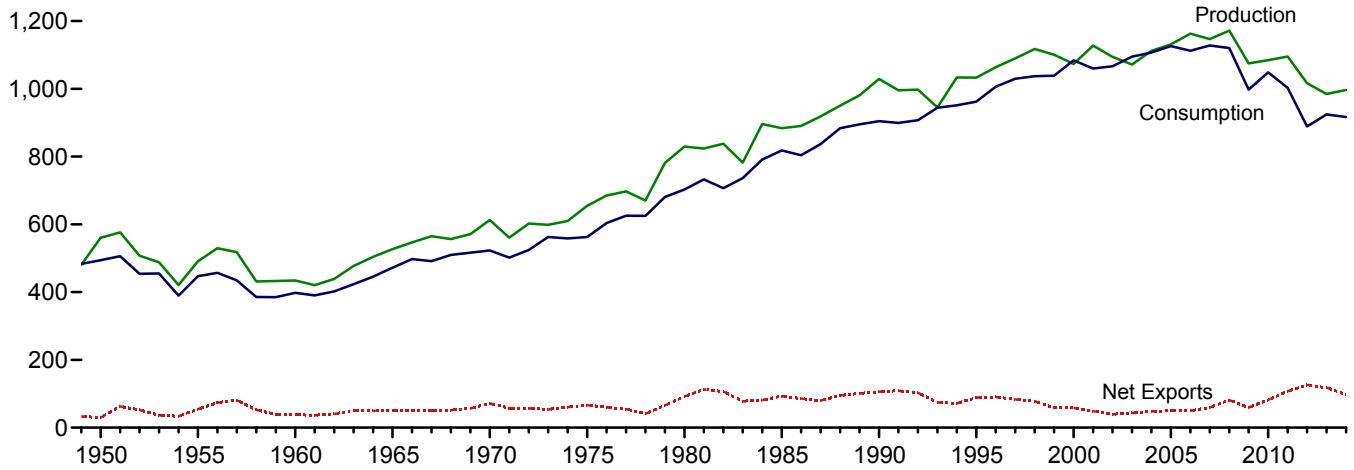
completion data for the above types and classes of wells as reported to the American Petroleum Institute (API) during a given month. Due to time lags between the date of well completion and the date of completion reporting to the API, as-reported well completions proved to be an inaccurate indicator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

THIS PAGE INTENTIONALLY LEFT BLANK

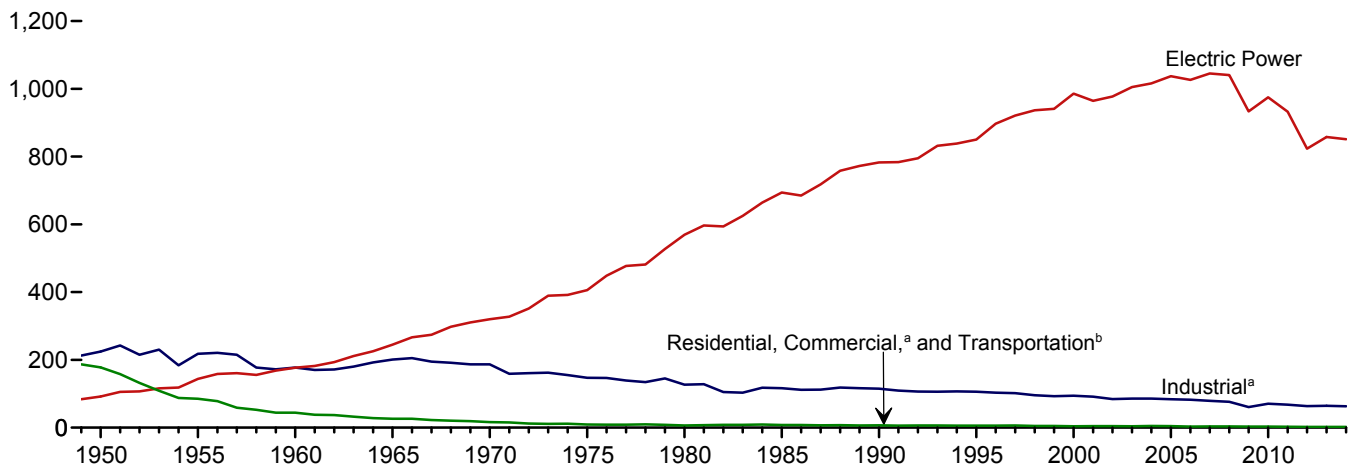
6. Coal

Figure 6.1 Coal
(Million Short Tons)

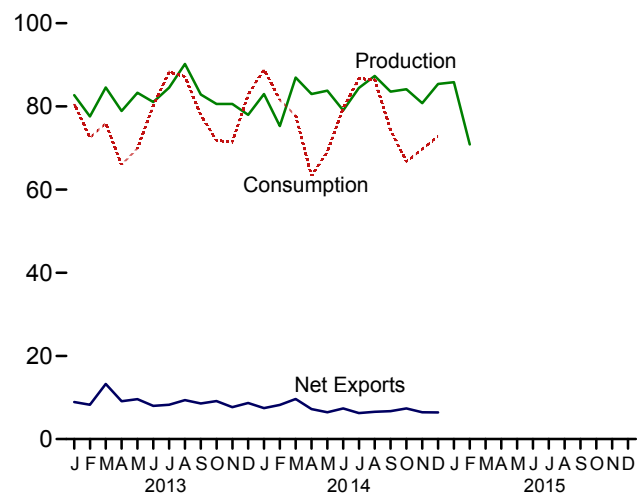
Overview, 1949–2014



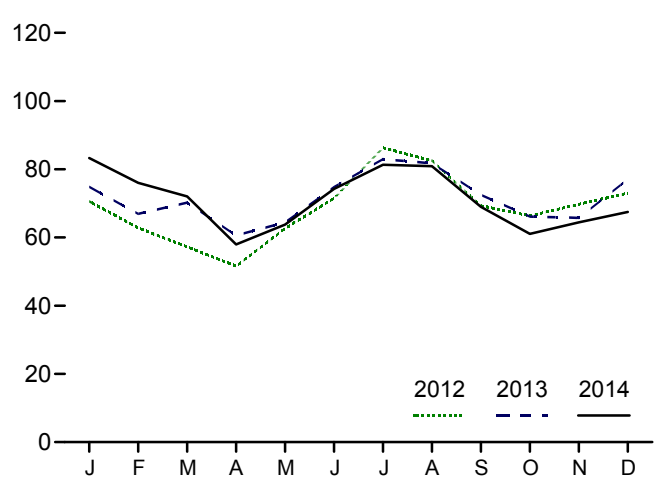
Consumption by Sector, 1949–2014



Overview, Monthly



Electric Power Sector Consumption, Monthly



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

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

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

Table 6.1 Coal Overview
(Thousand Short Tons)

	Production ^a	Waste Coal Supplied ^b	Trade			Stock Change ^{d,e}	Losses and Unaccounted for ^{e,f}	Consumption
			Imports	Exports	Net Imports ^c			
1950 Total	560,388	NA	365	29,360	-28,995	27,829	9,462	494,102
1955 Total	490,838	NA	337	54,429	-54,092	-3,974	-6,292	447,012
1960 Total	434,329	NA	262	37,981	-37,719	2,262	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	82,713	R 1,047	654	9,572	-8,917	R -5,799	R 55	R 80,587
February	77,586	R 950	385	8,627	-8,242	R -2,835	R 645	R 72,486
March	84,568	R 1,171	390	13,637	-13,247	R -3,371	R -51	R 75,914
April	78,909	R 716	672	9,754	-9,082	R 1,948	R 2,635	R 65,960
May	83,271	R 992	870	10,478	-9,608	R 4,830	R -61	R 69,885
June	81,031	R 979	1,213	9,194	-7,981	R -5,380	R -759	R 80,169
July	84,518	R 1,108	874	9,125	-8,251	R -11,970	R 1,045	R 88,299
August	90,199	R 925	710	10,073	-9,363	R -6,318	R 923	R 87,156
September	82,878	R 749	815	9,391	-8,576	R -2,738	R -112	R 77,902
October	80,603	R 737	707	9,855	-9,148	R 1,229	R -861	R 71,824
November	80,576	R 781	850	8,511	-7,662	R 1,783	R 473	R 71,439
December	77,990	R 1,122	766	9,443	-8,676	R -9,897	R -2,488	R 82,821
Total	984,842	R 11,279	8,906	117,659	-108,753	R -38,518	R 1,444	R 924,442
2014 January	82,964	1,116	1,064	8,516	-7,452	R -14,808	R 2,539	R 88,896
February	75,294	999	583	8,785	-8,203	R -13,771	R 293	R 81,568
March	86,929	1,089	803	10,430	-9,627	R -1,518	R 2,173	R 77,736
April	82,976	934	930	8,134	-7,205	R 11,234	R 2,192	R 63,279
May	83,788	852	1,280	7,718	-6,439	R 7,220	R 1,839	R 69,142
June	79,063	1,003	1,319	8,704	-7,385	R -4,191	R -2,729	R 79,601
July	84,429	F 865	928	7,191	-6,264	R -7,681	R 37	R 86,675
August	87,327	F 865	1,122	7,665	-6,544	R -5,873	R 1,128	R 86,394
September	83,563	F 865	1,148	7,848	-6,700	R 2,736	R 705	R 74,287
October	84,145	F 865	584	7,939	-7,355	R 11,974	R -1,066	R 66,748
November	80,774	F 865	1,003	7,464	-6,461	R 6,126	R -685	R 69,738
December	85,414	RF 865	R 548	R 6,940	R -6,391	R 11,417	R -4,321	R 72,792
Total	996,666	RE 11,184	R 11,310	R 97,335	R -86,025	R 2,865	R 2,106	R 916,854
2015 January	85,824	NA	NA	NA	NA	NA	NA	NA
February	70,864	NA	NA	NA	NA	NA	NA	NA
2-Month Total	156,688	NA	NA	NA	NA	NA	NA	NA
2014 2-Month Total	158,258	2,114	1,647	17,301	-15,654	-28,579	2,832	170,464
2013 2-Month Total	160,299	1,998	1,040	18,199	-17,159	-8,634	699	153,073

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

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

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

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

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

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

quantities lost or to data reporting problems.

R=Revised. E=Estimate. 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 ^{c,d}	Total
		Residential ^a and Commercial	Industrial			Total		
			Coke Plants	Other ^b	Total			
1950 Year	NA	2,462	16,809	26,182	42,991	45,453	31,842	77,295
1955 Year	NA	998	13,422	15,880	29,302	30,300	41,391	71,691
1960 Year	NA	666	11,122	11,637	22,759	23,425	51,735	75,160
1965 Year	NA	353	10,640	13,122	23,762	24,115	54,525	78,640
1970 Year	NA	300	9,045	11,781	20,826	21,126	71,908	93,034
1975 Year	12,108	233	8,797	8,529	17,326	17,559	110,724	140,391
1980 Year	24,379	NA	9,067	11,951	21,018	21,018	183,010	228,407
1985 Year	33,133	NA	3,420	10,438	13,857	13,857	156,376	203,367
1990 Year	33,418	NA	3,329	8,716	12,044	12,044	156,166	201,629
1995 Year	34,444	NA	2,632	5,702	8,334	8,334	126,304	169,083
2000 Year	31,905	NA	1,494	4,587	6,081	6,081	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	46,914	566	2,417	4,299	6,716	7,281	R 178,859	R 233,054
February	47,672	548	2,312	4,122	6,434	6,982	R 175,565	R 230,219
March	48,429	530	2,207	3,946	6,152	6,683	R 171,736	R 226,848
April	48,998	530	2,305	3,950	6,254	6,784	R 173,014	R 228,796
May	49,567	529	2,402	3,954	6,356	6,885	R 177,174	R 233,626
June	50,136	529	2,500	3,957	6,458	6,987	R 171,124	R 228,246
July	49,138	529	2,516	4,074	6,590	7,119	R 160,019	R 216,276
August	48,140	530	2,531	4,191	6,722	7,252	R 154,567	R 209,959
September	47,142	530	2,546	4,308	6,854	7,385	R 152,694	R 207,221
October	47,068	519	2,431	4,238	6,668	7,187	R 154,194	R 208,449
November	46,994	507	2,315	4,167	6,483	6,989	R 156,249	R 210,232
December	45,659	495	2,200	4,097	6,297	6,792	R 147,884	R 200,335
2014 January	F 45,439	465	2,064	3,913	5,977	6,441	R 133,647	R 185,527
February	F 45,780	435	1,927	3,729	5,657	6,091	R 119,885	R 171,756
March	F 46,192	405	1,791	3,545	5,336	5,741	R 118,305	R 170,238
April	F 46,765	413	1,833	3,579	5,412	5,825	R 128,883	R 181,472
May	F 46,310	421	1,875	3,613	5,488	5,908	R 136,474	R 188,692
June	F 45,610	429	1,937	3,647	5,584	6,013	R 132,879	R 184,501
July	F 45,355	F 431	F 1,904	RF 3,890	RF 5,794	RF 6,225	R 125,240	R 176,820
August	F 43,796	F 433	F 1,879	RF 4,129	RF 6,009	RF 6,442	R 120,709	R 170,947
September	F 43,220	F 435	F 1,847	RF 4,368	RF 6,215	RF 6,649	R 123,814	R 173,683
October	F 43,146	RF 436	RF 1,851	RF 4,514	RF 6,366	RF 6,802	R 135,709	R 185,657
November	F 43,527	F 439	RF 1,850	RF 4,658	RF 6,508	RF 6,947	R 141,309	R 191,783
December	F 44,750	F 434	F 1,853	F 4,801	F 6,654	F 7,088	151,362	203,200

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

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

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

^d Excludes waste coal. Through 1998, data are for electric utilities only. Beginning in 1999, data are for electric utilities and independent power producers.

R=Revised. 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

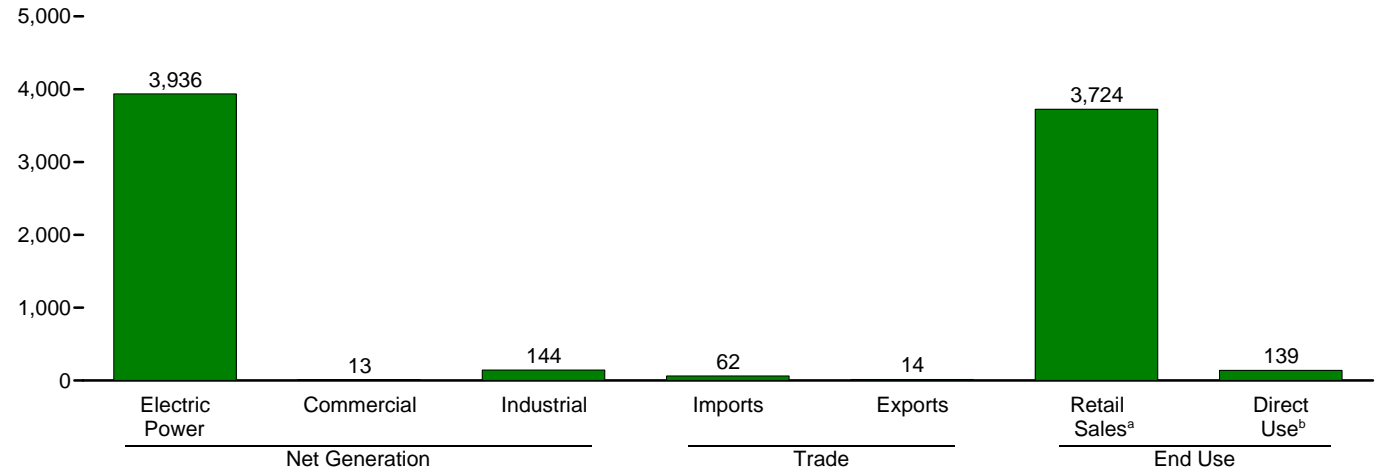
1949 forward: Table 7.5.

THIS PAGE INTENTIONALLY LEFT BLANK

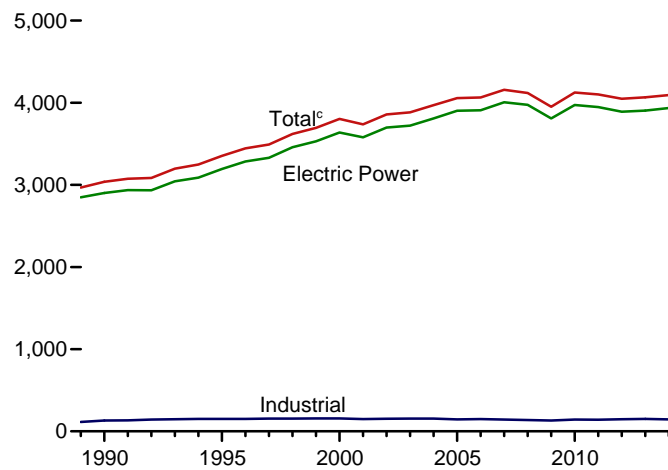
7. Electricity

Figure 7.1 Electricity Overview
(Billion Kilowatthours)

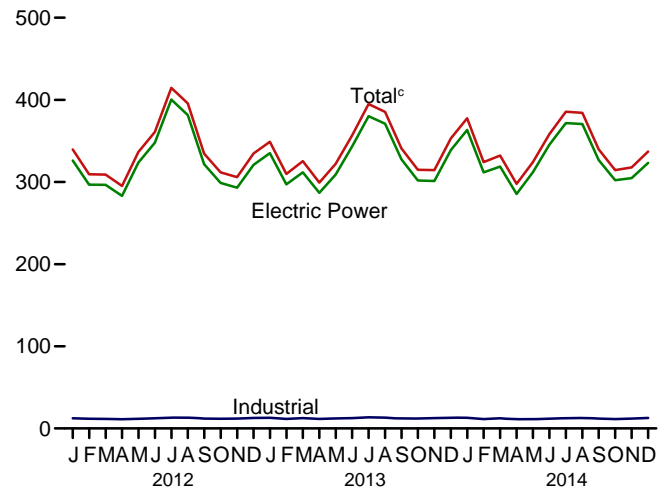
Overview, 2014



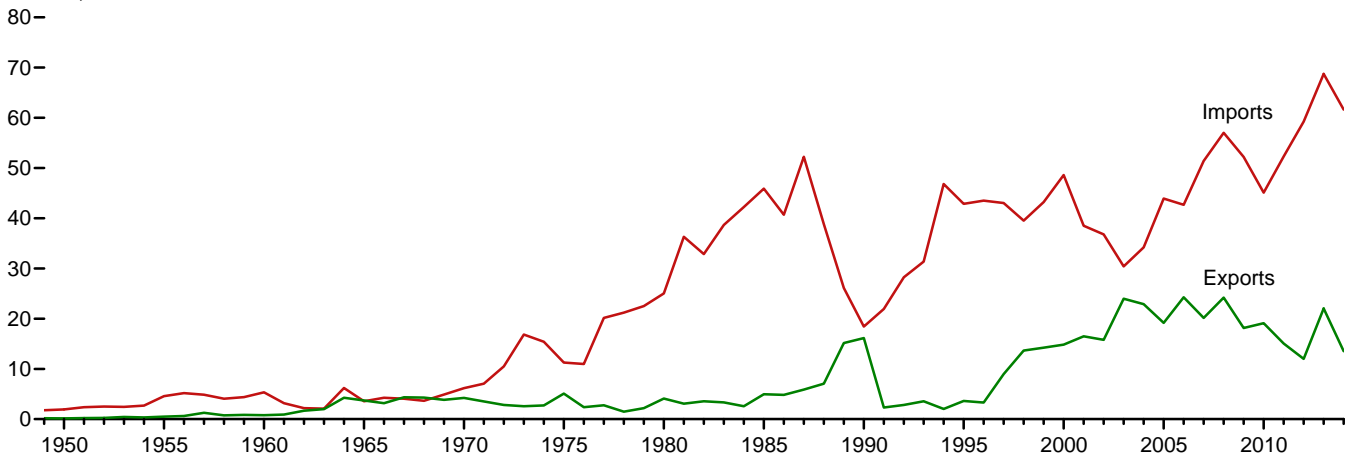
Net Generation by Sector, 1989–2014



Net Generation by Sector, Monthly



Trade, 1949–2014



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

^b See "Direct Use" in Glossary.

^c Includes commercial sector.

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

Source: Table 7.1.

Table 7.1 Electricity Overview
(Billion Kilowatthours)

	Net Generation				Trade			T&D Losses ^e and Unaccounted for ^f	End Use		
	Electric Power Sector ^a	Com- mercial Sector ^b	Indus- trial Sector ^c	Total	Imports ^d	Exports ^d	Net Imports ^d		Retail Sales ^g	Direct Use ^h	Total
1950 Total	329	NA	5	334	2	(s)	2	44	291	NA	291
1955 Total	547	NA	3	550	5	(s)	4	58	497	NA	497
1960 Total	756	NA	4	759	5	1	5	76	688	NA	688
1965 Total	1,055	NA	3	1,058	4	(s)	4	104	954	NA	954
1970 Total	1,532	NA	3	1,535	6	4	2	145	1,392	NA	1,392
1975 Total	1,918	NA	3	1,921	11	5	6	180	1,747	NA	1,747
1980 Total	2,286	NA	3	2,290	25	4	21	216	2,094	NA	2,094
1985 Total	2,470	NA	3	2,473	46	5	41	190	2,324	NA	2,324
1990 Total	2,901	6	c 131	3,038	18	16	2	203	2,713	125	2,837
1995 Total	3,194	8	151	3,353	43	4	39	229	3,013	151	3,164
2000 Total	3,638	8	157	3,802	49	15	34	244	3,421	171	3,592
2001 Total	3,580	7	149	3,737	39	16	22	202	3,394	163	3,557
2002 Total	3,698	7	153	3,858	37	16	21	248	3,465	166	3,632
2003 Total	3,721	7	155	3,883	30	24	6	228	3,494	168	3,662
2004 Total	3,808	8	154	3,971	34	23	11	266	3,547	168	3,716
2005 Total	3,902	8	145	4,055	44	19	25	269	3,661	150	3,811
2006 Total	3,908	8	148	4,065	43	24	18	266	3,670	147	3,817
2007 Total	4,005	8	143	4,157	51	20	31	298	3,765	126	3,890
2008 Total	3,974	8	137	4,119	57	24	33	R 286	R 3,734	132	R 3,866
2009 Total	3,810	8	132	3,950	52	18	34	261	3,597	127	3,724
2010 Total	3,972	9	144	4,125	45	19	26	R 264	R 3,755	132	R 3,887
2011 Total	3,948	10	142	4,100	52	15	37	255	3,750	133	3,883
2012											
January	326	1	12	340	4	1	3	20	311	E 12	323
February	297	1	12	309	4	1	3	14	287	E 11	298
March	296	1	12	309	4	1	3	17	284	E 11	295
April	283	1	11	295	5	1	4	18	271	E 11	281
May	324	1	12	337	5	1	4	33	297	E 11	308
June	348	1	12	361	5	1	4	28	325	E 11	337
July	400	1	13	415	7	1	6	37	371	E 13	383
August	381	1	13	396	6	1	5	24	365	E 12	377
September	322	1	12	335	5	1	4	9	318	E 11	329
October	299	1	12	312	4	1	4	13	291	E 11	302
November	293	1	12	306	5	1	4	20	278	E 11	290
December	321	1	13	335	4	1	3	29	297	E 12	309
Total	3,890	11	146	4,048	59	12	47	263	3,695	138	3,832
2013											
January	335	1	13	R 349	R 6	R 2	4	R 20	R 321	E 12	R 333
February	297	1	12	R 310	5	R 2	4	R 11	R 291	E 11	R 303
March	312	1	13	325	R 6	R 2	4	R 20	R 297	E 12	R 309
April	R 287	1	R 12	R 299	5	R 2	R 2	R 13	R 278	E 11	R 289
May	309	1	12	322	R 6	R 2	R 4	R 25	R 289	RE 12	R 301
June	343	1	R 13	R 357	6	R 2	R 4	R 29	R 320	E 12	R 332
July	380	1	R 14	R 395	R 7	R 2	5	R 28	R 359	RE 13	R 372
August	R 371	1	13	R 385	R 7	R 2	R 5	R 24	R 354	RE 13	R 366
September	R 328	1	12	R 341	R 6	1	4	R 10	R 323	RE 12	R 335
October	302	1	12	315	5	R 2	4	R 13	R 294	RE 12	R 306
November	301	1	12	R 315	R 6	R 2	4	R 25	R 282	E 12	R 293
December	R 339	1	13	R 353	R 6	R 2	4	R 27	R 316	RE 13	R 329
Total	R 3,904	R 12	R 150	R 4,066	R 69	R 22	R 47	R 244	R 3,725	R 143	R 3,869
2014											
January	363	1	13	R 378	5	1	4	R 31	R 338	E 12	351
February	312	1	11	324	4	1	3	R 10	R 306	E 11	R 317
March	319	1	12	332	5	2	3	24	R 299	E 12	311
April	285	1	11	R 298	4	1	3	R 17	273	E 11	R 284
May	312	1	11	324	5	1	4	29	288	E 11	299
June	R 346	1	12	R 358	5	1	4	R 32	319	E 11	R 331
July	R 372	1	R 13	R 386	6	1	5	31	347	E 12	R 360
August	370	1	R 13	R 384	6	1	5	29	348	E 12	360
September	R 327	1	12	R 340	6	1	5	R 10	323	E 12	R 335
October	302	1	11	R 315	5	1	4	14	293	E 11	304
November	305	1	12	R 318	6	1	5	29	282	E 11	293
December	323	1	13	337	5	1	4	23	306	E 12	318
Total	3,936	13	144	4,093	62	14	48	R 279	3,724	E 139	R 3,862

^a Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

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

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

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

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

^f Data collection frame differences and nonsampling error.

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

in 1996, other energy service providers.

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

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

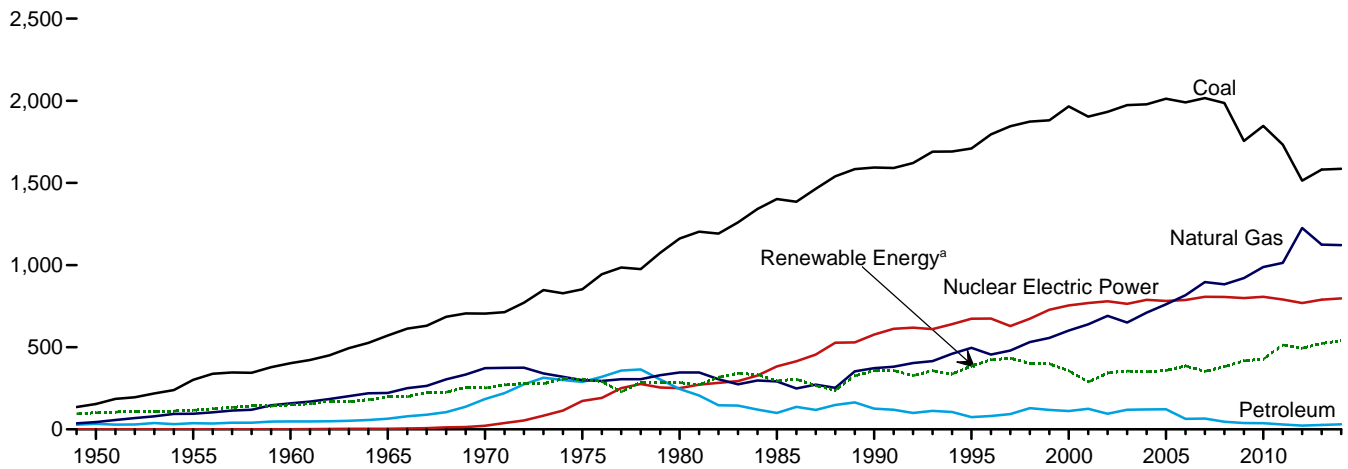
Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.
• Totals may not equal sum of components due to independent rounding.
• Geographic coverage is the 50 states and the District of Columbia.

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.

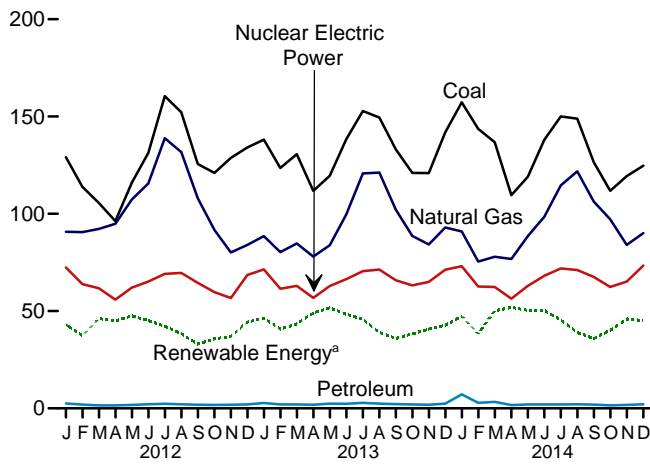
Sources: See end of section.

Figure 7.2 Electricity Net Generation
(Billion Kilowatthours)

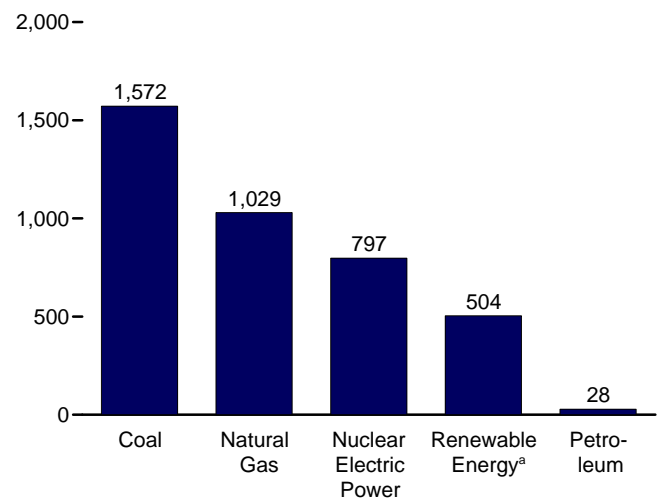
Total (All Sectors), Major Sources, 1949–2014



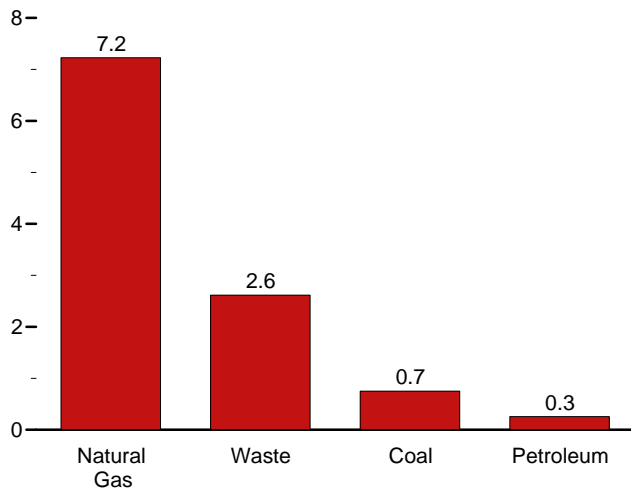
Total (All Sectors), Major Sources, Monthly



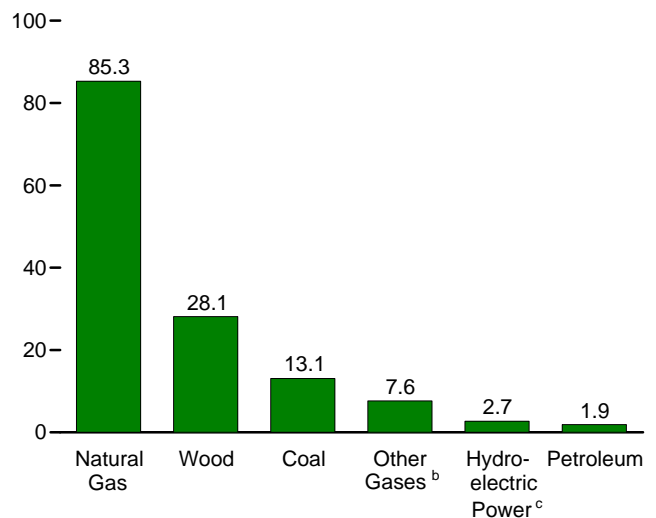
Electric Power Sector, Major Sources, 2014



Commercial Sector, Major Sources, 2014



Industrial Sector, Major Sources, 2014



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

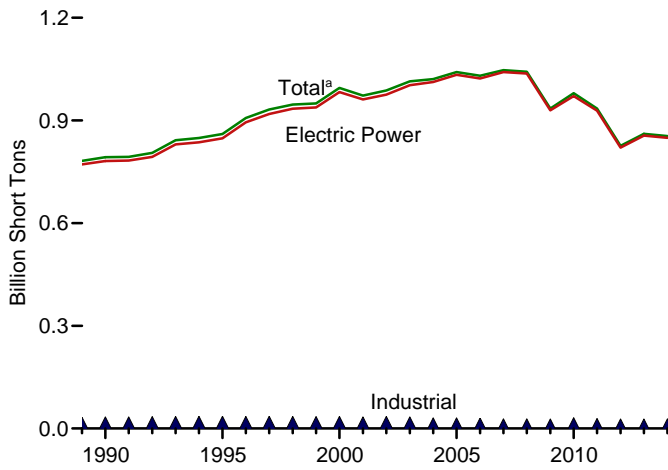
^b Blast furnace gas, and other manufactured and waste gases derived from fossil fuels.

^c Conventional hydroelectric power.

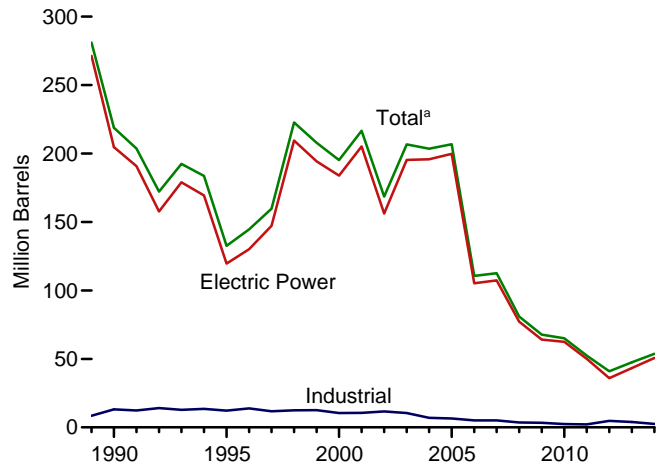
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.
Sources: Tables 7.2a–7.2c.

Figure 7.3 Consumption of Selected Combustible Fuels for Electricity Generation

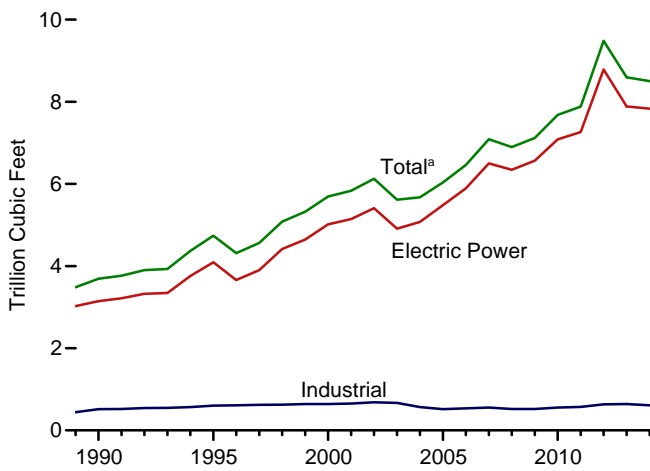
Coal by Sector, 1989–2014



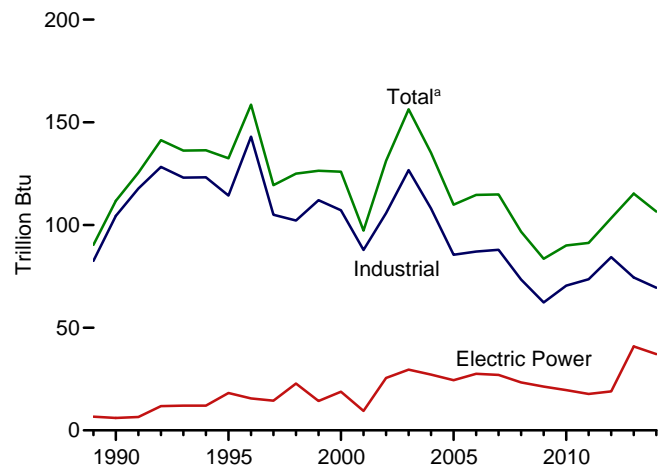
Petroleum by Sector, 1989–2014



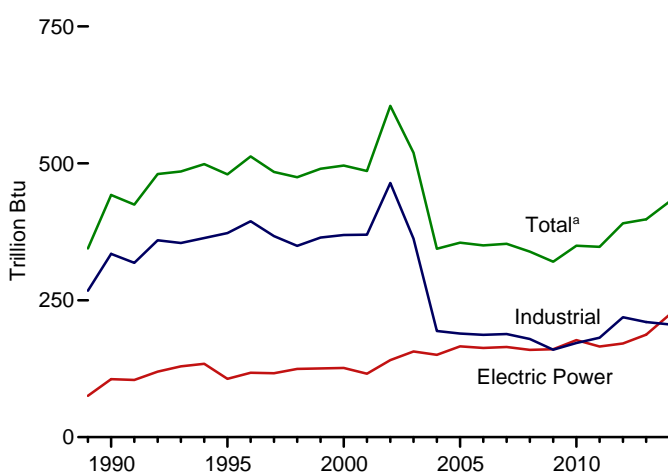
Natural Gas by Sector, 1989–2014



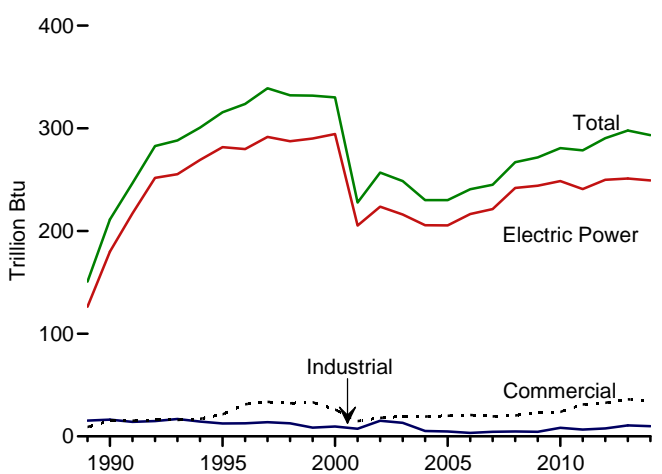
Other Gases^b by Sector, 1989–2014



Wood by Sector, 1989–2014



Waste by Sector, 1989–2014



^a Includes commercial sector.

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

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

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

	Coal ^a Thousand Short Tons	Petroleum					Natural Gas ^f Billion Cubic Feet	Other Gases ^g	Biomass		Other ⁱ
		Distillate Fuel Oil ^b Thousand Barrels	Residual Fuel Oil ^c Thousand Barrels	Other Liquids ^d	Petroleum Coke ^e Thousand Short Tons	Total ^e Thousand Barrels			Wood ^h	Waste ^j	
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	792,457	18,143	190,652	437	1,914	218,800	3,692	112	442	211	36
1995 Total	860,594	19,615	95,507	680	3,355	132,578	4,738	133	480	316	42
2000 Total	994,933	31,675	143,381	1,450	3,744	195,228	5,691	126	496	330	46
2001 Total	972,691	31,150	165,312	855	3,871	216,672	5,832	97	486	228	160
2002 Total	987,583	23,286	109,235	1,894	6,836	168,597	6,126	131	605	257	191
2003 Total	1,014,058	29,672	142,518	2,947	6,303	206,653	5,616	156	519	249	193
2004 Total	1,020,523	20,163	142,088	2,856	7,677	203,494	5,675	135	344	230	183
2005 Total	1,041,448	20,651	141,518	2,968	8,330	206,785	6,036	110	355	230	173
2006 Total	1,030,556	13,174	58,473	2,174	7,363	110,634	6,462	115	350	241	172
2007 Total	1,046,795	15,683	63,833	2,917	6,036	112,615	7,089	115	353	245	168
2008 Total	1,042,335	12,832	38,191	2,822	5,417	80,932	6,896	97	339	267	172
2009 Total	934,683	12,658	28,576	2,328	4,821	67,668	7,121	84	320	272	170
2010 Total	979,684	14,050	23,997	2,056	4,994	65,071	7,680	90	350	281	184
2011 Total	934,938	11,231	14,251	1,844	5,012	52,387	7,884	91	348	279	205
2012 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
Total	825,734	9,285	11,755	1,565	3,675	40,977	9,485	103	390	290	204
2013 January	R 75,049	R 1,114	R 1,548	R 299	R 385	R 4,889	R 667	R 10	R 33	R 24	R 16
February	R 67,129	R 734	R 1,004	R 152	R 314	R 3,459	R 599	R 9	R 30	R 21	R 15
March	R 70,469	R 700	R 840	R 99	R 364	R 3,459	R 637	R 10	R 33	R 25	R 17
April	R 60,807	R 724	R 844	R 117	R 342	R 3,397	R 596	R 9	R 28	R 24	R 15
May	R 64,688	R 852	R 829	R 109	R 469	R 4,136	R 646	R 10	R 31	R 26	R 17
June	R 75,054	R 710	R 889	R 100	R 476	R 4,080	R 772	R 10	R 33	R 25	R 17
July	R 83,213	R 1,076	R 1,317	R 153	R 474	R 4,915	R 949	R 10	R 35	R 26	R 18
August	R 81,970	R 676	R 968	R 132	R 491	R 4,233	R 937	R 10	R 36	R 26	R 18
September	R 72,723	R 657	R 814	R 120	R 442	R 3,803	R 785	R 10	R 33	R 25	R 17
October	R 66,348	R 661	R 813	R 107	R 404	R 3,604	R 670	R 10	R 34	R 25	R 17
November	R 65,959	R 786	R 751	R 120	R 308	R 3,197	R 634	R 10	R 34	R 25	R 16
December	R 77,319	R 1,094	R 1,150	R 173	R 381	R 4,321	R 705	R 9	R 37	R 27	R 18
Total	R 860,729	R 9,784	R 11,766	R 1,681	R 4,852	R 47,492	R 8,596	R 115	R 398	R 298	R 200
2014 January	R 83,600	R 4,996	R 4,437	R 1,204	R 443	R 12,852	R 694	R 9	R 37	R 25	R 15
February	R 76,252	R 1,350	R 1,555	R 227	R 367	R 4,968	R 577	R 7	R 34	R 21	R 13
March	R 72,234	R 1,490	R 1,760	R 352	R 431	R 5,758	R 589	R 8	R 37	R 25	R 15
April	R 58,151	R 641	R 773	R 83	R 298	R 2,986	R 578	R 8	R 31	R 24	R 15
May	R 64,018	R 862	R 676	R 91	R 383	R 3,543	R 675	R 9	R 34	R 25	R 16
June	R 74,488	R 723	R 739	R 60	R 407	R 3,558	R 752	R 9	R 37	R 24	R 16
July	R 81,580	R 697	R 915	R 99	R 366	R 3,540	R 876	R 10	R 38	R 26	R 16
August	R 81,164	R 740	R 973	R 98	R 364	R 3,629	R 930	R 10	R 38	R 25	R 16
September	R 69,242	R 752	R 820	R 106	R 352	R 3,438	R 804	R 10	R 35	R 24	R 16
October	R 61,323	R 662	R 758	R 103	R 222	R 2,631	R 731	R 9	R 35	R 25	R 15
November	R 64,633	R 862	R 719	R 92	R 278	R 3,064	R 631	R 9	R 36	R 24	R 15
December	67,730	813	724	132	414	3,740	667	10	38	25	16
Total	854,416	14,588	14,849	2,647	4,325	53,709	8,503	107	430	293	183

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.
^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.
^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.
^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.
^e Petroleum coke is converted from short tons to barrels by multiplying by 5.
^f Natural gas, plus a small amount of supplemental gaseous fuels.
^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.
^h Wood and wood-derived fuels.
ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and

tire-derived fuels).
^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
^k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities, independent power producers, commercial plants, and industrial plants.
R=Revised. 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 ^a	Petroleum					Natural Gas ^f	Other Gases ^g	Biomass		Other ^j
		Distillate Fuel Oil ^b	Residual Fuel Oil ^c	Other Liquids ^d	Petroleum Coke ^e	Total ^e			Wood ^h	Waste ⁱ	
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total^k	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	R 74,608	R 1,074	R 1,489	R 282	R 320	R 4,447	R 606	R 3	15	20	10
February	R 66,722	R 709	R 957	R 138	R 282	R 3,213	R 545	R 3	14	R 18	R 10
March	R 70,016	R 682	801	R 82	R 303	R 3,083	R 579	R 3	15	R 21	11
April	R 60,392	R 704	R 812	R 101	R 279	R 3,012	R 541	R 3	R 12	20	10
May	R 64,250	R 830	R 796	R 87	R 401	R 3,719	R 591	R 3	14	R 22	11
June	R 74,620	R 692	R 862	86	R 410	R 3,692	R 713	R 3	15	21	11
July	R 82,747	R 1,051	R 1,283	R 138	R 409	R 4,516	R 884	R 3	17	22	12
August	R 81,523	R 658	R 933	R 117	R 425	R 3,835	R 873	3	R 18	R 22	11
September	R 72,305	R 638	R 788	R 105	R 386	R 3,460	R 726	R 4	16	R 21	11
October	R 65,944	R 643	R 782	R 92	R 354	R 3,285	R 613	R 4	16	R 21	R 11
November	R 65,552	R 764	R 719	R 104	R 277	R 2,973	R 576	R 4	17	R 21	10
December	R 76,868	R 1,064	R 1,101	R 156	R 341	R 4,028	R 641	R 4	18	23	12
Total	R 855,546	R 9,511	R 11,322	R 1,488	R 4,189	R 43,265	R 7,888	R 41	R 187	R 251	R 130
2014											
January	R 83,120	R 4,901	R 4,218	R 1,167	404	R 12,306	R 633	3	R 20	20	10
February	R 75,809	R 1,312	R 1,472	R 203	332	R 4,648	R 523	R 3	18	R 18	9
March	R 71,773	R 1,454	R 1,675	R 321	R 390	R 5,398	R 532	R 3	R 20	R 21	11
April	R 57,763	R 618	R 754	R 79	267	R 2,786	R 525	2	15	R 21	10
May	R 63,595	R 837	R 652	R 80	R 350	R 3,318	R 622	3	16	R 21	11
June	R 74,032	R 701	R 711	R 46	372	R 3,317	R 698	3	R 20	R 21	11
July	R 81,108	R 673	R 889	R 89	R 337	R 3,336	R 817	R 3	R 20	22	11
August	R 80,702	R 717	R 948	R 75	R 336	R 3,418	R 871	R 3	R 20	R 22	11
September	R 68,800	R 729	R 797	R 91	R 329	R 3,261	R 748	R 3	18	20	R 10
October	R 60,922	R 638	R 739	92	201	R 2,473	R 678	3	18	R 21	10
November	R 64,235	R 835	R 692	R 70	R 254	R 2,868	R 575	3	19	R 21	10
December	67,312	790	696	120	383	3,518	607	3	20	21	11
Total	849,171	14,204	14,242	2,432	3,954	50,647	7,831	37	224	249	126

^a Anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and coal synfuel.
^b Fuel oil nos. 1, 2, and 4. For 1949–1979, data are for gas turbine and internal combustion plant use of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.
^c Fuel oil nos. 5 and 6. For 1949–1979, data are for steam plant use of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.
^d Jet fuel, kerosene, other petroleum liquids, waste oil, and, beginning in 2011, propane.
^e Petroleum coke is converted from short tons to barrels by multiplying by 5.
^f Natural gas, plus a small amount of supplemental gaseous fuels.
^g Blast furnace gas, and other manufactured and waste gases derived from fossil fuels. Through 2010, also includes propane gas.
^h Wood and wood-derived fuels.
ⁱ Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2000, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

^j Batteries, chemicals, hydrogen, pitch, purchased steam, sulfur, miscellaneous technologies, and, beginning in 2001, non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).
^k Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.
 R=Revised. 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 ^a				Industrial Sector ^b						
	Coal ^c	Petroleum ^d	Natural Gas ^e	Biomass	Coal ^c	Petroleum ^d	Natural Gas ^e	Other Gases ^g	Biomass		Other ⁱ
				Waste ^f					Wood ^h	Waste ^f	
	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu			
1990 Total	417	953	28	15	10,740	13,103	517	104	335	16	36
1995 Total	569	649	43	21	12,171	12,265	601	114	373	13	40
2000 Total	514	823	37	26	11,706	10,459	640	107	369	10	45
2001 Total	532	1,023	36	15	10,636	10,530	654	88	370	7	44
2002 Total	477	834	33	18	11,855	11,608	685	106	464	15	43
2003 Total	582	894	38	19	10,440	10,424	668	127	362	13	46
2004 Total	377	766	33	19	7,687	6,919	566	108	194	5	41
2005 Total	377	585	34	20	7,504	6,440	518	85	189	5	46
2006 Total	347	333	35	21	7,408	5,066	536	87	187	3	45
2007 Total	361	258	34	19	5,089	5,041	554	88	188	4	41
2008 Total	369	166	33	20	5,075	3,617	520	73	179	5	39
2009 Total	317	190	34	23	4,674	3,328	520	62	160	4	42
2010 Total	314	172	39	24	8,125	2,422	555	70	172	8	55
2011 Total	347	137	47	31	5,735	2,145	572	74	182	7	57
2012 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
Total	307	279	63	33	4,665	4,761	633	84	219	8	54
2013 January	R 55	R 48	5	3	R 386	R 393	55	7	R 18	1	R 4
February	R 50	R 36	5	3	R 358	R 210	R 49	6	R 16	1	R 4
March	R 49	R 25	5	3	R 404	R 352	53	R 6	R 17	1	R 4
April	R 40	R 24	R 5	3	R 374	R 360	R 50	6	R 16	1	R 4
May	R 40	R 20	5	3	R 399	R 397	50	R 6	R 17	1	R 4
June	R 38	R 18	R 6	3	R 395	R 370	R 53	R 6	R 18	1	R 4
July	R 38	R 31	R 7	3	R 429	R 367	R 58	R 7	R 19	1	R 4
August	R 38	R 27	6	3	R 408	R 371	R 58	R 7	R 18	1	R 5
September	R 38	R 20	R 6	3	R 380	R 323	R 52	R 6	R 17	1	R 5
October	R 37	R 22	5	3	R 367	R 297	R 52	6	R 18	1	R 5
November	R 42	R 25	5	3	R 366	R 199	53	R 6	R 17	1	R 4
December	R 47	R 39	R 6	3	R 404	R 254	R 58	R 5	R 19	1	R 4
Total	R 513	R 335	R 67	R 36	R 4,670	R 3,892	R 642	R 74	R 210	R 11	R 50
2014 January	R 31	R 236	R 6	3	R 449	310	R 55	6	R 17	1	3
February	R 30	R 75	5	R 3	R 413	R 244	R 48	5	R 16	1	R 3
March	R 27	R 78	5	3	R 435	R 282	R 52	R 5	R 18	1	3
April	R 20	20	5	3	R 369	R 180	R 48	5	R 17	1	3
May	R 18	20	5	3	R 405	R 206	R 48	6	R 18	1	3
June	R 21	19	5	3	R 435	R 221	R 49	6	17	1	3
July	R 21	R 20	R 6	3	R 450	R 184	R 53	R 7	18	1	3
August	R 20	R 21	6	3	R 442	R 190	R 52	6	18	1	R 4
September	R 19	R 19	R 6	3	R 422	R 158	R 50	R 7	R 17	1	3
October	R 16	R 19	5	3	R 385	R 139	R 47	6	16	1	3
November	R 21	R 22	5	3	R 376	R 175	R 51	6	R 17	1	3
December	24	24	5	3	394	198	54	6	18	1	4
Total	269	575	64	34	4,976	2,488	609	69	206	10	38

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

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

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

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

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

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

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

^h Wood and wood-derived fuels.

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

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

R=Revised.

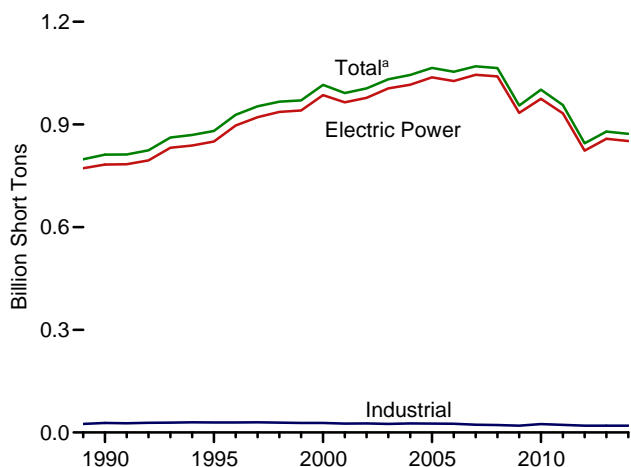
Notes: • Data are for fuels consumed to produce electricity. Through 1988, data are not available. • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding.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

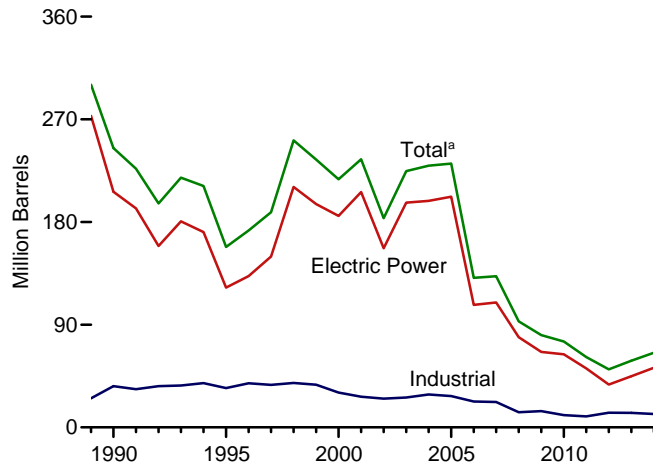
Sources: • **1989–1997:** U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003:** EIA, Form EIA-906, "Power Plant Report." • **2004–2007:** EIA, Form EIA-906,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

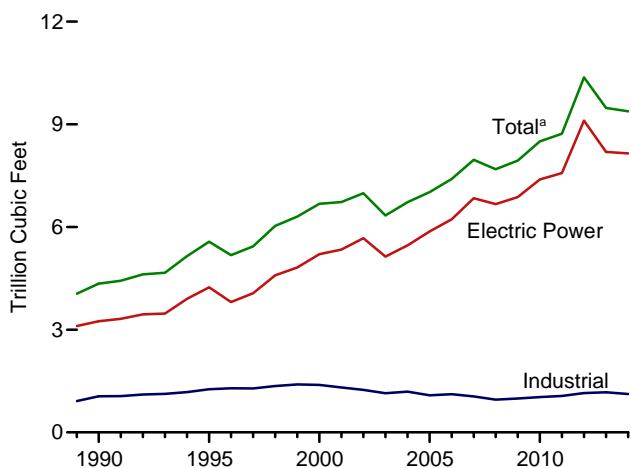
Coal by Sector, 1989–2014



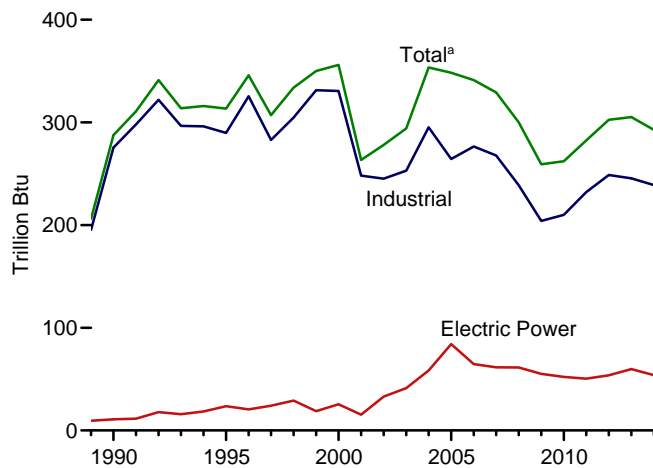
Petroleum by Sector, 1989–2014



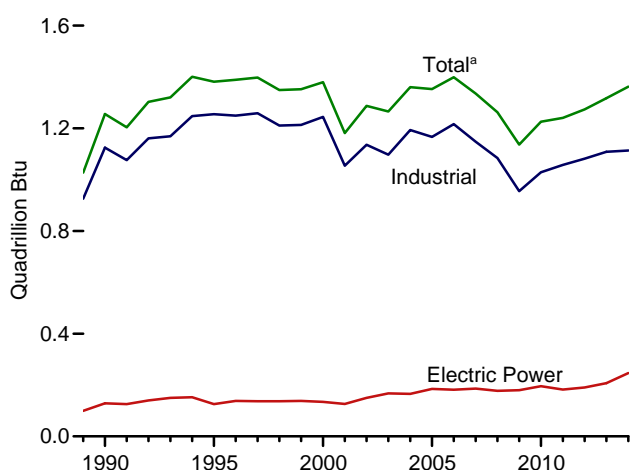
Natural Gas by Sector, 1989–2014



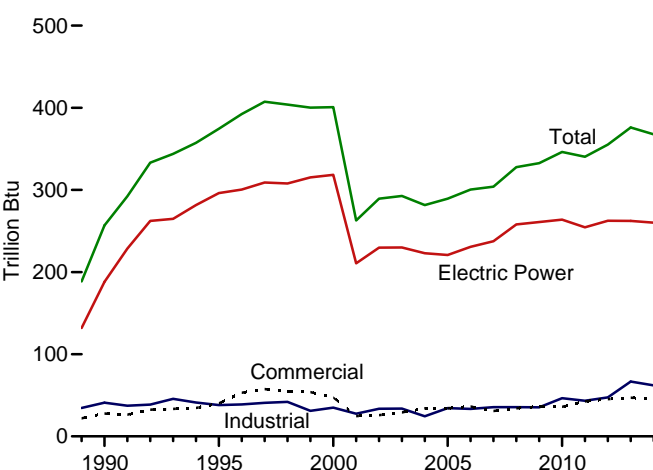
Other Gases^b by Sector, 1989–2014



Wood by Sector, 1989–2014



Waste by Sector, 1989–2014



^a Includes commercial sector.

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

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

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

	Coal ^a Thousand Short Tons	Petroleum					Natural Gas ^f Billion Cubic Feet	Other Gases ^g	Biomass		Other ⁱ
		Distillate Fuel Oil ^b Thousand Barrels	Residual Fuel Oil ^c Thousand Barrels	Other Liquids ^d Thousand Barrels	Petroleum Coke ^e Thousand Short Tons	Total ^e Thousand Barrels			Wood ^h Trillion Btu	Waste ^j Trillion Btu	
1950 Total	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	811,538	20,194	209,081	1,332	2,832	244,765	4,346	288	1,256	257	86
1995 Total	881,012	21,697	112,168	1,322	4,590	158,140	5,572	313	1,382	374	97
2000 Total	1,015,398	34,572	156,673	2,904	4,669	217,494	6,677	356	1,380	401	109
2001 Total	991,635	33,724	177,137	1,418	4,532	234,940	6,731	263	1,182	263	229
2002 Total	1,005,144	24,749	118,637	3,257	7,353	183,409	6,986	278	1,287	289	252
2003 Total	1,031,778	31,825	152,859	4,576	7,067	224,593	6,337	294	1,266	293	262
2004 Total	1,044,798	23,520	157,478	4,764	8,721	229,364	6,727	353	1,360	282	254
2005 Total	1,065,281	24,446	156,915	4,270	9,113	231,193	7,021	348	1,353	289	237
2006 Total	1,053,783	14,655	69,846	3,396	8,622	131,005	7,404	341	1,399	300	247
2007 Total	1,069,606	17,042	74,616	4,237	7,299	132,389	7,962	329	1,336	304	239
2008 Total	1,064,503	14,137	43,477	3,765	6,314	92,948	7,689	300	1,263	328	212
2009 Total	955,190	14,800	33,672	3,218	5,828	80,830	7,938	259	1,137	333	228
2010 Total	1,001,411	15,247	26,944	2,777	6,053	75,231	8,502	262	1,226	346	237
2011 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	R 76,748	R 1,173	R 1,906	R 356	R 522	R 6,045	R 741	R 26	R 113	R 31	R 19
February	R 68,656	R 789	R 1,216	R 197	R 416	R 4,284	R 666	R 24	R 101	R 28	R 18
March	R 72,100	R 739	R 989	R 146	R 493	R 4,341	R 711	R 26	R 109	R 32	R 20
April	R 62,249	R 762	R 1,000	R 167	R 456	R 4,211	R 666	R 25	R 101	R 31	R 18
May	R 66,168	R 889	R 995	R 153	R 600	R 5,036	R 717	R 25	R 106	R 31	R 19
June	R 76,482	R 750	R 1,032	R 147	R 606	R 4,961	R 842	R 25	R 109	R 31	R 20
July	R 84,740	R 1,107	R 1,467	R 193	R 614	R 5,837	R 1,028	R 26	R 118	R 32	R 21
August	R 83,466	R 709	R 1,110	R 166	R 653	R 5,250	R 1,015	R 26	R 116	R 32	R 21
September	R 74,127	R 690	R 946	R 157	R 558	R 4,583	R 858	R 25	R 107	R 30	R 20
October	R 67,818	R 700	R 964	R 147	R 522	R 4,421	R 742	R 25	R 108	R 32	R 20
November	R 67,559	R 830	R 904	R 157	R 400	R 3,893	R 708	R 25	R 111	R 32	R 19
December	R 78,966	R 1,139	R 1,671	R 226	R 496	R 5,516	R 785	R 28	R 117	R 35	R 21
Total	R 879,078	R 10,277	R 14,199	R 2,212	R 6,338	R 58,378	R 9,479	R 305	R 1,318	R 376	R 236
2014 January	R 85,321	R 5,220	R 5,203	R 1,327	R 561	R 14,554	R 777	R 25	R 115	R 31	R 17
February	R 77,852	R 1,425	R 1,906	R 286	R 471	R 5,972	R 647	R 22	R 105	R 26	R 15
March	R 73,994	R 1,557	R 2,116	R 420	R 544	R 6,813	R 665	R 23	R 113	R 31	R 18
April	R 59,650	R 685	R 934	R 103	R 401	R 3,730	R 648	R 22	R 107	R 30	R 17
May	R 65,510	R 896	R 853	R 127	R 455	R 4,152	R 743	R 23	R 111	R 30	R 18
June	R 75,882	R 762	R 931	R 97	R 487	R 4,224	R 822	R 24	R 115	R 30	R 18
July	R 83,070	R 738	R 1,096	R 129	R 532	R 4,623	R 947	R 26	R 118	R 33	R 19
August	R 82,638	R 779	R 1,148	R 151	R 541	R 4,782	R 1,004	R 26	R 120	R 31	R 19
September	R 70,655	R 782	R 953	R 146	R 510	R 4,429	R 874	R 26	R 110	R 30	R 18
October	R 62,729	R 693	R 915	R 131	R 342	R 3,452	R 803	R 25	R 114	R 31	R 17
November	R 66,112	R 904	R 897	R 155	R 417	R 4,044	R 704	R 26	R 114	R 31	R 17
December	R 69,221	R 846	R 875	R 184	R 559	R 4,701	R 745	R 26	R 121	R 32	R 18
Total	R 872,634	R 15,287	R 17,827	R 3,258	R 5,820	R 65,474	R 9,380	R 293	R 1,362	R 368	R 211

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

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

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

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

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

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

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

^h Wood and wood-derived fuels.

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

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

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

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

R=Revised. 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 ^a Thousand Short Tons	Petroleum					Natural Gas ^f Billion Cubic Feet	Other Gases ^g	Biomass		Other ^j
		Distillate Fuel Oil ^b Thousand Barrels	Residual Fuel Oil ^c Thousand Barrels	Other Liquids ^d Thousand Barrels	Petroleum Coke ^e Thousand Short Tons	Total ^e Thousand Barrels			Wood ^h Trillion Btu	Waste ⁱ 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	159,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total ^k	782,567	16,567	184,915	26	1,008	206,550	3,245	11	129	188	(s)
1995 Total	850,230	18,553	90,023	499	2,674	122,447	4,237	24	125	296	2
2000 Total	985,821	30,016	138,513	454	3,275	185,358	5,206	25	134	318	1
2001 Total	964,433	29,274	159,504	377	3,427	206,291	5,342	15	126	211	113
2002 Total	977,507	21,876	104,773	1,267	5,816	156,996	5,672	33	150	230	143
2003 Total	1,005,116	27,632	136,279	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	R 74,832	R 1,087	R 1,540	R 282	R 329	R 4,554	R 632	R 5	17	22	11
February	R 66,919	R 722	R 1,022	R 138	R 289	R 3,328	R 568	4	15	19	10
March	R 70,219	R 690	R 883	R 82	R 312	R 3,216	R 604	4	17	R 23	R 12
April	R 60,584	R 711	R 895	101	R 288	R 3,147	R 565	R 5	R 14	21	11
May	R 64,444	R 836	R 882	R 87	R 409	R 3,849	R 615	R 5	R 15	22	12
June	R 74,817	R 698	R 942	86	R 416	R 3,804	R 737	R 5	17	22	12
July	R 82,966	R 1,056	R 1,367	R 138	R 418	R 4,649	R 911	5	R 18	22	13
August	R 81,737	R 663	R 1,018	R 117	R 434	R 3,966	R 901	5	20	R 23	12
September	R 72,501	R 644	R 876	R 105	R 392	R 3,587	R 751	5	18	21	11
October	R 66,107	R 652	R 872	R 92	R 362	R 3,427	R 637	5	18	22	11
November	R 65,763	R 770	R 800	R 104	R 285	R 3,101	R 601	5	19	R 22	11
December	R 77,071	R 1,070	R 1,187	R 156	R 350	R 4,166	R 669	5	20	24	12
Total	R 857,962	R 9,598	R 12,283	R 1,489	R 4,285	R 44,794	R 8,191	R 60	207	R 262	R 139
2014 January	R 83,312	R 5,003	R 4,273	R 1,203	413	R 12,542	R 663	R 5	22	R 22	11
February	R 76,004	R 1,334	R 1,547	R 203	339	R 4,779	R 649	R 4	20	R 19	R 10
March	R 72,016	R 1,468	R 1,763	R 328	R 398	R 5,547	R 559	R 4	22	R 22	12
April	R 57,969	R 626	R 833	R 79	276	R 2,919	R 550	R 4	R 7	21	11
May	R 63,790	R 844	R 736	R 80	R 358	R 3,449	R 648	R 5	R 18	R 22	R 12
June	R 74,223	R 707	R 795	R 46	372	R 3,408	R 724	4	R 22	R 22	R 12
July	R 81,308	R 681	R 979	R 89	R 342	R 3,458	R 844	5	22	23	12
August	R 80,885	R 724	R 1,037	R 75	R 344	R 3,558	R 899	5	22	22	12
September	R 68,968	R 734	R 857	R 91	338	R 3,370	R 773	5	20	21	11
October	R 61,076	R 645	R 830	92	210	R 2,616	R 704	5	20	22	11
November	R 64,413	R 844	R 778	R 70	R 263	R 3,008	R 601	5	21	22	11
December	67,463	797	761	122	392	3,639	636	5	22	22	11
Total	851,428	14,407	15,190	2,479	4,043	52,293	8,149	54	247	260	135

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

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

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

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

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

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

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

^h Wood and wood-derived fuels.

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

tire-derived fuels).

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

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

R=Revised. 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 ^a				Industrial Sector ^b						
	Coal ^c	Petroleum ^d	Natural Gas ^e	Biomass	Coal ^c	Petroleum ^d	Natural Gas ^e	Other Gases ^g	Biomass		Other ⁱ
				Waste ^f					Wood ^h	Waste ^f	
Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu				
1990 Total	1,191	2,056	46	28	27,781	36,159	1,055	275	1,125	41	86
1995 Total	1,419	1,245	78	40	29,363	34,448	1,258	290	1,255	38	95
2000 Total	1,547	1,615	85	47	28,031	30,520	1,386	331	1,244	35	108
2001 Total	1,448	1,832	79	25	25,755	26,817	1,310	248	1,054	27	101
2002 Total	1,405	1,250	74	26	26,232	25,163	1,240	245	1,136	34	92
2003 Total	1,816	1,449	58	29	24,846	26,212	1,144	253	1,097	34	103
2004 Total	1,917	2,009	72	34	26,613	28,857	1,191	295	1,193	24	94
2005 Total	1,922	1,630	68	34	25,875	27,380	1,084	264	1,166	34	94
2006 Total	1,886	935	68	36	25,262	22,706	1,115	277	1,216	33	102
2007 Total	1,927	752	70	31	22,537	22,207	1,050	268	1,148	36	98
2008 Total	2,021	671	66	34	21,902	13,222	955	239	1,084	35	60
2009 Total	1,798	521	76	36	19,766	14,228	990	204	955	35	82
2010 Total	1,720	437	86	36	24,638	10,740	1,029	210	1,029	47	91
2011 Total	1,668	333	87	43	22,319	9,610	1,063	232	1,057	43	94
2012 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
Total	1,450	457	111	45	20,065	12,853	1,149	249	1,082	47	81
2013 January	R 149	R 270	R 10	4	R 1,767	R 1,222	R 100	21	R 96	5	R 6
February	R 137	R 98	9	R 3	R 1,600	R 858	R 89	19	R 86	R 5	R 5
March	R 132	R 35	9	4	R 1,748	R 1,091	R 97	R 22	R 92	R 5	R 6
April	R 100	R 28	R 9	4	R 1,565	R 1,036	R 92	20	R 88	R 6	R 5
May	R 105	R 27	R 9	4	R 1,618	R 1,159	93	R 20	R 91	R 5	R 5
June	R 102	R 24	R 10	4	R 1,563	R 1,133	R 96	20	R 92	R 5	R 5
July	R 100	R 44	R 12	4	R 1,674	R 1,143	R 105	R 21	R 100	R 5	R 6
August	R 102	R 39	R 11	4	R 1,626	R 1,245	R 104	21	R 96	R 5	R 6
September	R 96	R 29	R 10	4	R 1,530	R 967	R 96	20	R 88	R 5	R 6
October	R 91	R 37	R 9	4	R 1,620	R 956	R 96	R 19	R 91	R 6	R 6
November	R 112	R 42	9	4	R 1,683	R 750	R 98	19	R 92	R 7	R 6
December	R 130	R 213	R 11	4	R 1,765	R 1,137	105	R 23	R 97	R 7	R 6
Total	R 1,356	R 887	R 118	R 47	R 19,761	R 12,697	R 1,170	R 246	R 1,109	R 67	R 69
2014 January	R 146	R 625	R 11	4	R 1,862	R 1,387	R 103	20	R 93	R 5	4
February	R 145	R 205	9	3	R 1,703	R 987	R 89	18	R 85	4	3
March	R 140	R 218	9	4	R 1,838	R 1,047	R 97	R 19	R 91	R 5	R 4
April	R 109	R 49	R 9	4	R 1,571	R 762	R 89	18	R 90	R 5	4
May	R 92	R 52	8	4	R 1,627	R 651	R 87	19	R 93	R 5	4
June	R 88	R 48	9	4	R 1,571	R 769	R 89	R 19	R 93	R 5	4
July	R 98	R 49	9	4	R 1,664	R 1,116	R 94	21	R 96	R 6	4
August	R 90	R 63	10	4	R 1,663	R 1,161	R 95	R 21	R 97	R 5	4
September	R 91	R 50	9	4	R 1,596	R 1,009	R 92	R 21	R 90	R 5	4
October	R 88	R 44	9	4	R 1,566	R 791	R 90	R 20	R 94	R 5	4
November	R 114	R 58	9	4	R 1,585	R 978	R 94	R 21	R 93	R 5	4
December	121	64	10	4	1,636	998	99	21	99	6	4
Total	1,323	1,525	112	46	19,883	11,656	1,119	239	1,113	62	47

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

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

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

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

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

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

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

^h Wood and wood-derived fuels.

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

R=Revised.

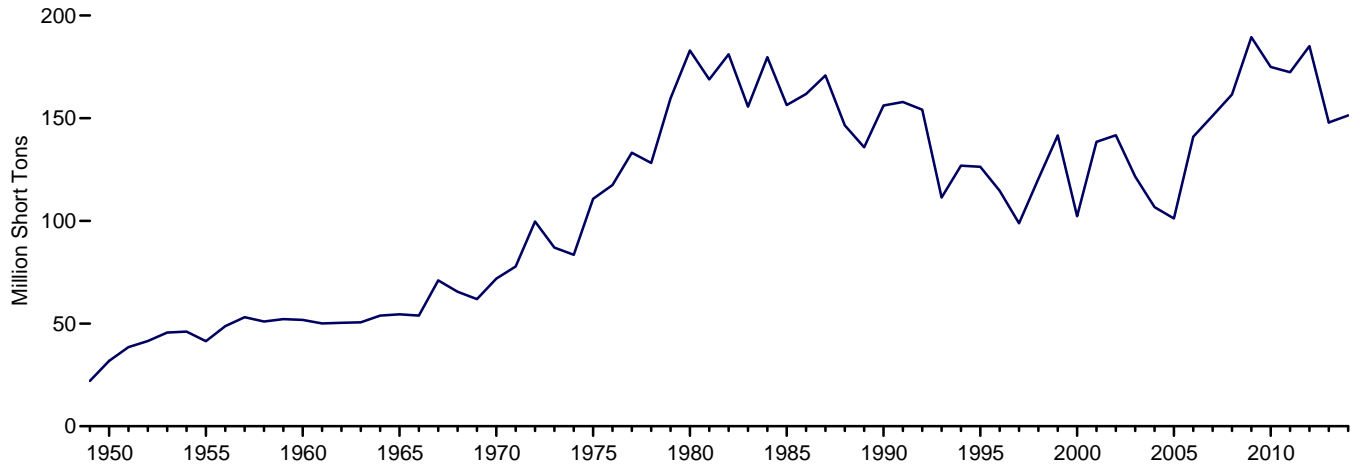
Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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.

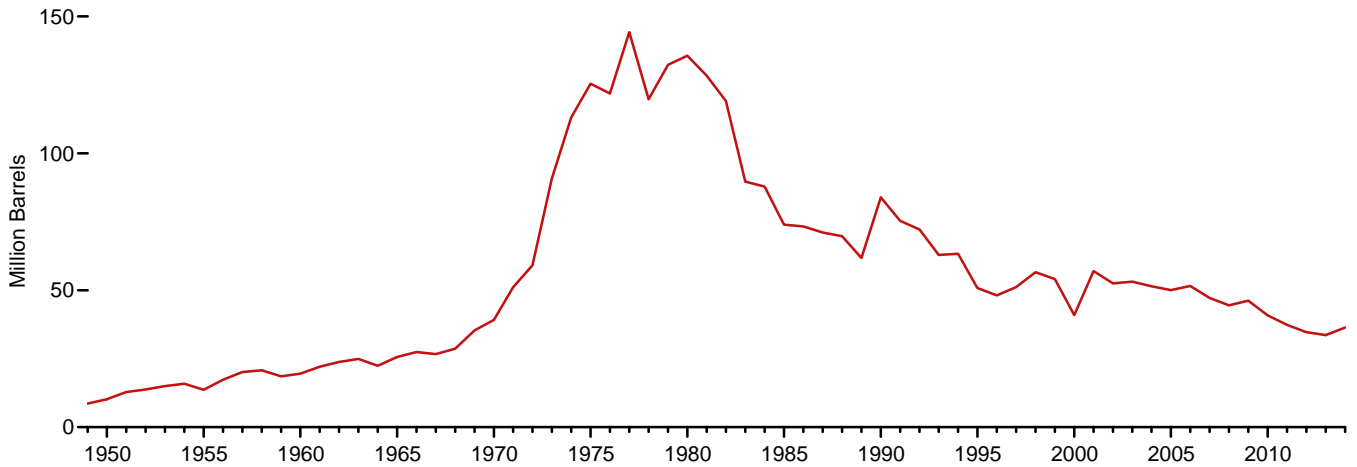
Sources: • **1989–1997:** U.S. Energy Information Administration (EIA), Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000:** EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003:** EIA, Form EIA-906, "Power Plant Report." • **2004–2007:** EIA, Form EIA-906,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

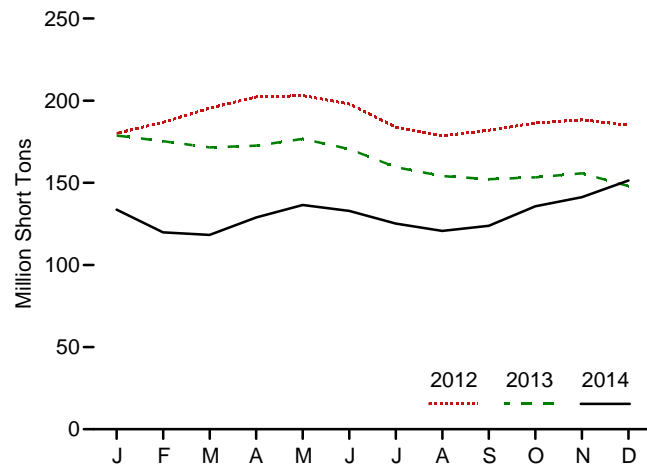
Coal, 1949–2014



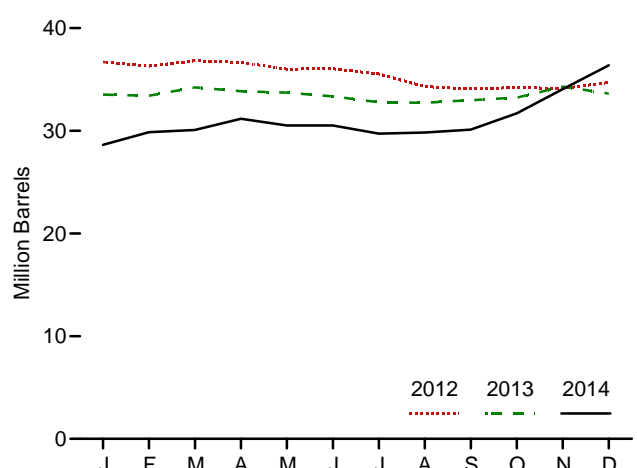
Total Petroleum, 1949–2014



Coal, Monthly



Total Petroleum, Monthly



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.
 Source: Table 7.5.

Table 7.5 Stocks of Coal and Petroleum: Electric Power Sector

	Coal ^a	Petroleum				
		Distillate Fuel Oil ^b	Residual Fuel Oil ^c	Other Liquids ^d	Petroleum Coke ^e	Total ^{e,f}
		Thousand Barrels			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 ^g	102,296	15,127	24,748	NA	211	40,932
2001 Year	138,496	20,486	34,594	NA	390	57,031
2002 Year	141,714	17,413	25,723	800	1,711	52,490
2003 Year	121,567	19,153	25,820	779	1,484	53,170
2004 Year	106,669	19,275	26,596	879	937	51,434
2005 Year	101,137	18,778	27,624	1,012	530	50,062
2006 Year	140,964	18,013	28,823	1,380	674	51,583
2007 Year	151,221	18,395	24,136	1,902	554	47,203
2008 Year	161,589	17,761	21,088	1,955	739	44,498
2009 Year	189,467	17,886	19,068	2,257	1,394	46,181
2010 Year	174,917	16,758	16,629	2,319	1,019	40,800
2011 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	R 178,859	R 16,431	R 12,219	R 2,664	442	R 33,525
February	R 175,565	R 16,517	R 12,024	R 2,664	442	R 33,417
March	R 171,736	R 16,508	R 12,983	R 2,707	R 407	R 34,234
April	R 173,014	R 16,322	R 12,531	R 2,715	R 456	R 33,847
May	R 177,174	R 16,271	R 12,476	R 2,747	R 443	R 33,711
June	R 171,124	R 16,345	R 12,198	R 2,770	R 408	R 33,350
July	R 160,019	R 16,260	R 11,760	R 2,784	394	R 32,774
August	R 154,567	R 16,350	R 12,275	R 2,810	260	R 32,735
September	R 152,694	R 16,301	R 12,349	R 2,778	309	R 32,973
October	R 154,194	R 16,497	R 12,514	R 2,759	291	R 33,226
November	R 156,249	R 16,787	R 13,046	R 2,787	338	R 34,310
December	R 147,884	R 16,068	R 12,926	R 2,679	390	R 33,622
2014 January	R 133,647	R 14,760	R 10,005	R 2,376	298	R 28,631
February	R 119,885	R 15,483	R 10,594	R 2,400	R 276	R 29,857
March	R 118,305	R 15,487	R 10,509	R 2,341	349	R 30,083
April	R 128,883	R 15,724	R 10,506	R 2,366	514	R 31,167
May	R 136,474	R 15,358	R 10,489	R 2,386	457	R 30,516
June	R 132,879	R 15,535	R 10,577	R 2,357	R 410	R 30,518
July	R 125,240	R 15,415	R 10,170	R 2,228	381	R 29,718
August	R 120,709	R 15,329	R 10,362	R 2,210	388	R 29,840
September	R 123,814	R 15,536	R 10,426	R 2,213	389	R 30,120
October	R 135,709	R 16,026	R 10,757	R 2,365	510	R 31,697
November	R 141,309	R 16,564	R 11,838	R 2,456	640	R 34,057
December	151,362	16,932	12,682	2,525	847	36,373

^a Anthracite, bituminous coal, subbituminous coal, and lignite; excludes waste coal.

^b Fuel oil nos. 1, 2 and 4. For 1973–1979, data are for gas turbine and internal combustion plant stocks of petroleum. For 1980–2000, electric utility data also include small amounts of kerosene and jet fuel.

^c Fuel oil nos. 5 and 6. For 1973–1979, data are for steam plant stocks of petroleum. For 1980–2000, electric utility data also include a small amount of fuel oil no. 4.

^d Jet fuel and kerosene. Through 2003, data also include a small amount of waste oil.

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

^f Distillate fuel oil and residual fuel oil. Beginning in 1970, also includes petroleum coke. Beginning in 2002, also includes other liquids.

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

R=Revised. 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.

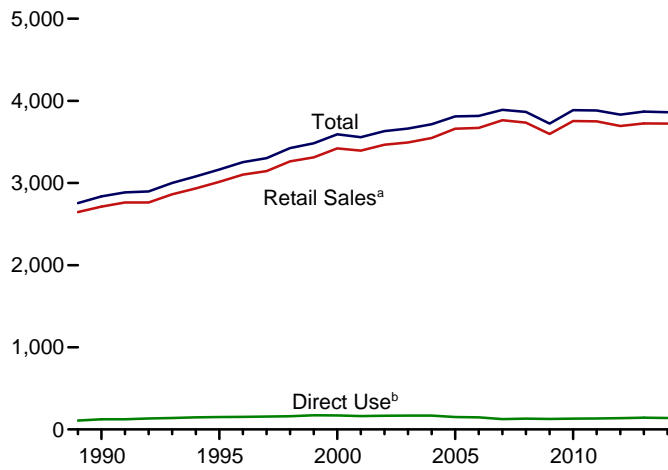
• Geographic coverage is the 50 states and the District of Columbia.

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.

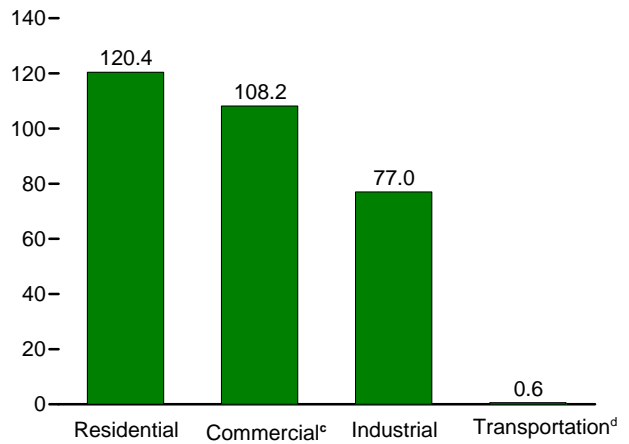
Sources: • **1949–September 1977:** Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977–1981:** Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1982–1988:** U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power 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)

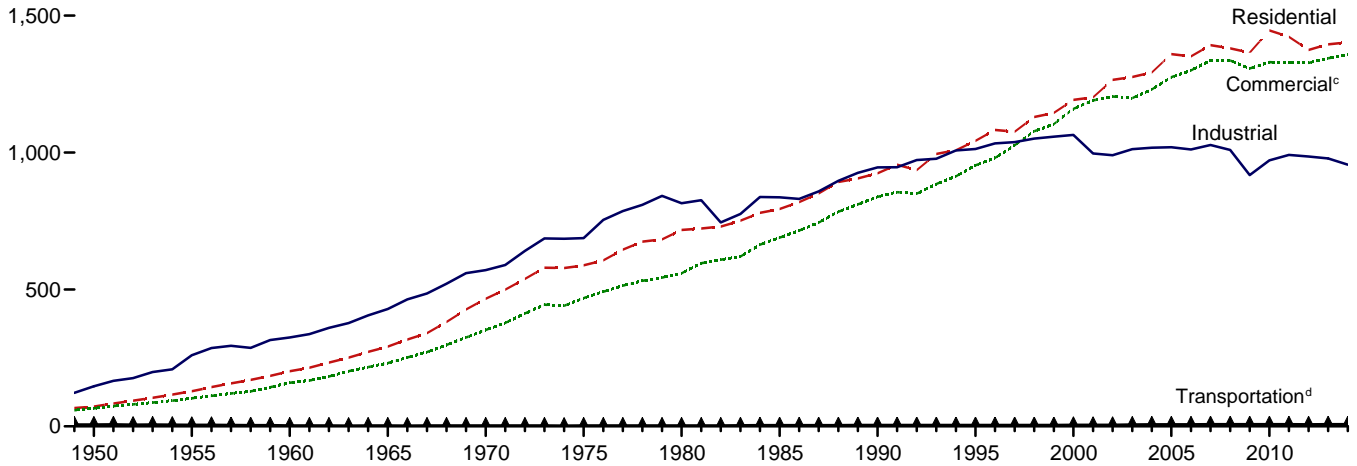
Electricity End Use Overview, 1989–2014



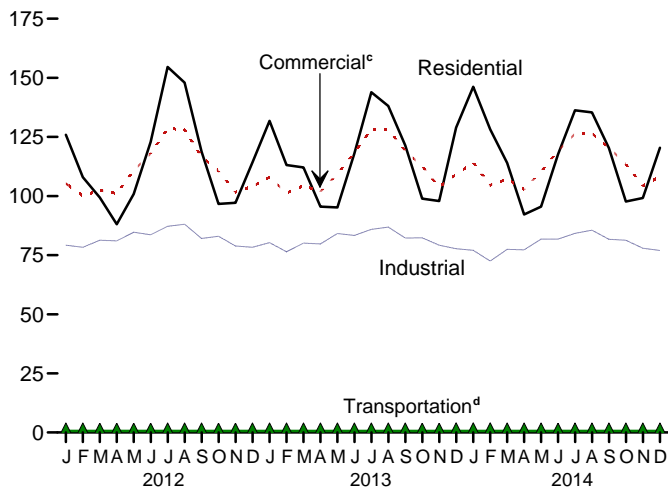
Retail Sales^a by Sector, December 2014



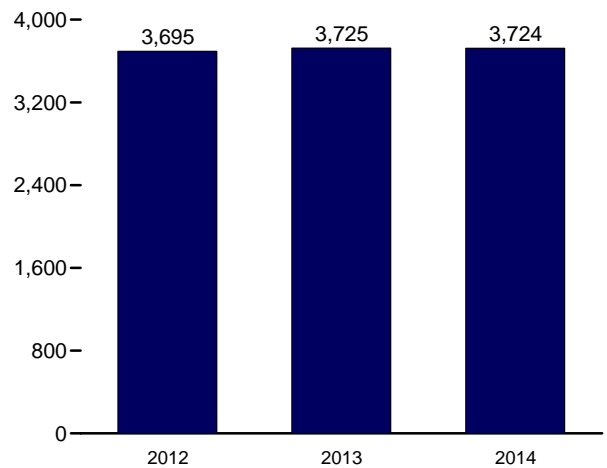
Retail Sales^a by Sector, 1949–2014



Retail Sales^a by Sector, Monthly



Retail Sales^a Total, January–December



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

^b See "Direct Use" in Glossary.

^c Commercial sector, including public street and highway lighting, inte-

departmental sales, and other sales to public authorities.

^d Transportation sector, including sales to railroads and railways.

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

Source: Table 7.6.

Table 7.6 Electricity End Use
(Million Kilowatthours)

	Retail Sales ^a					Direct Use ^f	Total End Use ^g	Discontinued Retail Sales Series	
	Residential	Commercial ^b	Industrial ^c	Transportation ^d	Total Retail Sales ^e			Commercial (Old) ^h	Other (Old) ⁱ
1950 Total	72,200	E 65,971	146,479	E 6,793	291,443	NA	291,443	50,637	22,127
1955 Total	128,401	E 102,547	259,974	E 5,826	496,748	NA	496,748	79,389	28,984
1960 Total	201,463	E 159,144	324,402	E 3,066	688,075	NA	688,075	130,702	31,508
1965 Total	291,013	E 231,126	428,727	E 2,923	953,789	NA	953,789	200,470	33,580
1970 Total	466,291	E 352,041	570,854	E 3,115	1,392,300	NA	1,392,300	306,703	48,452
1975 Total	588,140	E 468,296	687,680	E 2,974	1,747,091	NA	1,747,091	403,049	68,222
1980 Total	717,495	558,643	815,067	3,244	2,094,449	NA	2,094,449	488,155	73,732
1985 Total	793,934	689,121	836,772	4,147	2,323,974	NA	2,323,974	605,989	87,279
1990 Total	924,019	838,263	945,522	4,751	2,712,555	124,529	2,837,084	751,027	91,988
1995 Total	1,042,501	953,117	1,012,693	4,975	3,013,287	150,677	3,163,963	862,685	95,407
2000 Total	1,192,446	1,159,347	1,064,239	5,382	3,421,414	170,943	3,592,357	1,055,232	109,496
2001 Total	1,201,607	1,190,518	996,609	5,724	3,394,458	162,649	3,557,107	1,083,069	113,174
2002 Total	1,265,180	1,204,531	990,238	5,517	3,465,466	166,184	3,631,650	1,104,497	105,552
2003 Total	1,275,824	1,198,728	1,012,373	6,810	3,493,734	168,295	3,662,029	--	--
2004 Total	1,291,982	1,230,425	1,017,850	7,224	3,547,479	168,470	3,715,949	--	--
2005 Total	1,359,227	1,275,079	1,019,156	7,506	3,660,969	150,016	3,810,984	--	--
2006 Total	1,351,520	1,299,744	1,011,298	7,358	3,669,919	146,927	3,816,845	--	--
2007 Total	R 1,392,241	R 1,336,315	R 1,027,832	R 8,173	R 3,764,561	R 125,670	R 3,890,231	--	--
2008 Total	R 1,380,662	R 1,336,133	R 1,009,516	R 7,653	R 3,733,965	R 132,197	R 3,866,161	--	--
2009 Total	R 1,364,758	R 1,306,853	R 917,416	R 7,768	R 3,596,795	R 126,938	R 3,723,733	--	--
2010 Total	1,445,708	1,330,199	R 971,221	7,712	R 3,754,841	R 131,910	R 3,886,752	--	--
2011 Total	1,422,801	1,328,057	991,316	7,672	3,749,846	132,754	3,882,600	--	--
2012 January	125,881	105,239	79,205	650	310,975	E 11,668	322,643	--	--
February	107,975	100,080	78,298	629	286,983	E 11,018	298,001	--	--
March	99,362	102,474	81,298	597	283,731	E 11,013	294,744	--	--
April	88,103	101,037	81,030	590	270,760	E 10,535	281,294	--	--
May	100,895	110,800	84,678	595	296,968	E 11,297	308,266	--	--
June	122,934	118,009	83,619	597	325,160	E 11,427	336,586	--	--
July	154,579	128,535	87,219	629	370,963	E 12,528	383,490	--	--
August	147,941	128,106	88,105	633	364,785	E 12,423	377,208	--	--
September	118,831	116,585	82,060	613	318,090	E 11,368	329,457	--	--
October	96,669	110,471	82,996	599	290,735	E 11,146	301,882	--	--
November	97,155	101,641	78,847	569	278,212	E 11,306	289,518	--	--
December	114,188	104,122	78,360	619	297,288	E 11,927	309,216	--	--
Total	1,374,515	1,327,101	985,714	7,320	3,694,650	137,657	3,832,306	--	--
2013 January	R 131,794	R 107,983	R 80,260	R 664	R 320,701	RE 12,296	R 332,997	--	--
February	R 113,123	R 101,279	R 76,438	R 659	R 291,499	RE 11,079	R 302,578	--	--
March	R 112,104	R 104,391	R 80,102	R 644	R 297,242	RE 12,000	R 309,241	--	--
April	R 95,547	R 101,886	R 79,732	R 630	R 277,796	RE 11,076	R 288,872	--	--
May	R 95,199	R 109,407	R 84,183	R 627	R 289,416	RE 11,608	R 301,024	--	--
June	R 117,991	R 118,245	R 83,348	R 638	R 320,222	RE 11,969	R 332,191	--	--
July	R 143,877	R 128,324	R 85,905	R 649	R 358,755	RE 13,031	R 371,786	--	--
August	R 138,073	R 128,003	R 86,868	R 645	R 353,589	RE 12,682	R 366,271	--	--
September	R 121,427	R 119,170	R 82,273	R 626	R 323,496	RE 11,762	R 335,258	--	--
October	R 98,900	R 112,548	R 82,349	R 591	R 294,387	RE 11,621	R 306,009	--	--
November	R 97,910	R 103,823	R 79,202	R 574	R 281,509	RE 11,718	R 293,227	--	--
December	R 128,975	R 109,146	R 77,692	R 679	R 316,492	RE 12,621	R 329,113	--	--
Total	R 1,394,919	R 1,344,207	R 978,352	R 7,625	R 3,725,103	R 143,462	R 3,868,565	--	--
2014 January	R 146,177	R 114,169	R 77,028	R 735	R 338,108	RE 12,488	R 350,596	--	--
February	R 128,190	R 104,570	R 72,498	R 700	R 305,959	RE 10,931	R 316,890	--	--
March	R 113,968	R 107,173	R 77,474	R 649	R 299,264	RE 11,809	R 311,073	--	--
April	R 92,186	R 102,833	R 77,227	R 641	R 272,887	RE 10,864	R 283,750	--	--
May	R 95,516	R 110,375	R 81,756	R 649	R 288,296	RE 10,976	R 299,272	--	--
June	R 117,630	R 119,153	R 81,784	R 608	R 319,174	RE 11,392	R 330,566	--	--
July	R 136,278	R 126,282	R 84,208	R 643	R 347,411	RE 12,192	R 359,603	--	--
August	R 135,383	R 126,413	R 85,600	R 640	R 348,036	RE 12,124	R 360,160	--	--
September	R 120,303	R 120,489	R 81,714	R 626	R 323,133	RE 11,502	R 334,635	--	--
October	R 97,701	R 113,475	R 81,306	R 623	R 293,106	RE 10,986	R 304,092	--	--
November	R 99,166	R 104,391	R 77,897	R 637	R 282,092	RE 11,383	R 293,475	--	--
December	120,411	108,183	76,995	626	306,215	E 12,147	318,362	--	--
Total	1,402,911	1,357,505	955,488	7,776	3,723,681	E 138,791	3,862,472	--	--

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

^b Commercial sector, including public street and highway lighting, interdepartmental sales, and other sales to public authorities.

^c Industrial sector. Through 2002, excludes agriculture and irrigation; beginning in 2003, includes agriculture and irrigation.

^d Transportation sector, including sales to railroads and railways.

^e The sum of "Residential," "Commercial," "Industrial," and "Transportation."

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

^g The sum of "Total Retail Sales" and "Direct Use."

^h "Commercial (Old)" is a discontinued series—data are for the commercial

sector, excluding public street and highway lighting, interdepartmental sales, and other sales to public authorities.

ⁱ "Other (Old)" is a discontinued series—data are for public street and highway lighting, interdepartmental sales, other sales to public authorities, agriculture and irrigation, and transportation including railroads and railways.

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

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

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

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

Web 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.

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.

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)*, February 2015, Table 5.1.

Retail Sales, Commercial

1949–2002: Estimated by EIA as the sum of “Commercial (Old)” and the non-transportation portion of “Other (Old).”

See estimation methodology at http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf.

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

2004 forward: EIA, EPM, February 2015, Table 5.1.

Retail Sales, Transportation

1949–2002: Estimated by EIA as the transportation portion of “Other (Old).” See estimation methodology at http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf.

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

2004 forward: EIA, EPM, February 2015, 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.”

2001–2013: EIA, *Electric Power Annual 2013*, March 2015, Table 2.2.

2014: 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 2014, the 2013 annual share is used.

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

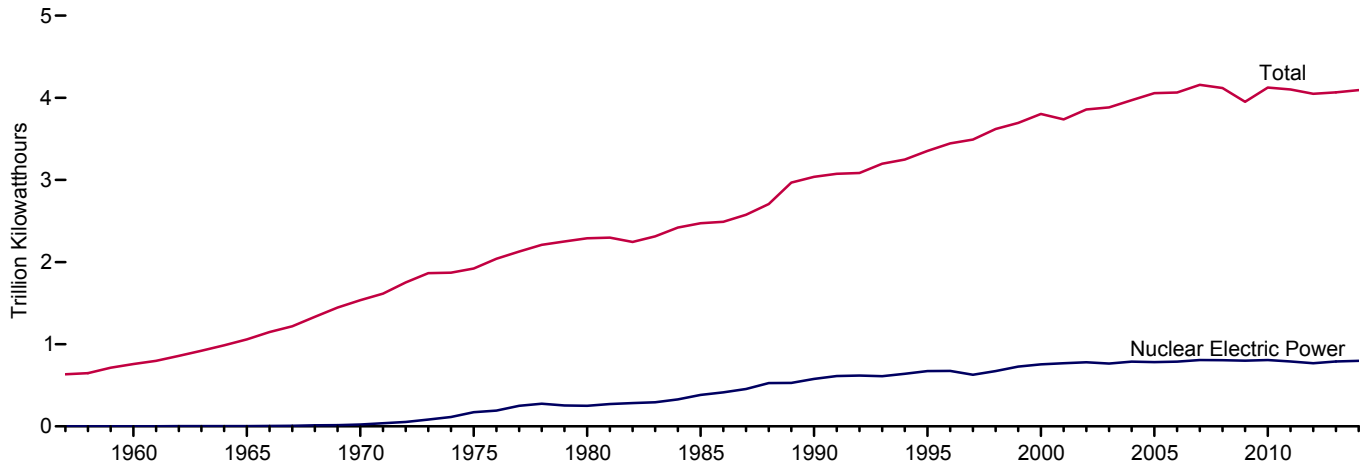
1949–2002: See sources for “Residential” and “Industrial.”

THIS PAGE INTENTIONALLY LEFT BLANK

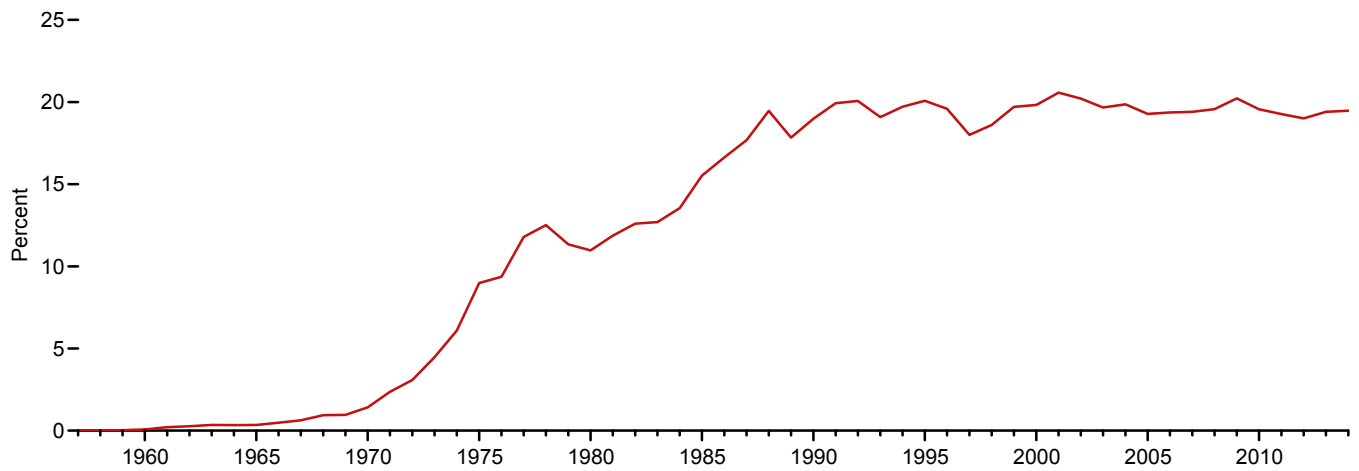
8. Nuclear Energy

Figure 8.1 Nuclear Energy Overview

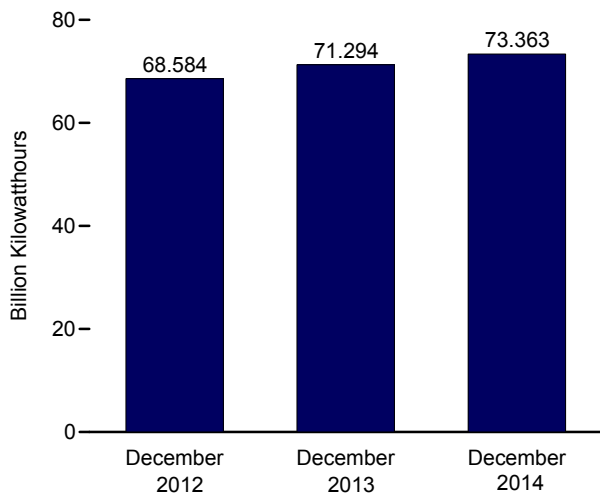
Electricity Net Generation, 1957–2014



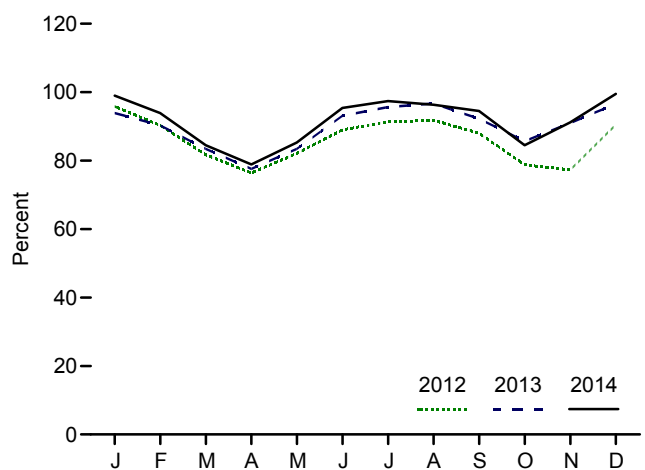
Nuclear Share of Electricity Net Generation, 1957–2014



Nuclear Electricity Net Generation



Capacity Factor, Monthly



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#nuclear>.
Sources: Tables 7.2a and 8.1.

Table 8.1 Nuclear Energy Overview

	Total Operable Units ^{a,b}	Net Summer Capacity of Operable Units ^{b,c}	Nuclear Electricity Net Generation	Nuclear Share of Electricity Net Generation	Capacity Factor ^d
	Number	Million Kilowatts	Million Kilowatthours	Percent	
1957 Total	1	0.055	10	(s)	NA
1960 Total	3	.411	518	.1	NA
1965 Total	13	.793	3,657	.3	NA
1970 Total	20	7.004	21,804	1.4	NA
1975 Total	57	37.267	172,505	9.0	55.9
1980 Total	71	51.810	251,116	11.0	56.3
1985 Total	96	79.397	383,691	15.5	58.0
1990 Total	112	99.624	576,862	19.0	66.0
1995 Total	109	99.515	673,402	20.1	77.4
2000 Total	104	97.860	753,893	19.8	88.1
2001 Total	104	98.159	768,826	20.6	89.4
2002 Total	104	98.657	780,064	20.2	90.3
2003 Total	104	99.209	763,733	19.7	87.9
2004 Total	104	99.628	788,528	19.9	90.1
2005 Total	104	99.988	781,986	19.3	89.3
2006 Total	104	100.334	787,219	19.4	89.6
2007 Total	104	100.266	806,425	19.4	91.8
2008 Total	104	100.755	806,208	19.6	^d 91.1
2009 Total	104	101.004	798,855	20.2	90.3
2010 Total	104	101.167	806,968	19.6	91.1
2011 Total	104	^c 101.419	790,204	19.3	89.1
2012 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
Total	104	101.885	769,331	19.0	86.1
2013 January	104	^R 102.206	71,406	20.5	^R 93.9
February	103	^R 101.346	61,483	19.9	^R 90.3
March	103	^R 101.455	62,947	^R 19.3	^R 83.4
April	103	^R 101.603	56,767	19.0	^R 77.6
May	102	^R 101.282	62,848	19.5	83.4
June	100	^R 99.132	66,430	18.6	^R 93.1
July	100	^R 99.132	70,539	17.9	^R 95.6
August	100	^R 99.132	71,344	^R 18.5	^R 96.7
September	100	^R 99.132	65,799	19.3	^R 92.2
October	100	^R 99.132	63,184	20.1	^R 85.7
November	100	^R 99.132	64,975	20.7	^R 91.0
December	100	^R 99.240	71,294	20.2	^R 96.6
Total	100	^R 99.240	^R 789,016	19.4	^R 89.9
2014 January	100	^{RE} 99.225	73,064	19.4	^{RE} 99.0
February	100	^{RE} 99.225	62,639	^R 19.3	^{RE} 93.9
March	100	^{RE} 99.225	62,397	18.8	^{RE} 84.5
April	100	^{RE} 99.225	56,385	^R 18.9	^{RE} 78.9
May	100	^{RE} 99.225	62,947	19.4	^{RE} 85.3
June	100	^{RE} 99.225	68,138	^R 19.0	^{RE} 95.4
July	100	^{RE} 99.225	71,940	18.7	^{RE} 97.4
August	100	^{RE} 99.225	71,129	18.5	^{RE} 96.3
September	100	^{RE} 99.225	67,535	19.9	^E 94.5
October	100	^{RE} 99.225	62,391	^R 19.8	^E 84.5
November	100	^E 99.225	65,140	20.5	^E 91.2
December	99	^E 98.621	73,363	21.8	^E 99.5
Total	99	^E 98.621	797,067	19.5	^E 91.7

^a Total of nuclear generating units holding full-power licenses, or equivalent permission to operate, at end of period. See Note 1, "Operable Nuclear Reactors," at end of section.

^b At end of period.

^c For the definition of "Net Summer Capacity," see Note 2, "Nuclear Capacity," at end of section. Beginning in 2011, monthly capacity values are estimated in two steps: 1) updates 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.

^d 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.

R=Revised. E=Estimate. NA=Not available. (s)=Less than 0.05.

Notes: • For a discussion of nuclear reactor unit coverage, see Note 1, "Operable Nuclear Reactors," at end of section. • Nuclear electricity net generation totals may not equal sum of components due to independent rounding.

• Geographic coverage is the 50 states and the District of Columbia.
Web 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. Vermont Yankee was retired in December 2014.

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.

Nuclear Electricity Net Generation and Nuclear Share of Electricity Net Generation

1957 forward: Table 7.2a.

Capacity Factor

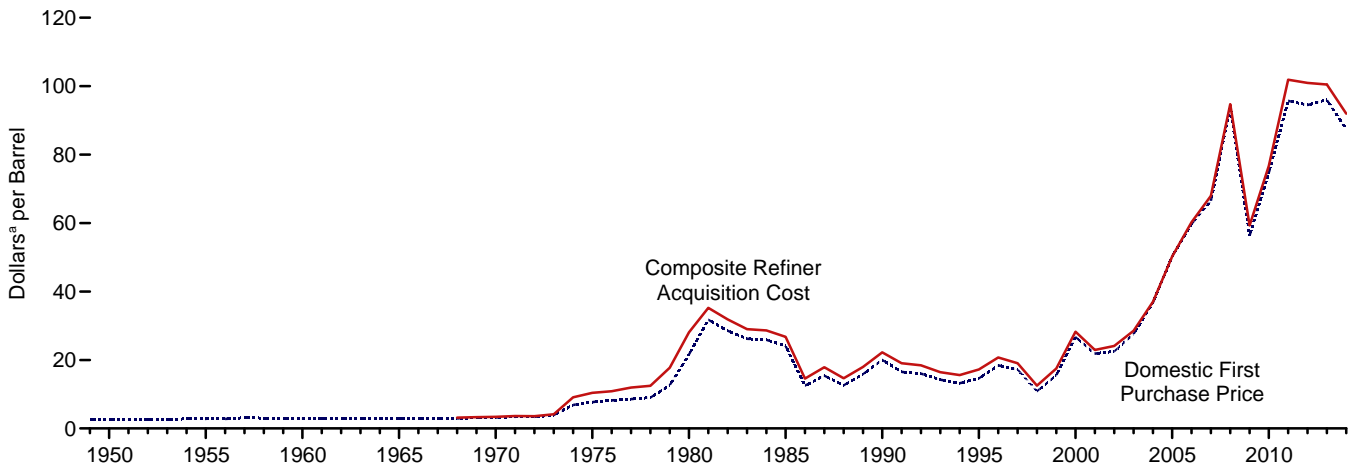
1973–2007: Calculated by EIA using the method described above in Note 2.

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.”

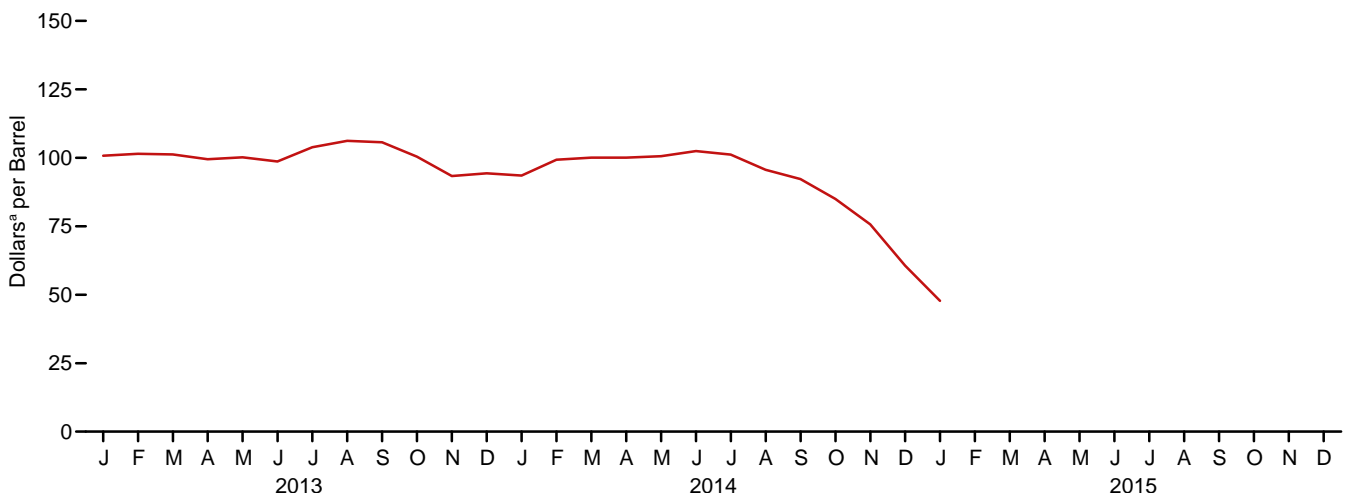
9. Energy Prices

Figure 9.1 Petroleum Prices

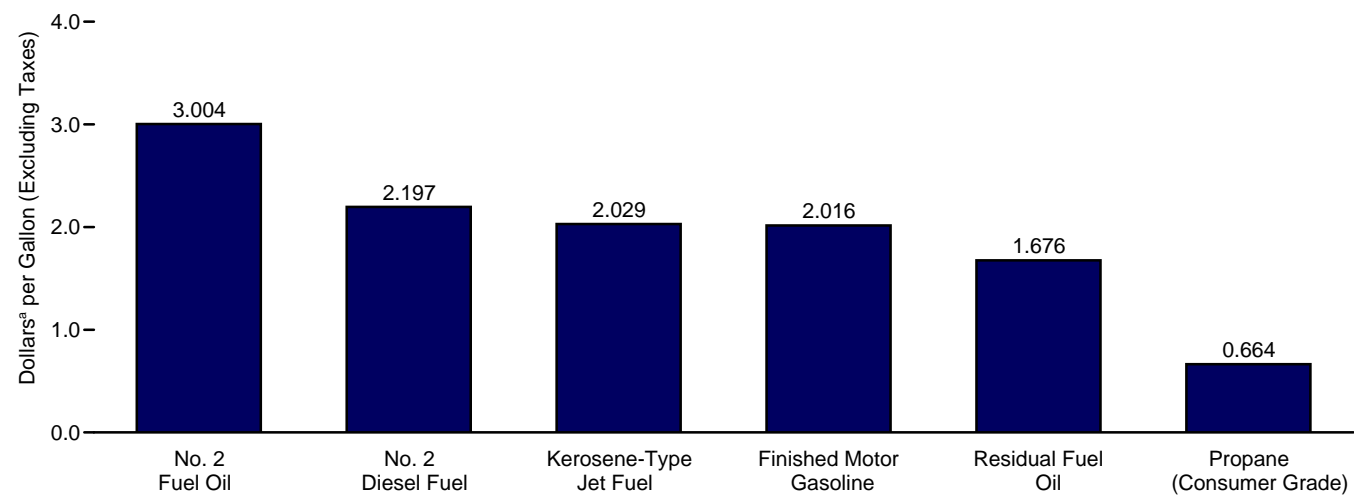
Crude Oil Prices, 1949–2014



Composite Refiner Acquisition Cost, Monthly



Refiner Prices to End Users: Selected Products, December 2014



^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#prices>.
 Sources: Tables 9.1, 9.5, and 9.7.

Table 9.1 Crude Oil Price Summary
(Dollars^a per Barrel)

	Domestic First Purchase Price ^c	F.O.B. Cost of Imports ^d	Landed Cost of Imports ^e	Refiner Acquisition Cost ^b		
				Domestic	Imported	Composite
1950 Average	2.51	NA	NA	NA	NA	NA
1955 Average	2.77	NA	NA	NA	NA	NA
1960 Average	2.88	NA	NA	NA	NA	NA
1965 Average	2.86	NA	NA	NA	NA	NA
1970 Average	3.18	NA	NA	E 3.46	E 2.96	E 3.40
1975 Average	7.67	11.18	12.70	8.39	13.93	10.38
1980 Average	21.59	32.37	33.67	24.23	33.89	28.07
1985 Average	24.09	25.84	26.67	26.66	26.99	26.75
1990 Average	20.03	20.37	21.13	22.59	21.76	22.22
1995 Average	14.62	15.69	16.78	17.33	17.14	17.23
2000 Average	26.72	26.27	27.53	29.11	27.70	28.26
2001 Average	21.84	20.46	21.82	24.33	22.00	22.95
2002 Average	22.51	22.63	23.91	24.65	23.71	24.10
2003 Average	27.56	25.86	27.69	29.82	27.71	28.53
2004 Average	36.77	33.75	36.07	38.97	35.90	36.98
2005 Average	50.28	47.60	49.29	52.94	48.86	50.24
2006 Average	59.69	57.03	59.11	62.62	59.02	60.24
2007 Average	66.52	66.36	67.97	69.65	67.04	67.94
2008 Average	94.04	90.32	93.33	98.47	92.77	94.74
2009 Average	56.35	57.78	60.23	59.49	59.17	59.29
2010 Average	74.71	74.19	76.50	78.01	75.86	76.69
2011 Average	95.73	101.66	102.92	100.71	102.63	101.87
2012 January	98.99	103.96	105.27	103.97	105.25	104.71
February	102.04	108.56	109.23	105.93	108.08	107.18
March	105.42	110.65	110.62	110.80	111.00	110.92
April	103.62	107.17	107.55	111.22	108.54	109.68
May	95.57	100.79	101.56	103.04	103.26	103.17
June	83.59	87.89	91.90	91.66	92.18	91.96
July	86.10	92.50	93.68	92.64	92.99	92.84
August	92.53	99.63	98.70	98.58	97.04	97.70
September	95.98	101.03	101.34	102.17	101.82	101.97
October	92.24	97.75	99.22	99.07	100.92	100.02
November	89.64	91.86	96.20	95.28	98.07	96.78
December	89.81	92.69	95.01	96.56	93.70	95.06
Average	94.52	99.78	101.00	100.72	101.09	100.93
2013 January	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
Average	95.99	96.56	96.99	102.91	98.11	100.49
2014 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	89.28	91.53	97.60	93.23	95.61
September	87.34	85.26	87.31	94.62	89.38	92.26
October	78.83	R 76.73	R 80.13	86.73	82.75	84.99
November	71.07	R 67.39	R 71.71	77.08	73.90	75.69
December	R 54.86	R 52.94	R 56.79	R 63.22	R 57.22	R 60.62
Average	87.39	86.38	88.90	94.05	89.46	91.98
2015 January	NA	NA	NA	E 50.52	E 44.93	E 47.75

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

^b See Note 1, "Crude Oil Refinery Acquisition Costs," at end of section.

^c See Note 2, "Crude Oil Domestic First Purchase Prices," at end of section.

^d See Note 3, "Crude Oil F.O.B. Costs," at end of section.

^e See Note 4, "Crude Oil Landed Costs," at end of section.

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

Notes: • Domestic first purchase prices and refinery acquisition costs for the current two months are preliminary. F.O.B. and landed costs for the current three months are preliminary. • Through 1980, F.O.B. and landed costs reflect the

period of reporting; beginning in 1981, they reflect the period of loading. • Annual averages are the averages of the monthly prices, weighted by volume. • Geographic coverage is the 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, and all U.S. Territories and Possessions.

Web 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^a per Barrel)

	Selected Countries							Persian Gulf Nations ^b	Total OPEC ^c	Total Non-OPEC ^c
	Angola	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average^d	W	W	–	7.81	3.25	–	5.39	3.68	5.43	4.80
1975 Average	10.97	–	11.44	11.82	10.87	–	11.04	10.88	11.34	10.62
1980 Average	33.45	W	31.06	35.93	28.17	34.36	24.81	28.92	32.21	32.85
1985 Average	26.30	–	25.33	28.04	22.04	27.64	23.64	23.31	25.67	25.96
1990 Average	20.23	20.75	19.26	22.46	20.36	23.43	19.55	18.54	20.40	20.32
1995 Average	16.58	16.73	15.64	17.40	W	16.94	13.86	W	15.36	16.02
2000 Average	27.90	29.04	25.39	28.70	24.62	27.21	24.45	24.72	25.56	26.77
2001 Average	23.25	24.25	18.89	24.85	18.98	23.30	18.01	18.89	19.73	21.04
2002 Average	24.09	24.64	21.60	25.38	23.92	24.50	20.13	23.38	22.18	22.93
2003 Average	28.22	28.89	24.83	29.40	25.03	28.76	23.81	25.17	25.36	26.21
2004 Average	37.26	37.73	31.55	38.71	34.08	37.30	31.78	33.08	33.95	33.58
2005 Average	52.48	51.89	43.00	55.95	47.96	54.48	46.39	47.21	49.60	45.79
2006 Average	62.23	59.77	52.91	65.69	56.09	66.03	55.80	56.02	59.18	55.35
2007 Average	67.80	67.93	61.35	76.64	W	69.96	64.10	69.93	69.58	62.69
2008 Average	95.66	91.17	84.61	102.06	93.03	96.33	88.06	91.44	93.15	87.15
2009 Average	57.07	57.90	56.47	64.61	57.87	65.63	55.58	59.53	58.53	57.16
2010 Average	78.18	72.56	72.46	80.83	76.44	W	70.30	75.65	75.23	73.24
2011 Average	111.82	100.21	100.90	115.35	107.08	–	97.23	106.47	105.34	98.49
2012 January	111.10	106.69	107.79	114.12	W	–	105.08	107.51	107.51	101.40
February	121.45	114.47	110.14	124.31	W	–	110.37	111.12	113.85	103.42
March	W	118.46	114.81	128.10	W	–	112.76	118.06	117.06	104.65
April	118.84	114.06	110.54	W	W	–	109.33	115.02	113.85	101.42
May	110.79	101.27	103.12	110.79	W	–	101.45	105.16	105.28	96.74
June	95.65	91.81	90.60	98.96	91.90	–	87.64	90.55	90.63	85.28
July	W	96.83	95.03	103.86	W	–	93.81	95.47	96.30	88.46
August	W	106.16	101.12	114.62	W	–	99.94	104.87	104.18	95.13
September	112.75	108.59	102.49	111.74	107.14	–	101.00	105.58	105.05	97.52
October	W	105.77	98.98	W	W	–	98.10	102.70	101.29	95.05
November	W	103.75	93.45	–	W	–	93.15	101.91	95.94	89.37
December	–	101.24	94.19	W	W	–	92.99	102.93	98.04	87.64
Average	111.23	106.43	101.84	114.51	106.65	–	100.15	105.45	104.39	95.71
2013 January	W	106.99	100.16	W	W	–	97.15	105.30	102.42	91.11
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
Average	107.71	101.24	98.40	110.06	101.16	W	97.52	100.62	100.57	93.67
2014 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	–	99.74	–	89.22	98.95	93.30	86.68
September	W	86.08	88.50	–	94.98	–	83.20	93.59	88.39	83.11
October	W	72.47	79.79	–	^R 85.77	–	74.19	85.04	^R 79.29	^R 75.20
November	W	70.25	^R 71.87	–	W	–	^R 65.63	W	^R 70.69	^R 65.57
December	W	50.95	53.88	–	W	–	48.32	60.57	54.94	51.68
Average	W	80.75	86.89	W	95.27	–	85.55	93.81	90.23	83.83

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
^b Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).
^c See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On this table, "Total OPEC" for all years includes Algeria, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela; for 1973–2008, also includes Indonesia; for 1973–1992 and again beginning in 2008, also includes Ecuador (although Ecuador rejoined OPEC in November 2007, on this table Ecuador is included in "Total Non-OPEC" for 2007); for 1974–1995, also includes Gabon (although Gabon was a member of OPEC for only 1975–1994); and beginning in 2007, also includes Angola. Data for all countries not included in "Total OPEC" are included in "Total Non-OPEC."
^d Based on October, November, and December data only.
^R = Revised. – = No data reported. W = Value withheld to avoid disclosure of individual company data.

Notes: • The Free on Board (F.O.B.) cost at the country of origin excludes all costs related to insurance and transportation. See "F.O.B. (Free on Board)" in Glossary, and Note 3, "Crude Oil F.O.B. Costs," at end of section. • Values for the current two months are preliminary. • Through 1980, prices reflect the period of reporting; beginning in 1981, prices reflect the period of loading.
• Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 states and the District of Columbia.
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (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^a per Barrel)

	Selected Countries								Persian Gulf Nations ^b	Total OPEC ^c	Total Non-OPEC ^c
	Angola	Canada	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average ^d	W	5.33	W	–	9.08	5.37	–	5.99	5.91	6.85	5.64
1975 Average	11.81	12.84	–	12.61	12.70	12.50	–	12.36	12.64	12.70	12.70
1980 Average	34.76	30.11	W	31.77	37.15	29.80	35.68	25.92	30.59	33.56	33.99
1985 Average	27.39	25.71	–	25.63	28.96	24.72	28.36	24.43	25.50	26.86	26.53
1990 Average	21.51	20.48	22.34	19.64	23.33	21.82	22.65	20.31	20.55	21.23	20.98
1995 Average	17.66	16.65	17.45	16.19	18.25	16.84	17.91	14.81	16.78	16.61	16.95
2000 Average	29.57	26.69	29.68	26.03	30.04	26.58	29.26	26.05	26.77	27.29	27.80
2001 Average	25.13	20.72	25.88	19.37	26.55	20.98	25.32	19.81	20.73	21.52	22.17
2002 Average	25.43	22.98	25.28	22.09	26.45	24.77	26.35	21.93	24.13	23.83	23.97
2003 Average	30.14	26.76	30.55	25.48	31.07	27.50	30.62	25.70	27.54	27.70	27.68
2004 Average	39.62	34.51	39.03	32.25	40.95	37.11	39.28	33.79	36.53	36.84	35.29
2005 Average	54.31	44.73	53.42	43.47	57.55	50.31	55.28	47.87	49.68	51.36	47.31
2006 Average	64.85	53.90	62.13	53.76	68.26	59.19	67.44	57.37	58.92	61.21	57.14
2007 Average	71.27	60.38	70.91	62.31	78.01	70.78	72.47	66.13	69.83	71.14	63.96
2008 Average	98.18	90.00	93.43	85.97	104.83	94.75	96.95	90.76	93.59	95.49	90.59
2009 Average	61.32	57.60	58.50	57.35	68.01	62.14	63.87	57.78	62.15	61.90	58.58
2010 Average	80.61	72.80	74.25	72.86	83.14	79.29	80.29	72.43	78.60	78.28	74.68
2011 Average	114.05	89.92	102.57	101.21	116.43	108.83	118.45	100.14	108.01	107.84	98.64
2012 January	115.13	93.43	110.54	108.38	115.41	110.49	W	106.23	110.61	110.32	101.31
February	121.30	92.09	115.19	111.24	126.42	114.75	W	111.72	114.24	115.76	102.99
March	128.35	88.71	119.93	115.20	130.46	117.55	–	114.29	116.71	117.99	103.94
April	120.60	85.55	113.78	111.55	124.06	115.33	W	110.58	115.77	116.10	99.94
May	114.94	82.78	105.04	103.79	113.89	108.39	W	103.02	108.52	108.26	95.21
June	103.10	78.11	93.85	90.89	103.24	99.38	–	89.41	99.24	97.29	87.15
July	106.95	75.65	97.70	95.24	106.95	99.00	W	94.91	99.05	99.49	88.11
August	113.27	80.68	105.94	101.98	114.51	104.66	–	101.38	104.35	105.27	92.29
September	116.51	85.42	109.19	103.16	114.95	107.06	–	102.97	106.29	107.02	95.79
October	114.90	86.35	106.48	99.09	117.03	106.12	W	99.31	105.76	105.81	93.77
November	111.01	82.89	104.74	94.32	112.41	106.05	–	94.67	104.94	102.26	91.17
December	116.37	76.68	102.86	94.98	114.52	106.87	W	94.30	105.78	103.38	86.76
Average	114.95	84.24	107.07	102.45	116.88	108.15	W	101.58	107.74	107.56	95.05
2013 January	115.79	75.30	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
Average	110.81	84.41	103.00	99.06	112.87	102.60	111.23	99.34	102.53	102.98	91.99
2014 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	83.93	95.70	92.07	–	98.80	–	91.64	99.98	97.19	88.15
September	99.49	81.27	91.03	89.25	–	93.39	–	84.78	93.81	91.07	85.08
October	90.74	R 76.38	80.37	80.42	W	R 79.85	W	75.72	R 83.84	R 82.50	R 78.56
November	R 80.21	R 67.05	73.37	R 73.18	W	R 78.77	–	R 67.65	R 79.71	R 75.32	R 69.79
December	62.51	52.71	56.17	54.14	W	64.36	–	50.65	67.19	61.84	54.22
Average	99.75	81.87	88.29	87.80	102.16	97.01	W	87.87	96.74	94.28	85.16

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

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

^c See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary.

On this table, "Total OPEC" for all years includes Algeria, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela; for 1973–2008, also includes Indonesia; for 1973–1992 and again beginning in 2008, also includes Ecuador (although Ecuador rejoined OPEC in November 2007, on this table Ecuador is included in "Total Non-OPEC" for 2007); for 1974–1995, also includes Gabon (although Gabon was a member of OPEC for only 1975–1994); and beginning in 2007, also includes Angola. Data for all countries not included in "Total OPEC" are included in "Total Non-OPEC."

^d Based on October, November, and December data only.

R=Revised. – =No data reported. W=Value withheld to avoid disclosure of individual company data.

Notes: • See "Landed Costs" in Glossary, and Note 4, "Crude Oil Landed Costs," at end of section. • Values for the current two months are preliminary.

• Through 1980, prices reflect the period of reporting; beginning in 1981, prices reflect the period of loading. • Annual averages are averages of the monthly prices, including prices not published, weighted by volume. • Cargoes that are purchased on a "netback" basis, or under similar contractual arrangements whereby the actual purchase price is not established at the time the crude oil is acquired for importation into the United States, are not included in the published data until the actual prices have been determined and reported. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (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*, March 2015, Table 22.

Table 9.4 Retail Motor Gasoline and On-Highway Diesel Fuel Prices
(Dollars^a per Gallon, Including Taxes)

	Platt's / Bureau of Labor Statistics Data				U.S. Energy Information Administration Data			
	Motor Gasoline by Grade				Regular Motor Gasoline by Area Type			On-Highway Diesel Fuel
	Leaded Regular	Unleaded Regular	Unleaded Premium ^b	All Grades ^c	Conventional Gasoline Areas ^d	Reformulated Gasoline Areas ^e	All Areas	
1950 Average	0.268	NA	NA	NA	--	--	--	--
1955 Average	.291	NA	NA	NA	--	--	--	--
1960 Average	.311	NA	NA	NA	--	--	--	--
1965 Average	.312	NA	NA	NA	--	--	--	--
1970 Average	.357	NA	NA	NA	--	--	--	--
1975 Average	.567	NA	NA	NA	--	--	--	--
1980 Average	1.191	1.245	NA	1.221	--	--	--	--
1985 Average	1.115	1.202	1.340	1.196	--	--	--	--
1990 Average	1.149	1.164	1.349	1.217	NA	NA	NA	NA
1995 Average	--	1.147	1.336	1.205	1.103	1.163	1.111	1.109
2000 Average	--	1.510	1.693	1.563	1.462	1.543	1.484	1.491
2001 Average	--	1.461	1.657	1.531	1.384	1.498	1.420	1.401
2002 Average	--	1.358	1.556	1.441	1.313	1.408	1.345	1.319
2003 Average	--	1.591	1.777	1.638	1.516	1.655	1.561	1.509
2004 Average	--	1.880	2.068	1.923	1.812	1.937	1.852	1.810
2005 Average	--	2.295	2.491	2.338	2.240	2.335	2.270	2.402
2006 Average	--	2.589	2.805	2.635	2.533	2.654	2.572	2.705
2007 Average	--	2.801	3.033	2.849	2.767	2.857	2.796	2.885
2008 Average	--	3.266	3.519	3.317	3.213	3.314	3.246	3.803
2009 Average	--	2.350	2.607	2.401	2.315	2.433	2.353	2.467
2010 Average	--	2.788	3.047	2.836	2.742	2.864	2.782	2.992
2011 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
2015 January	--	R 2.110	R 2.497	R 2.170	2.046	2.262	2.116	2.997
February	--	2.249	2.621	2.308	2.152	2.351	2.216	2.858

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
^b The 1981 average (available in Web file) is based on September through December data only.
^c Also includes grades of motor gasoline not shown separately.
^d Any area that does not require the sale of reformulated gasoline.
^e "Reformulated Gasoline Areas" are ozone nonattainment areas designated by the U.S. Environmental Protection Agency that require the use of reformulated gasoline (RFG). Areas are reclassified each time a shift in or out of an RFG program occurs due to federal or state regulations.
R=Revised. 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^a per Gallon, Excluding Taxes)

	Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent		Residual Fuel Oil Sulfur Content Greater Than 1 Percent		Average	
	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
1978 Average	0.293	0.314	0.245	0.275	0.263	0.298
1980 Average .....	.608	.675	.479	.523	.528	.607
1985 Average .....	.610	.644	.560	.582	.577	.610
1990 Average .....	.472	.505	.372	.400	.413	.444
1995 Average .....	.383	.436	.338	.377	.363	.392
2000 Average .....	.627	.708	.512	.566	.566	.602
2001 Average .....	.523	.642	.428	.492	.476	.531
2002 Average .....	.546	.640	.508	.544	.530	.569
2003 Average .....	.728	.804	.588	.651	.661	.698
2004 Average .....	.764	.835	.601	.692	.681	.739
2005 Average	1.115	1.168	.842	.974	.971	1.048
2006 Average	1.202	1.342	1.085	1.173	1.136	1.218
2007 Average	1.406	1.436	1.314	1.350	1.350	1.374
2008 Average	1.918	2.144	1.843	1.889	1.866	1.964
2009 Average	1.337	1.413	1.344	1.306	1.342	1.341
2010 Average	1.756	1.920	1.679	1.619	1.697	1.713
2011 Average	2.389	2.736	2.316	2.257	2.336	2.401
2012 January	2.591	2.965	2.480	2.452	2.512	2.620
February	2.739	3.070	2.632	2.556	2.654	2.705
March	2.921	3.159	2.717	2.601	2.772	2.784
April	2.805	3.201	2.624	2.596	2.670	2.731
May	2.589	3.170	2.501	2.652	2.527	2.784
June	2.275	3.083	2.186	2.179	2.211	2.476
July	2.271	2.926	2.224	2.221	2.234	2.406
August	2.586	3.041	2.457	2.442	2.483	2.579
September	2.558	2.970	2.491	2.473	2.501	2.582
October	2.464	2.969	2.393	2.382	2.409	2.496
November	2.385	2.895	2.283	2.346	2.300	2.492
December	2.341	2.814	2.248	2.275	2.268	2.431
Average	2.548	3.025	2.429	2.433	2.457	2.592
2013 January	2.530	2.874	2.328	2.333	2.388	2.475
February	2.571	3.017	2.388	2.402	2.415	2.578
March	2.479	2.949	2.294	2.320	2.346	2.517
April	2.354	2.875	2.214	2.238	2.246	2.354
May	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
Average	2.363	2.883	2.249	2.353	2.278	2.482
2014 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	1.893	2.573	1.858	2.099	1.866	2.194
November	^R 1.639	2.294	^R 1.604	1.848	^R 1.611	1.946
December	1.237	1.916	1.317	1.611	1.292	1.676

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
R=Revised. 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*, March 2015, Table 16.

Table 9.6 Refiner Prices of Petroleum Products for Resale
(Dollars^a per Gallon, Excluding Taxes)

	Finished Motor Gasoline ^b	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	0.434	0.537	0.386	0.404	0.369	0.365	0.237
1980 Average .....	.941	1.128	.868	.864	.803	.801	.415
1985 Average .....	.835	1.130	.794	.874	.776	.772	.398
1990 Average .....	.786	1.063	.773	.839	.697	.694	.386
1995 Average .....	.626	.975	.539	.580	.511	.538	.344
2000 Average .....	.963	1.330	.880	.969	.886	.898	.595
2001 Average .....	.886	1.256	.763	.821	.756	.784	.540
2002 Average .....	.828	1.146	.716	.752	.694	.724	.431
2003 Average	1.002	1.288	.871	.955	.881	.883	.607
2004 Average	1.288	1.627	1.208	1.271	1.125	1.187	.751
2005 Average	1.670	2.076	1.723	1.757	1.623	1.737	.933
2006 Average	1.969	2.490	1.961	2.007	1.834	2.012	1.031
2007 Average	2.182	2.758	2.171	2.249	2.072	2.203	1.194
2008 Average	2.586	3.342	3.020	2.851	2.745	2.994	1.437
2009 Average	1.767	2.480	1.719	1.844	1.657	1.713	.921
2010 Average	2.165	2.874	2.185	2.299	2.147	2.214	1.212
2011 Average	2.867	3.739	3.014	3.065	2.907	3.034	1.467
2012 January	2.747	3.576	3.059	3.197	3.027	3.018	1.341
February	2.936	3.788	3.186	3.293	3.166	3.163	1.282
March	3.203	4.052	3.296	3.306	3.211	3.308	1.293
April	3.189	4.157	3.255	3.243	3.153	3.252	1.163
May	3.016	4.004	3.076	3.008	2.976	3.039	.950
June	2.757	3.883	2.747	2.697	2.635	2.741	.762
July	2.806	3.877	2.850	2.936	2.774	2.907	.809
August	3.087	4.124	3.129	3.195	2.988	3.206	.875
September	3.163	4.269	3.245	3.236	3.128	3.278	.910
October	2.941	4.002	3.182	3.250	3.155	3.265	.979
November	2.713	3.508	3.015	3.221	3.049	3.117	.955
December	2.590	3.518	2.982	3.145	3.003	3.022	.894
Average	2.929	3.919	3.080	3.163	3.031	3.109	1.033
2013 January	2.676	3.685	3.093	3.334	3.069	3.046	.928
February	3.020	4.058	3.250	3.474	3.168	3.259	.953
March	2.987	4.085	3.036	3.137	2.977	3.082	.952
April	2.853	3.962	2.884	2.889	2.793	2.969	.949
May	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
Average	2.812	3.869	2.953	3.084	2.966	3.028	1.048
2014 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	2.687	2.476	2.639	1.044
November	2.111	3.163	^R 2.410	2.594	2.371	2.558	.966
December	1.634	2.635	1.995	2.195	2.050	1.980	.812

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

^b See Note 5, "Motor Gasoline Prices," at end of section.

R=Revised.

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*, March 2015, Table 4.

Table 9.7 Refiner Prices of Petroleum Products to End Users
(Dollars^a per Gallon, Excluding Taxes)

	Finished Motor Gasoline ^b	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average	0.484	0.516	0.387	0.421	0.400	0.377	0.335
1980 Average	1.035	1.084	.868	.902	.788	.818	.482
1985 Average .....	.912	1.201	.796	1.030	.849	.789	.717
1990 Average .....	.883	1.120	.766	.923	.734	.725	.745
1995 Average .....	.765	1.005	.540	.589	.562	.560	.492
2000 Average	1.106	1.306	.899	1.123	.927	.935	.603
2001 Average	1.032	1.323	.775	1.045	.829	.842	.506
2002 Average .....	.947	1.288	.721	.990	.737	.762	.419
2003 Average	1.156	1.493	.872	1.224	.933	.944	.577
2004 Average	1.435	1.819	1.207	1.160	1.173	1.243	.839
2005 Average	1.829	2.231	1.735	1.957	1.705	1.786	1.089
2006 Average	2.128	2.682	1.998	2.244	1.982	2.096	1.358
2007 Average	2.345	2.849	2.165	2.263	2.241	2.267	1.489
2008 Average	2.775	3.273	3.052	3.283	2.986	3.150	1.892
2009 Average	1.888	2.442	1.704	2.675	1.962	1.834	1.220
2010 Average	2.301	3.028	2.201	3.063	2.462	2.314	1.481
2011 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	2.576	W	NA	2.802	.994
November	^R 2.406	W	2.433	W	3.213	^R 2.700	.904
December	2.016	W	2.029	W	3.004	2.197	.664

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

^b See Note 5, "Motor Gasoline Prices," at end of section.

R=Revised. NA=Not available. W=Value withheld to avoid disclosure of individual company data.

Notes: • Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and residential and commercial consumers. Sales for resale are shown in Table 9.6; they are sales made to purchasers other than ultimate consumers. • Values for the current month are preliminary. • Through 1982, prices are U.S. Energy

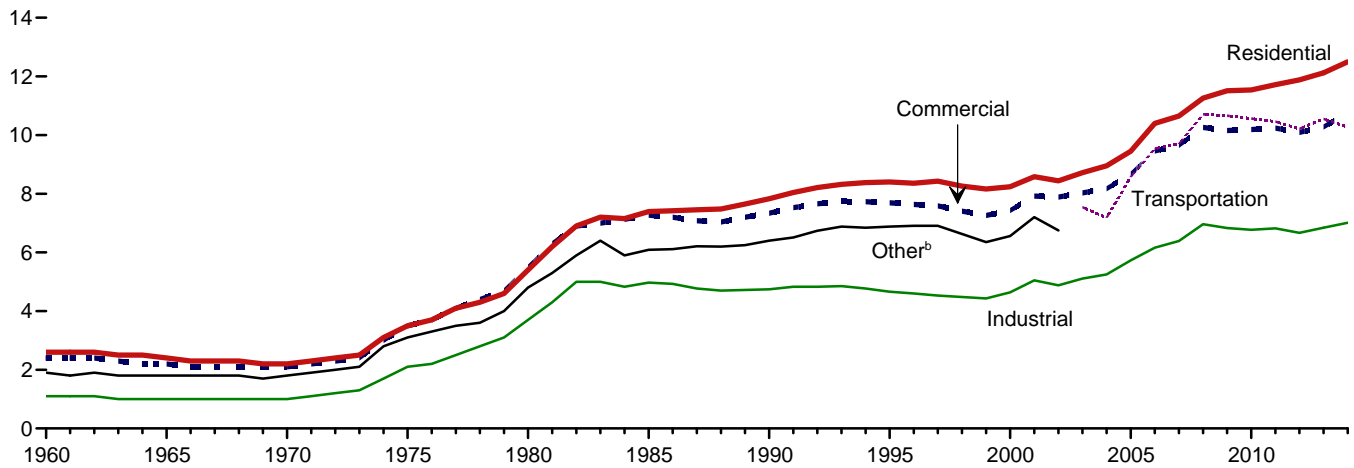
Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 states and the District of Columbia.

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

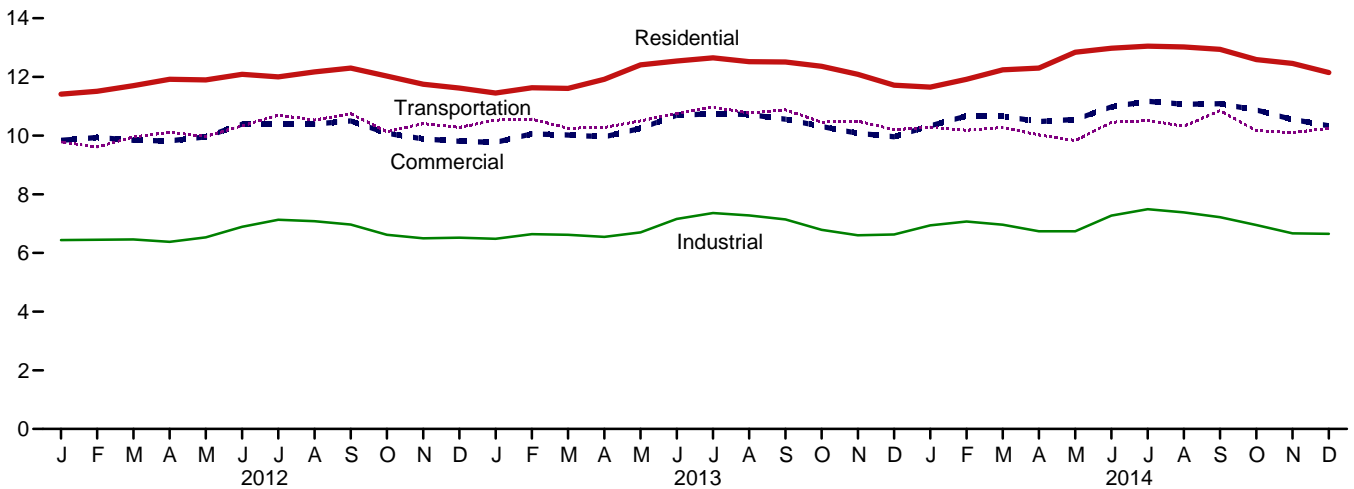
Sources: • 1978–2007: EIA, *Petroleum Marketing Annual 2007*, Table 2. • 2008 forward: EIA, *Petroleum Marketing Monthly*, March 2015, Table 2.

Figure 9.2 Average Retail Prices of Electricity
(Cents^a per Kilowatthour)

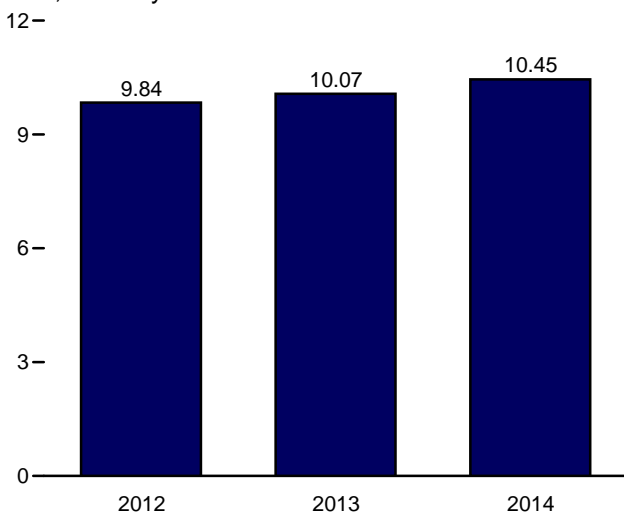
By Sector, 1960–2014



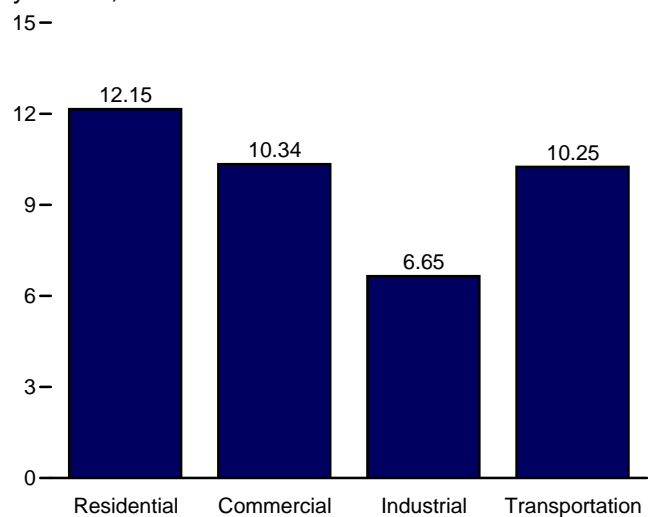
By Sector, Monthly



Total, January–December



By Sector, December 2014



^a Prices are not adjusted for inflation. See “Nominal Price” in Glossary.

^b Public street and highway lighting, interdepartmental sales, other sales to public authorities, agricultural and irrigation, and transportation including railroads and railways.

Note: Includes taxes.

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

Source: Table 9.8.

Table 9.8 Average Retail Prices of Electricity
(Cents^a per Kilowatt-hour, Including Taxes)

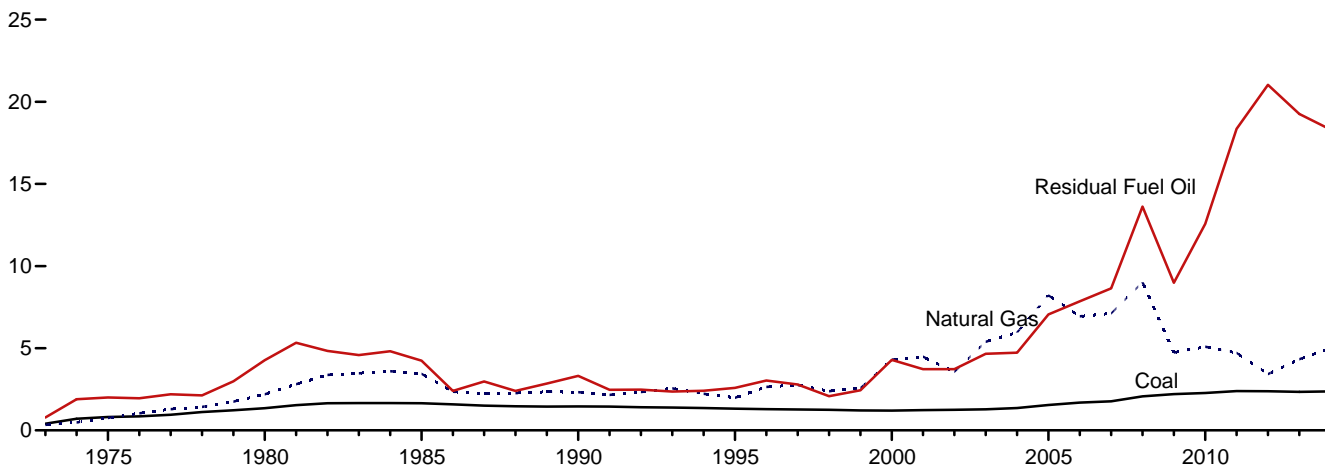
	Residential	Commercial ^b	Industrial ^c	Transportation ^d	Other ^e	Total
1960 Average	2.60	2.40	1.10	NA	1.90	1.80
1965 Average	2.40	2.20	1.00	NA	1.80	1.70
1970 Average	2.20	2.10	1.00	NA	1.80	1.70
1975 Average	3.50	3.50	2.10	NA	3.10	2.90
1980 Average	5.40	5.50	3.70	NA	4.80	4.70
1985 Average	7.39	7.27	4.97	NA	6.09	6.44
1990 Average	7.83	7.34	4.74	NA	6.40	6.57
1995 Average	8.40	7.69	4.66	NA	6.88	6.89
2000 Average	8.24	7.43	4.64	NA	6.56	6.81
2001 Average	8.58	7.92	5.05	NA	7.20	7.29
2002 Average	8.44	7.89	4.88	NA	6.75	7.20
2003 Average	8.72	8.03	5.11	7.54	--	7.44
2004 Average	8.95	8.17	5.25	7.18	--	7.61
2005 Average	9.45	8.67	5.73	8.57	--	8.14
2006 Average	10.40	9.46	6.16	9.54	--	8.90
2007 Average	10.65	9.65	6.39	9.70	--	9.13
2008 Average	11.26	R 10.26	R 6.96	R 10.71	--	9.74
2009 Average	11.51	R 10.16	R 6.83	R 10.66	--	9.82
2010 Average	11.54	10.19	6.77	R 10.56	--	9.83
2011 Average	11.72	R 10.24	6.82	10.46	--	9.90
2012 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
Average	11.88	10.09	6.67	10.21	--	9.84
2013 January	R 11.45	R 9.77	R 6.48	R 10.53	--	R 9.64
February	11.63	R 10.06	R 6.64	R 10.56	--	R 9.78
March	R 11.61	10.02	R 6.62	R 10.25	--	R 9.70
April	R 11.92	9.96	R 6.55	R 10.28	--	R 9.66
May	R 12.41	R 10.25	6.70	R 10.50	--	R 9.93
June	12.54	R 10.69	R 7.16	R 10.76	--	R 10.45
July	R 12.65	R 10.75	R 7.36	R 10.97	--	10.70
August	R 12.52	10.72	R 7.28	R 10.77	--	R 10.58
September	R 12.51	10.56	7.14	R 10.88	--	R 10.42
October	R 12.36	R 10.31	R 6.79	R 10.46	--	10.01
November	12.09	R 10.08	R 6.60	R 10.49	--	R 9.80
December	11.72	R 9.96	R 6.63	R 10.20	--	R 9.86
Average	12.12	R 10.28	R 6.84	R 10.55	--	R 10.07
2014 January	11.65	10.34	R 6.94	10.29	--	10.13
February	R 11.92	R 10.67	R 7.07	R 10.18	--	R 10.34
March	R 12.24	R 10.66	R 6.96	R 10.28	--	R 10.30
April	R 12.30	R 10.48	R 6.74	R 10.02	--	R 10.04
May	12.84	R 10.55	R 6.74	R 9.83	--	R 10.23
June	R 12.98	R 10.98	R 7.27	R 10.45	--	R 10.76
July	13.05	R 11.17	7.49	R 10.51	--	R 11.02
August	R 13.02	11.07	7.38	R 10.32	--	10.92
September	12.94	R 11.09	7.22	R 10.85	--	10.80
October	R 12.59	10.87	6.95	R 10.17	--	10.35
November	12.46	10.55	6.67	R 10.10	--	10.15
December	12.15	10.34	6.65	10.25	--	10.13
Average	12.50	10.75	7.01	10.27	--	10.45

a Prices are not adjusted for inflation. See "Nominal Price" in Glossary.
b Commercial sector. For 1960–2002, prices exclude public street and highway lighting, interdepartmental sales, and other sales to public authorities.
c Industrial sector. For 1960–2002, prices exclude agriculture and irrigation.
d Transportation sector, including railroads and railways.
e Public street and highway lighting, interdepartmental sales, other sales to public authorities, agriculture and irrigation, and transportation including railroads and railways.
R=Revised. 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.

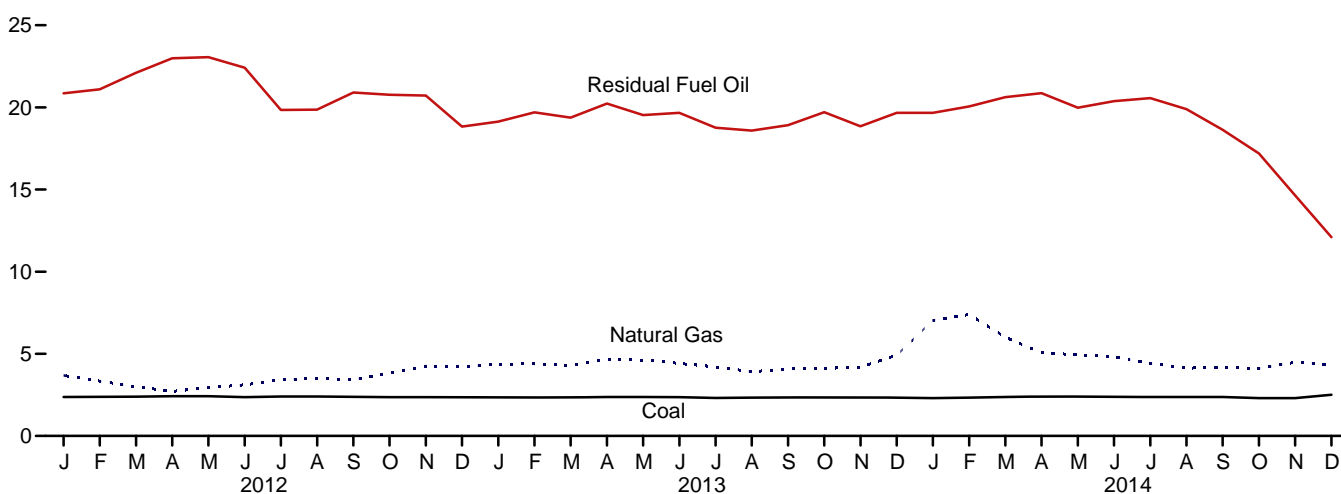
(Class A utilities are those with operating revenues of \$2.5 million or more; Class B utilities are those with operating revenues between \$1 million and \$2.5 million.) For 1980–1982, data are for selected Class A utilities whose electric operating revenues were \$100 million or more during the previous 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 FERC-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*, February 2015, Table 5.3.

Figure 9.3 Cost of Fossil-Fuel Receipts at Electric Generating Plants
(Dollars^a per Million Btu, Including Taxes)

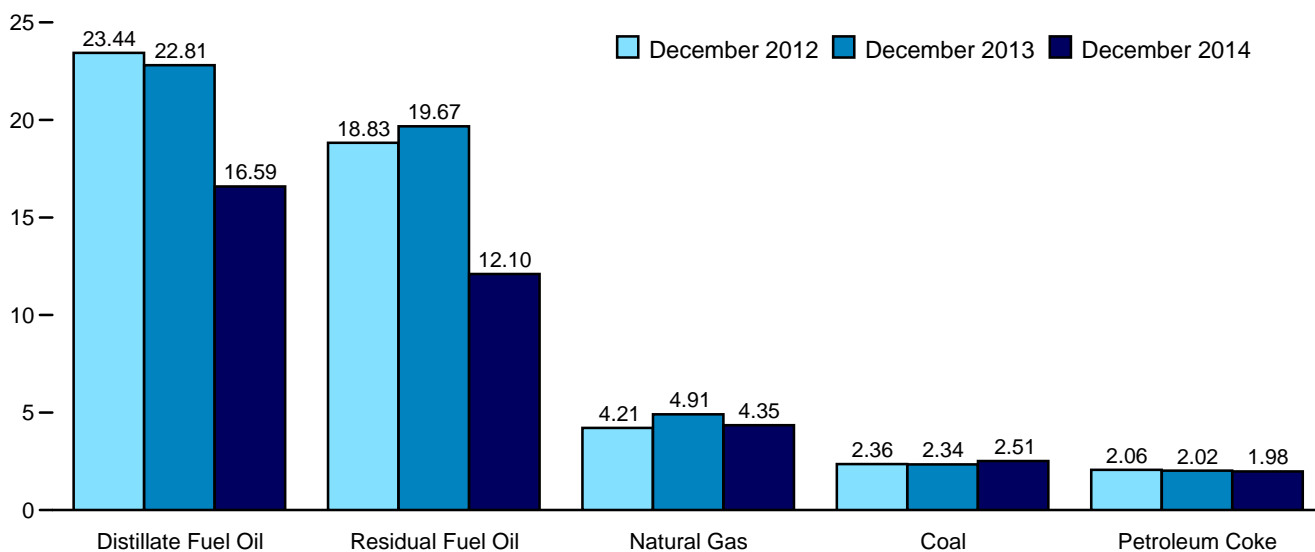
Costs, 1973–2014



Costs, Monthly



By Fuel Type



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

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#prices>.
Source: Table 9.9.

Table 9.9 Cost of Fossil-Fuel Receipts at Electric Generating Plants
(Dollars^a per Million Btu, Including Taxes)

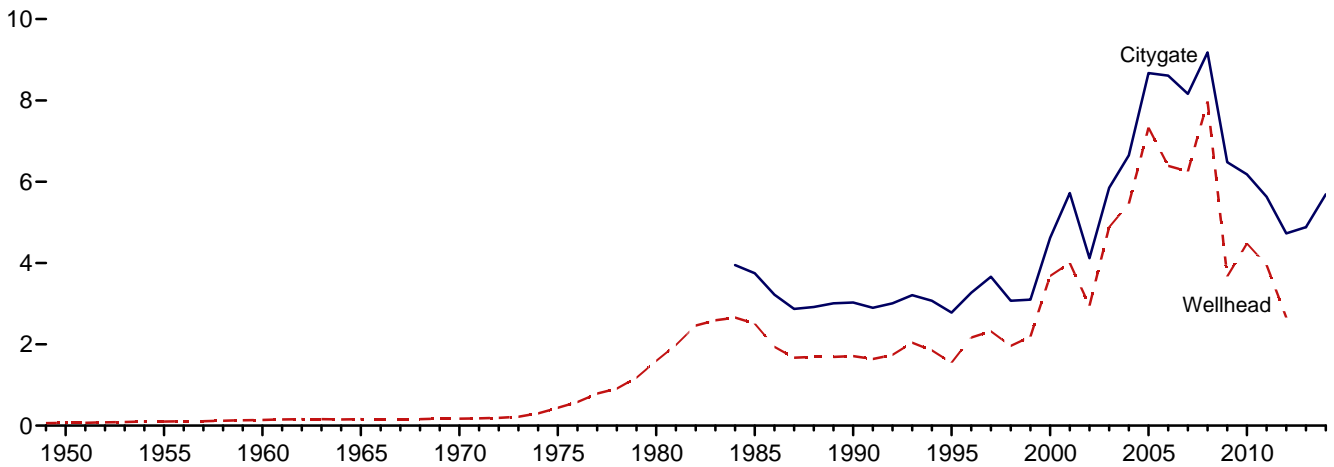
	Coal	Petroleum				Natural Gas ^e	All Fossil Fuels ^f
		Residual Fuel Oil ^b	Distillate Fuel Oil ^c	Petroleum Coke	Total ^d		
1973 Average	0.41	0.79	NA	NA	0.80	0.34	0.48
1975 Average	.81	2.01	NA	NA	2.02	.75	1.04
1980 Average	1.35	4.27	NA	NA	4.35	2.20	1.93
1985 Average	1.65	4.24	NA	NA	4.32	3.44	2.09
1990 Average	1.45	3.32	5.38	.80	3.35	2.32	1.69
1995 Average	1.32	2.59	3.99	.65	2.57	1.98	1.45
2000 Average	1.20	4.29	6.65	.58	4.18	4.30	1.74
2001 Average	1.23	3.73	6.30	.78	3.69	4.49	1.73
2002 Average ^g	1.25	3.73	5.34	.78	3.34	3.56	1.86
2003 Average	1.28	4.66	6.82	.72	4.33	5.39	2.28
2004 Average	1.36	4.73	8.02	.83	4.29	5.96	2.48
2005 Average	1.54	7.06	11.72	1.11	6.44	8.21	3.25
2006 Average	1.69	7.85	13.28	1.33	6.23	6.94	3.02
2007 Average	1.77	8.64	14.85	1.51	7.17	7.11	3.23
2008 Average	2.07	13.62	21.46	2.11	10.87	9.01	4.12
2009 Average	2.21	8.98	13.22	1.61	7.02	4.74	3.04
2010 Average	2.27	12.57	16.61	2.28	9.54	5.09	3.26
2011 Average	2.39	18.35	22.46	3.03	12.48	4.72	3.29
2012 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
Average	2.38	21.03	23.49	2.24	12.48	3.42	2.83
2013 January	R 2.34	R 19.13	R 22.94	R 2.04	R 12.44	4.38	R 3.08
February	R 2.34	19.70	R 23.84	R 2.09	R 12.66	4.39	R 3.09
March	2.35	R 19.38	R 23.87	R 2.08	R 14.34	R 4.30	R 3.09
April	R 2.37	R 20.23	R 22.96	R 2.28	R 9.67	4.67	R 3.15
May	2.37	R 19.53	R 22.60	R 2.34	R 10.75	4.62	R 3.15
June	2.36	R 19.67	22.37	R 2.42	R 10.04	4.42	R 3.14
July	R 2.31	R 18.76	R 23.10	R 2.29	R 11.38	4.20	R 3.11
August	2.33	R 18.59	R 23.24	R 2.25	R 11.74	3.91	R 2.99
September	2.35	R 18.92	R 23.55	R 2.17	R 10.06	4.08	3.02
October	R 2.34	19.71	R 22.85	R 2.13	R 11.22	4.11	R 2.99
November	2.33	R 18.85	22.74	R 1.91	R 12.88	4.19	3.01
December	2.34	R 19.67	R 22.81	R 2.02	R 11.18	4.91	R 3.26
Average	R 2.34	R 19.26	R 23.03	R 2.18	R 11.57	4.33	R 3.09
2014 January	2.30	R 19.67	R 23.13	R 1.80	R 16.69	R 7.04	R 4.10
February	2.33	20.06	R 23.97	W	R 16.44	R 7.40	W
March	2.37	20.62	23.82	2.00	R 12.70	6.00	3.53
April	R 2.39	R 20.87	22.82	2.11	R 10.20	5.07	R 3.24
May	R 2.40	19.98	R 22.77	2.18	R 9.90	4.93	R 3.25
June	2.38	20.38	22.73	2.05	10.74	R 4.83	R 3.28
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	R 21.38	1.90	R 9.99	R 4.20	R 3.06
October	2.30	17.19	20.09	1.77	10.73	R 4.10	R 2.96
November	2.30	14.64	R 19.68	1.84	10.55	4.48	R 3.07
December	2.51	12.10	16.59	1.98	8.19	4.35	3.14
Average	2.37	18.30	21.89	1.96	11.66	5.00	3.32

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
^b For 1973–2001, electric utility data are for heavy oil (fuel oil nos. 5 and 6, and small amounts of fuel oil no. 4).
^c For 1973–2001, electric utility data are for light oil (fuel oil nos. 1 and 2).
^d For all years, includes residual fuel oil and distillate fuel oil. For 1990 forward, also includes petroleum coke. For 1973–2012, also includes jet fuel, kerosene, and waste oil. For 1983–2012, also includes other petroleum, such as propane and refined motor oil.
^e Natural gas, plus a small amount of supplemental gaseous fuels. For 1973–2000, data also include a small amount of blast furnace gas and other gases derived from fossil fuels.
^f Weighted average of costs shown under "Coal," "Petroleum," and "Natural Gas."
^g Through 2001, data are for electric utilities only. Beginning in 2002, data also include independent power producers, and electric generating plants in the

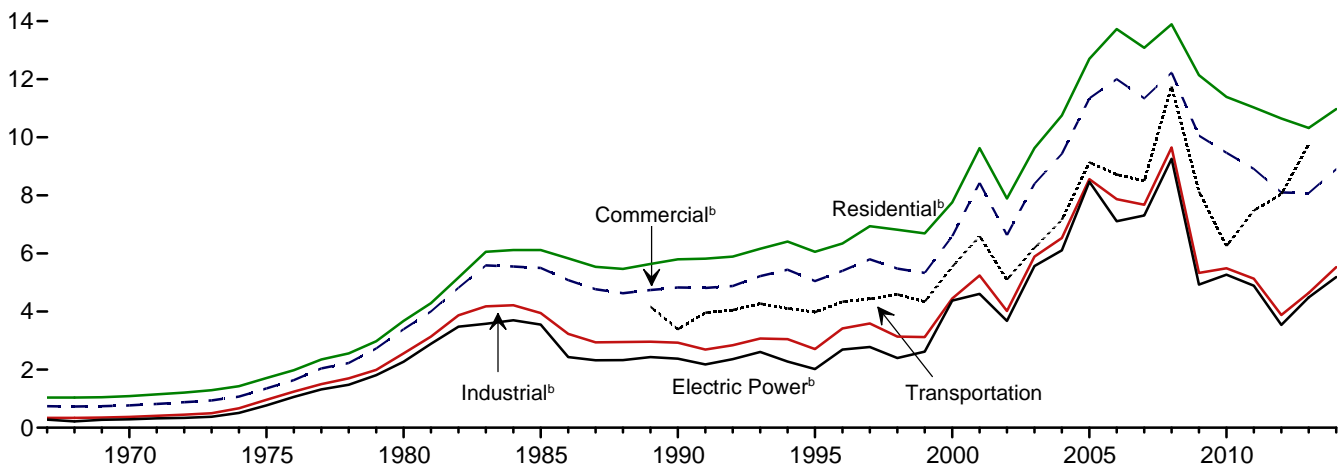
commercial and industrial sectors.
R=Revised. NA=Not available. W=Value withheld to avoid disclosure of individual company data.
Notes: • Receipts are purchases of fuel. • Yearly costs are averages of monthly values, weighted by quantities in Btu. • For this table, there are several breaks in the data 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^a per Thousand Cubic Feet)

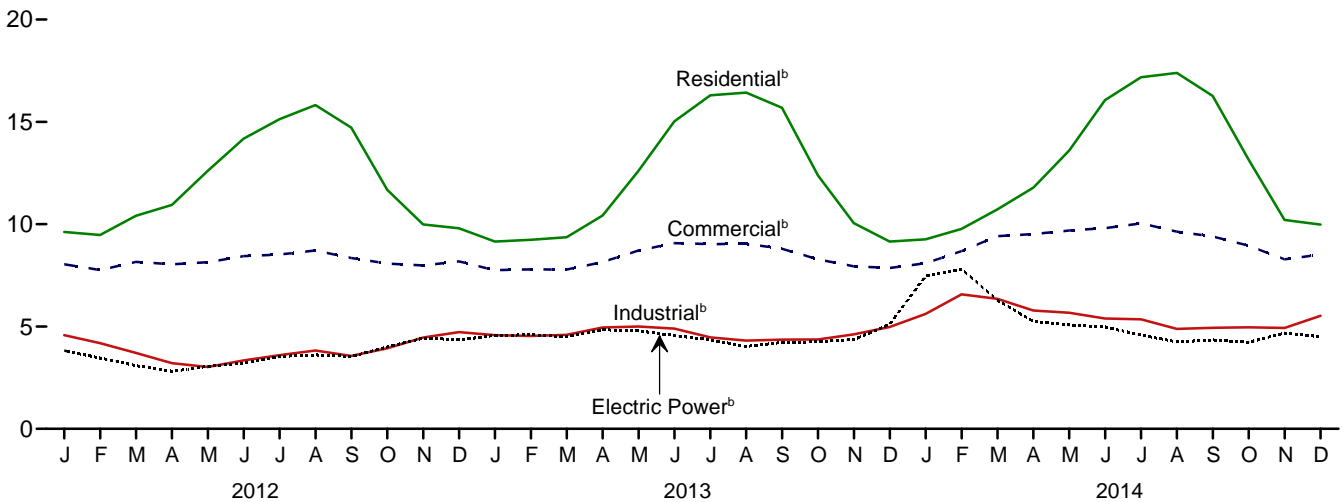
Wellhead and Citygate, 1949–2014



Consuming Sectors, 1967–2014



Consuming Sectors, Monthly



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

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

Table 9.10 Natural Gas Prices
(Dollars^a per Thousand Cubic Feet)

	Wellhead Price ^f	City-gate Price ^g	Consuming Sectors ^d									
			Residential		Commercial ^c		Industrial ^d		Transportation	Electric Power ^e		
			Price ^h	Percentage of Sector ⁱ	Price ^h	Percentage of Sector ⁱ	Price ^h	Percentage of Sector ⁱ	Vehicle Fuel Price ^h	Price ^h	Percentage of Sector ^{i,k}	
1950 Average	0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1955 Average	.10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1960 Average	.14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1965 Average	.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1970 Average	.17	NA	1.09	NA	.77	NA	.37	NA	NA	NA	.29	NA
1975 Average	.44	NA	1.71	NA	1.35	NA	.96	NA	NA	NA	.77	96.1
1980 Average	1.59	NA	3.68	NA	3.39	NA	2.56	NA	NA	NA	2.27	96.9
1985 Average	2.51	3.75	6.12	NA	5.50	NA	3.95	68.8	NA	NA	3.55	94.0
1990 Average	1.71	3.03	5.80	99.2	4.83	86.6	2.93	35.2	3.39	NA	2.38	76.8
1995 Average	1.55	2.78	6.06	99.0	5.05	76.7	2.71	24.5	3.98	NA	2.02	71.4
2000 Average	3.68	4.62	7.76	92.6	6.59	63.9	4.45	19.8	5.54	NA	4.38	50.5
2001 Average	4.00	5.72	9.63	92.4	8.43	66.0	5.24	20.8	6.60	NA	4.61	40.2
2002 Average	2.95	4.12	7.89	97.9	6.63	77.4	4.02	22.7	5.10	NA	3.68	83.9
2003 Average	4.88	5.85	9.63	97.5	8.40	78.2	5.89	22.1	6.19	NA	5.57	91.2
2004 Average	5.46	6.65	10.75	97.7	9.43	78.0	6.53	23.6	7.16	NA	6.11	89.8
2005 Average	7.33	8.67	12.70	98.1	11.34	82.1	8.56	24.0	9.14	NA	8.47	91.3
2006 Average	6.39	8.61	13.73	98.1	12.00	80.8	7.87	23.4	8.72	NA	7.11	93.4
2007 Average	6.25	8.16	13.08	98.0	11.34	80.4	7.68	22.2	8.50	NA	7.31	92.2
2008 Average	7.97	9.18	13.89	97.5	12.23	79.7	9.65	20.4	11.75	NA	9.26	101.1
2009 Average	3.67	6.48	12.14	97.4	10.06	77.8	5.33	18.8	8.13	NA	4.93	101.1
2010 Average	4.48	6.18	11.39	97.4	9.47	77.5	5.49	18.0	6.25	NA	5.27	100.8
2011 Average	3.95	5.63	11.03	96.3	8.91	67.3	5.13	16.3	7.48	NA	4.89	101.2
2012 January	E 2.89	4.85	9.62	96.3	8.04	71.5	4.58	16.1	NA	NA	3.82	95.0
February	E 2.46	4.73	9.47	96.2	7.76	70.1	4.19	16.2	NA	NA	3.46	95.3
March	E 2.25	4.84	10.41	96.2	8.16	68.1	3.71	16.0	NA	NA	3.09	95.2
April	E 1.89	4.19	10.94	95.5	8.04	62.8	3.21	15.5	NA	NA	2.81	96.4
May	E 1.94	4.30	12.61	95.4	8.14	59.2	3.02	15.6	NA	NA	3.05	96.0
June	E 2.54	4.63	14.18	95.5	8.44	59.1	3.34	15.6	NA	NA	3.21	95.8
July	E 2.59	4.88	15.13	95.5	8.52	57.9	3.60	16.1	NA	NA	3.54	95.8
August	E 2.86	5.13	15.82	94.9	8.71	55.9	3.83	16.6	NA	NA	3.61	95.2
September	E 2.71	4.76	14.72	95.0	8.35	56.4	3.56	16.5	NA	NA	3.54	96.0
October	E 3.03	4.65	11.68	95.1	8.07	59.9	3.94	16.3	NA	NA	4.00	95.9
November	E 3.35	4.79	9.99	95.3	7.99	65.3	4.46	16.9	NA	NA	4.43	94.3
December	E 3.35	4.79	9.80	95.7	8.18	67.6	4.73	17.0	NA	NA	4.35	94.4
Average	E 2.66	4.73	10.65	95.8	8.10	65.2	3.88	16.2	8.04	NA	3.54	95.5
2013 January	NA	4.52	9.15	95.9	7.75	70.5	4.58	17.0	NA	NA	4.56	R 95.0
February	NA	4.56	9.24	95.6	7.79	70.0	4.54	17.0	NA	NA	4.59	R 94.1
March	NA	4.75	9.36	95.4	7.78	69.1	4.59	16.8	NA	NA	4.50	R 94.7
April	NA	5.16	10.43	95.0	8.15	66.5	4.95	16.9	NA	NA	4.84	R 95.2
May	NA	5.55	12.61	95.1	8.71	62.9	5.00	16.2	NA	NA	4.79	R 95.5
June	NA	5.74	15.02	94.8	9.07	58.7	4.90	16.0	NA	NA	4.56	R 95.0
July	NA	5.51	16.30	94.8	9.03	57.0	4.47	15.8	NA	NA	4.34	94.6
August	NA	5.24	16.43	94.7	9.04	56.5	4.31	15.9	NA	NA	4.03	R 94.9
September	NA	5.21	15.69	94.8	8.80	56.9	4.36	16.3	NA	NA	4.22	R 95.2
October	NA	4.88	12.38	95.0	8.28	60.8	4.37	16.6	NA	NA	4.26	R 95.1
November	NA	4.78	10.05	95.4	7.94	66.0	4.62	16.9	NA	NA	4.36	R 94.6
December	NA	4.91	9.15	95.7	7.86	69.8	4.98	17.4	NA	NA	5.11	R 94.3
Average	NA	4.88	10.32	95.4	8.08	66.1	4.64	16.6	9.76	NA	4.49	94.9
2014 January	NA	R 5.55	9.26	95.7	8.10	71.0	5.62	16.5	NA	NA	R 7.47	R 94.9
February	NA	R 6.28	9.77	95.5	8.68	70.7	6.57	17.0	NA	NA	R 7.79	R 94.1
March	NA	6.56	10.72	95.4	9.42	69.3	6.35	16.9	NA	NA	6.28	R 94.7
April	NA	5.63	11.79	95.3	9.52	65.2	5.78	16.0	NA	NA	5.25	R 95.0
May	NA	5.89	13.60	95.4	9.69	60.7	5.67	16.0	NA	NA	5.08	R 95.1
June	NA	6.01	16.06	95.5	9.81	58.2	5.39	15.8	NA	NA	4.98	R 95.0
July	NA	5.97	17.18	94.3	10.04	55.9	5.35	15.8	NA	NA	R 4.58	R 94.8
August	NA	5.48	17.39	95.6	9.64	55.6	4.88	15.6	NA	NA	4.25	R 95.1
September	NA	5.48	16.27	95.6	9.40	55.8	4.94	15.1	NA	NA	R 4.34	R 94.6
October	NA	5.18	13.15	95.3	8.95	59.0	4.96	14.8	NA	NA	R 4.23	94.7
November	NA	4.92	10.21	95.8	8.28	R 66.2	R 4.93	15.8	NA	NA	4.68	R 94.6
December	NA	5.16	9.98	95.7	8.52	68.5	5.52	16.0	NA	NA	4.50	95.1
Average	NA	5.69	10.97	95.5	8.90	65.3	5.53	16.0	NA	NA	5.19	94.8

^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
^b See Note 8, "Natural Gas Prices," at end of section.
^c Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.
^d Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.
^e The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 2001, data are for electric utilities only; beginning in 2002, data also include independent power producers.
^f See "Natural Gas Wellhead Price" in Glossary.
^g See "Citygate" in Glossary.
^h Includes taxes.
ⁱ The percentage of the sector's consumption in Table 4.3 for which price data are available. For details on how the percentages are derived, see Table 9.10 sources at end of section.

^j Much of the natural gas delivered for vehicle fuel represents deliveries to fueling stations that are used primarily or exclusively by fleet vehicles. Thus, the prices are often those associated with the cost of gas in the operation of fleet vehicles.
^k Percentages exceed 100 percent when reported natural gas receipts are greater than reported natural gas consumption—this can occur when combined-heat-and-power plants report fuel receipts related to non-electric generating activities.
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*, March 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*, March 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*, March 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*, March 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*, February 2015, 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)*, February 2015, 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, February 2015, 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, February 2015, Table 3.

Percentage of Electric Power Sector

1973–2001: Calculated by EIA as the quantity of natural gas receipts by electric utilities reported on Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants” (and predecessor forms) divided by the quantity of natural gas consumed by the electric power sector (for 1973–1988, see *Monthly Energy Review (MER)*, Table 7.3b; for 1989–2001, see MER, Table 7.4b).

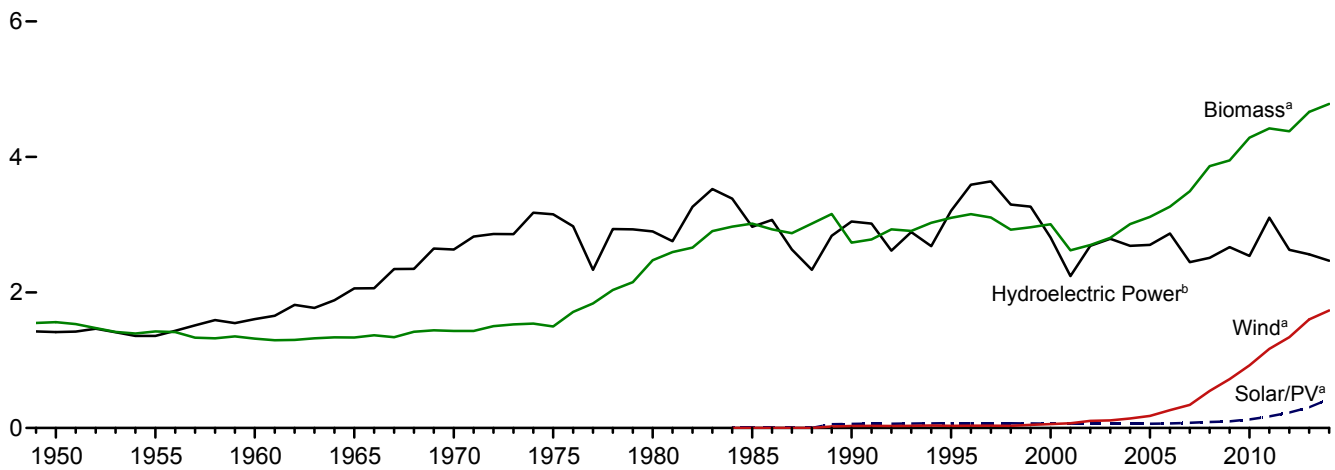
2002–2007: Calculated by EIA as the quantity of natural gas receipts by electric utilities and independent power producers reported on Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants,” and EIA-423, “Monthly Cost and Quality of Fuels for Electric Plants Report,” divided by the quantity of natural gas consumed by the electric power sector (see MER, Table 7.4b).

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

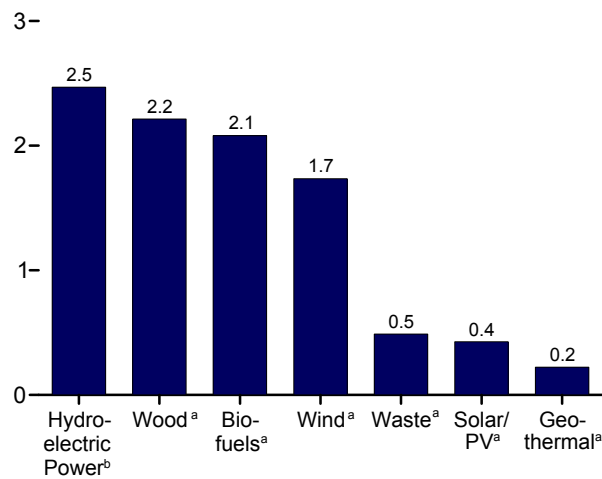
10. Renewable Energy

Figure 10.1 Renewable Energy Consumption
(Quadrillion Btu)

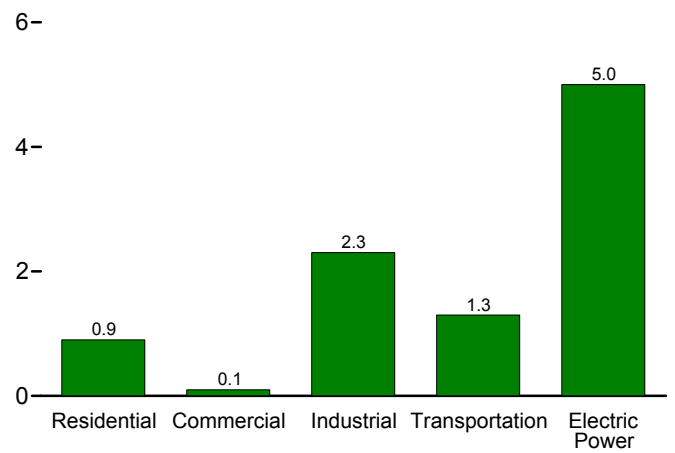
Major Sources, 1949–2014



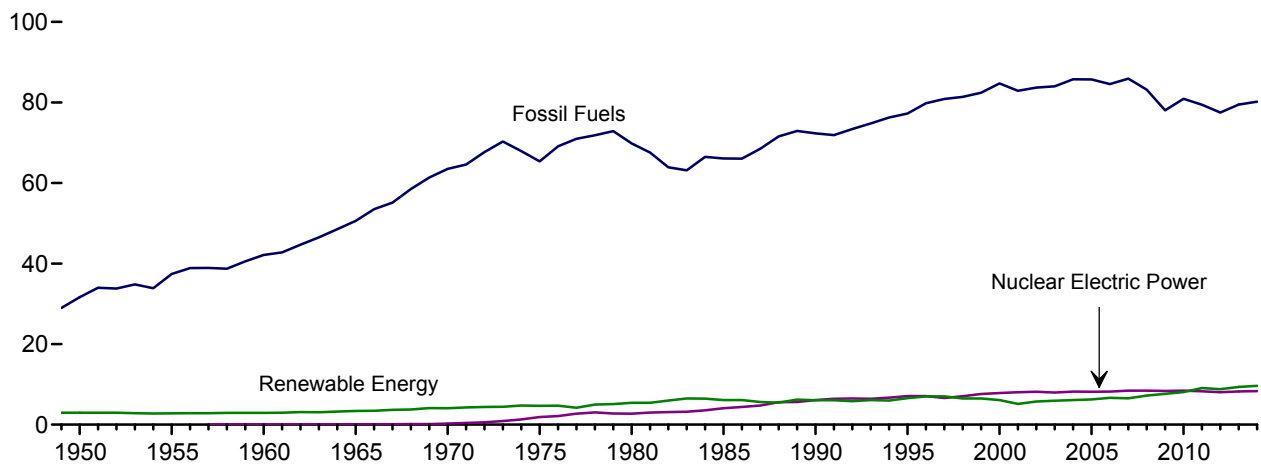
By Source, 2014



By Sector, 2014



Compared With Other Resources, 1949–2014



^a See Table 10.1 for definition.
^b Conventional hydroelectric power.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#renewable>.
Sources: Tables 1.3 and 10.1–10.2c.

Table 10.1 Renewable Energy Production and Consumption by Source
(Trillion Btu)

	Production ^a			Consumption								
	Biomass		Total Renewable Energy ^d	Hydroelectric Power ^e	Geothermal ^f	Solar/PV ^g	Wind ^h	Biomass				Total Renewable Energy
	Bio-fuels ^b	Total ^c						Wood ⁱ	Waste ^j	Bio-fuels ^k	Total	
1950 Total	NA	1,562	2,978	1,415	NA	NA	NA	1,562	NA	NA	1,562	2,978
1955 Total	NA	1,424	2,784	1,360	NA	NA	NA	1,424	NA	NA	1,424	2,784
1960 Total	NA	1,320	2,928	1,608	(s)	NA	NA	1,320	NA	NA	1,320	2,928
1965 Total	NA	1,335	3,396	2,059	2	NA	NA	1,335	NA	NA	1,335	3,396
1970 Total	NA	1,431	4,070	2,634	6	NA	NA	1,429	2	NA	1,431	4,070
1975 Total	NA	1,499	4,687	3,155	34	NA	NA	1,497	2	NA	1,499	4,687
1980 Total	NA	2,475	5,428	2,900	53	NA	NA	2,474	2	NA	2,475	5,428
1985 Total	93	3,016	6,084	2,970	97	(s)	(s)	2,687	236	93	3,016	6,084
1990 Total	111	2,735	6,041	3,046	171	59	29	2,216	408	111	2,735	6,041
1995 Total	198	3,099	6,558	3,205	152	69	33	2,370	531	200	3,101	6,560
2000 Total	233	3,006	6,104	2,811	164	66	57	2,262	511	236	3,008	6,106
2001 Total	254	2,624	5,164	2,242	164	64	70	2,006	364	253	2,622	5,163
2002 Total	308	2,705	5,734	2,689	171	63	105	1,995	402	303	2,701	5,729
2003 Total	402	2,805	5,947	2,793	173	62	113	2,002	401	404	2,807	5,948
2004 Total	487	2,998	6,069	2,688	178	63	142	2,121	389	499	3,010	6,081
2005 Total	564	3,104	6,229	2,703	181	63	178	2,137	403	577	3,117	6,242
2006 Total	720	3,216	6,599	2,869	181	68	264	2,099	397	771	3,267	6,649
2007 Total	978	3,480	6,528	2,446	186	76	341	2,089	413	990	3,492	6,541
2008 Total	1,387	3,881	7,219	2,511	192	89	546	2,059	435	1,370	3,865	7,202
2009 Total	1,584	3,967	7,655	2,669	200	98	721	1,931	452	1,568	3,950	7,638
2010 Total	1,884	4,332	8,128	2,539	208	126	923	1,981	468	1,837	4,285	8,081
2011 Total	2,044	4,516	9,170	3,103	212	171	1,168	2,010	462	1,948	4,420	9,074
2012 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
Total	1,942	4,419	8,826	2,629	212	227	1,340	2,010	467	1,902	4,379	8,786
2013 January	152	R 378	R 796	R 237	19	22	R 141	R 185	41	151	R 377	R 795
February	139	R 342	R 709	195	17	21	R 134	R 167	R 37	139	R 343	R 710
March	161	R 384	R 774	R 196	19	25	R 150	R 182	R 42	162	R 385	R 775
April	161	R 374	R 822	R 239	R 17	R 24	R 167	R 171	R 41	163	R 375	R 823
May	171	R 391	R 861	R 271	18	26	155	R 179	R 41	171	R 391	R 861
June	169	R 388	R 825	R 261	R 17	R 26	131	R 179	40	171	R 391	R 827
July	172	R 404	R 815	R 260	R 18	27	106	190	R 42	170	R 403	R 813
August	168	R 399	R 743	R 206	R 18	28	R 92	R 188	R 42	167	R 397	R 741
September	164	R 380	R 698	R 162	18	27	111	R 177	R 40	168	R 385	R 703
October	179	R 402	R 743	R 164	R 18	28	R 130	R 181	R 42	182	R 405	R 745
November	178	R 401	R 763	169	R 17	R 26	151	R 181	R 42	173	R 396	R 758
December	187	R 421	R 801	R 202	R 18	R 27	R 133	R 189	R 45	183	R 418	R 798
Total	2,000	R 4,666	R 9,349	R 2,562	R 214	R 305	R 1,601	R 2,170	R 496	2,000	R 4,666	R 9,349
2014 January	172	R 401	R 827	206	19	29	R 172	R 187	R 42	165	R 394	R 820
February	158	R 364	R 709	166	17	R 28	133	R 170	R 36	155	R 361	R 706
March	175	R 401	R 855	231	R 19	R 35	169	R 185	R 42	166	R 393	R 847
April	173	R 390	R 862	239	18	36	R 179	R 177	R 40	170	R 387	R 859
May	181	R 405	R 863	252	19	39	148	R 184	R 41	180	R 404	R 862
June	179	R 405	R 859	246	18	40	R 150	R 185	R 40	174	R 400	R 854
July	186	R 419	R 824	231	R 19	39	115	R 190	R 43	180	R 413	R 818
August	179	R 412	R 756	R 189	R 19	40	97	R 192	R 41	179	R 412	R 756
September	173	R 393	R 712	R 152	18	39	R 110	R 180	R 40	171	R 391	R 709
October	180	R 408	R 766	R 163	R 19	R 37	R 139	R 187	R 41	180	R 408	R 766
November	178	R 403	R 816	R 179	R 19	34	R 182	R 184	R 41	175	R 400	R 813
December	195	430	834	214	19	31	140	193	42	185	420	824
Total	2,130	4,832	9,684	2,469	222	427	1,734	2,214	488	2,080	4,782	9,634

^a Production equals consumption for all renewable energy sources except biofuels.

^b Total biomass inputs to the production of fuel ethanol and biodiesel.

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

^d Hydroelectric power, geothermal, solar thermal/photovoltaic, wind, and biomass.

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

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

^g Solar thermal and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6), and solar thermal direct use energy.

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

ⁱ Wood and wood-derived fuels.

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

^k Fuel ethanol (minus denaturant) and biodiesel consumption, plus losses and co-products from the production of fuel ethanol and biodiesel.

R=Revised. 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 ^a								
	Geo-thermal ^b	Solar/ PV ^c	Biomass	Total	Hydro- electric Power ^e	Geo- thermal ^b	Solar/ PV ^f	Wind ^g	Biomass			Total	Total
			Wood ^d						Wood ^d	Waste ^h	Fuel Ethanol ⁱ		
1950 Total	NA	NA	1,006	1,006	NA	NA	NA	NA	19	NA	NA	19	19
1955 Total	NA	NA	775	775	NA	NA	NA	NA	15	NA	NA	15	15
1960 Total	NA	NA	627	627	NA	NA	NA	NA	12	NA	NA	12	12
1965 Total	NA	NA	468	468	NA	NA	NA	NA	9	NA	NA	9	9
1970 Total	NA	NA	401	401	NA	NA	NA	NA	8	NA	NA	8	8
1975 Total	NA	NA	425	425	NA	NA	NA	NA	8	NA	NA	8	8
1980 Total	NA	NA	850	850	NA	NA	NA	NA	21	NA	NA	21	21
1985 Total	NA	NA	1,010	1,010	NA	NA	NA	NA	24	NA	(s)	24	24
1990 Total	6	56	580	641	1	3	-	-	66	28	(s)	94	98
1995 Total	7	64	520	591	1	5	-	-	72	40	(s)	113	118
2000 Total	9	61	420	489	1	8	-	-	71	47	(s)	119	128
2001 Total	9	59	370	438	1	8	-	-	67	25	(s)	92	101
2002 Total	10	57	380	448	(s)	9	-	-	69	26	(s)	95	104
2003 Total	13	57	400	470	1	11	-	-	71	29	1	101	113
2004 Total	14	57	410	481	1	12	-	-	70	34	1	105	118
2005 Total	16	58	430	504	1	14	-	-	70	34	1	105	120
2006 Total	18	63	380	462	1	14	-	-	65	36	1	103	118
2007 Total	22	70	420	512	1	14	-	-	70	31	2	103	118
2008 Total	26	80	470	577	1	15	(s)	-	73	34	2	109	125
2009 Total	33	89	500	622	1	17	(s)	(s)	73	36	3	112	129
2010 Total	37	114	440	591	1	19	(s)	(s)	72	36	3	111	130
2011 Total	40	153	450	643	(s)	20	1	(s)	69	43	3	115	136
2012 January	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
February	3	15	33	51	(s)	2	(s)	(s)	5	4	(s)	9	10
March	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
April	3	15	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11
May	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
June	3	15	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11
July	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
August	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
September	3	15	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11
October	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
November	3	15	34	53	(s)	2	(s)	(s)	5	4	(s)	9	11
December	3	16	36	55	(s)	2	(s)	(s)	5	4	(s)	9	11
Total	40	186	420	646	(s)	20	1	1	61	45	3	108	130
2013 January	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12
February	3	17	44	64	(s)	2	(s)	(s)	5	R 3	(s)	9	11
March	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12
April	3	18	48	69	(s)	2	(s)	(s)	6	4	(s)	10	12
May	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12
June	3	18	48	69	(s)	2	(s)	(s)	6	4	(s)	10	12
July	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12
August	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12
September	3	18	48	69	(s)	2	(s)	(s)	6	4	(s)	10	12
October	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12
November	3	18	48	69	(s)	2	(s)	(s)	6	4	(s)	10	12
December	3	19	49	71	(s)	2	(s)	(s)	6	4	(s)	10	12
Total	40	219	580	839	(s)	20	3	1	70	R 47	3	R 120	143
2014 January	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12
February	3	19	44	67	(s)	2	(s)	(s)	5	3	(s)	9	11
March	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12
April	3	21	48	72	(s)	2	(s)	(s)	6	4	(s)	10	12
May	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12
June	3	21	48	72	(s)	2	(s)	(s)	6	4	(s)	10	12
July	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12
August	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12
September	3	21	48	72	(s)	2	(s)	(s)	6	4	(s)	10	12
October	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12
November	3	21	48	72	(s)	2	(s)	(s)	6	4	(s)	10	12
December	3	21	49	74	(s)	2	(s)	(s)	6	4	(s)	10	12
Total	40	252	580	871	(s)	20	4	1	71	46	3	119	144

^a Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

^b Geothermal heat pump and direct use energy.

^c Solar thermal direct use energy, and photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6). Includes distributed solar thermal and PV energy used in the commercial, industrial, and electric power sectors.

^d Wood and wood-derived fuels.

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

^f Photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6) at commercial plants with capacity of 1 megawatt or greater.

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

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

ⁱ The fuel ethanol (minus denaturant) portion of motor fuels, such as E10, consumed by the commercial sector.

R=Revised. 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 ^a										Transportation Sector		
	Hydro-electric Power ^b	Geo-thermal ^c	Solar/ PV ^d	Wind ^e	Biomass					Total	Biomass		
					Wood ^f	Waste ^g	Fuel Ethanol ^h	Losses and Co-products ⁱ	Total		Fuel Ethanol ^j	Bio-diesel	Total
1950 Total	69	NA	NA	NA	532	NA	NA	NA	532	602	NA	NA	NA
1955 Total	38	NA	NA	NA	631	NA	NA	NA	631	669	NA	NA	NA
1960 Total	39	NA	NA	NA	680	NA	NA	NA	680	719	NA	NA	NA
1965 Total	33	NA	NA	NA	855	NA	NA	NA	855	888	NA	NA	NA
1970 Total	34	NA	NA	NA	1,019	NA	NA	NA	1,019	1,053	NA	NA	NA
1975 Total	32	NA	NA	NA	1,063	NA	NA	NA	1,063	1,096	NA	NA	NA
1980 Total	33	NA	NA	NA	1,600	NA	NA	NA	1,600	1,633	NA	NA	NA
1985 Total	33	NA	NA	NA	1,645	230	1	42	1,918	1,951	50	NA	50
1990 Total	31	2	-	-	1,442	192	1	49	1,684	1,717	60	NA	60
1995 Total	55	3	-	-	1,652	195	2	86	1,934	1,992	112	NA	112
2000 Total	42	4	-	-	1,636	145	1	99	1,881	1,928	135	NA	135
2001 Total	33	5	-	-	1,443	129	3	108	1,681	1,719	141	1	142
2002 Total	39	5	-	-	1,396	146	3	130	1,676	1,720	168	2	170
2003 Total	43	3	-	-	1,363	142	4	169	1,679	1,725	228	2	230
2004 Total	33	4	-	-	1,476	132	6	203	1,817	1,853	286	3	290
2005 Total	32	4	-	-	1,452	148	7	230	1,837	1,873	327	12	339
2006 Total	29	4	-	-	1,472	130	10	285	1,897	1,930	442	33	475
2007 Total	16	5	-	-	1,413	145	10	377	1,944	1,965	557	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	2	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	17	724	2,239	2,266	1,045	114	1,159
2013 January	3	(s)	(s)	(s)	R 113	R 16	1	57	R 187	R 190	83	9	92
February	3	(s)	(s)	(s)	R 101	R 14	1	52	R 169	R 172	77	9	86
March	3	(s)	(s)	(s)	R 109	R 16	1	59	R 185	R 189	89	12	101
April	2	(s)	(s)	(s)	R 104	R 16	1	59	R 181	R 184	89	13	102
May	3	(s)	(s)	(s)	R 108	R 15	2	63	R 188	R 191	93	13	106
June	3	(s)	(s)	(s)	R 109	R 15	2	62	R 187	R 190	93	15	108
July	3	(s)	(s)	(s)	R 117	15	2	62	R 196	R 199	92	15	107
August	2	(s)	(s)	(s)	R 113	R 16	2	61	R 191	R 193	91	13	105
September	2	(s)	(s)	(s)	R 105	R 15	1	59	R 180	R 183	90	18	108
October	2	(s)	(s)	(s)	R 108	R 16	2	65	R 191	R 193	94	22	116
November	2	(s)	(s)	(s)	R 109	R 16	1	64	R 191	R 194	89	17	107
December	3	(s)	(s)	(s)	R 114	R 17	2	68	R 201	R 204	92	22	114
Total	R 33	4	(s)	(s)	R 1,312	R 187	18	729	R 2,246	R 2,283	1,072	179	1,251
2014 January	3	(s)	(s)	(s)	R 110	R 16	1	65	R 192	R 196	87	11	98
February	2	(s)	(s)	(s)	R 100	13	1	58	R 173	R 176	82	13	95
March	2	(s)	(s)	(s)	R 108	R 16	1	65	R 190	R 192	87	13	100
April	2	(s)	(s)	(s)	R 107	R 15	1	64	R 188	R 190	91	13	104
May	2	(s)	(s)	(s)	R 111	R 15	2	67	R 194	R 196	94	17	111
June	2	(s)	(s)	(s)	R 110	R 15	2	66	R 193	R 195	92	15	106
July	2	(s)	(s)	(s)	R 113	R 16	2	68	R 198	R 200	95	16	111
August	2	(s)	(s)	(s)	R 115	R 15	2	66	R 198	R 200	94	17	111
September	2	(s)	(s)	(s)	R 107	R 15	1	64	R 187	R 189	89	17	105
October	2	(s)	(s)	(s)	R 111	R 15	2	66	R 194	R 197	96	16	113
November	2	(s)	(s)	(s)	R 110	R 15	1	66	R 192	R 195	91	17	107
December	2	(s)	(s)	(s)	116	16	2	71	205	207	95	17	112
Total	26	4	(s)	(s)	1,317	183	18	786	2,303	2,334	1,092	181	1,273

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

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

^c Geothermal heat pump and direct use energy.

^d Photovoltaic (PV) electricity net generation (converted to Btu using the fossil-fuels heat rate—see Table A6) at industrial plants with capacity of 1 megawatt or greater.

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

^f Wood and wood-derived fuels.

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

^h The fuel ethanol (minus denaturant) portion of motor fuels, such as E10,

consumed by the industrial sector.

ⁱ Losses and co-products from the production of fuel ethanol and biodiesel. Does not include natural gas, electricity, and other non-biomass energy used in the production of fuel ethanol and biodiesel—these are included in the industrial sector consumption statistics for the appropriate energy source.

^j The fuel ethanol (minus denaturant) portion of motor fuels, such as E10 and E85, consumed by the transportation sector.

R=Revised. 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 ^a	Geo-thermal ^b	Solar/PV ^c	Wind ^d	Biomass			Total
					Wood ^e	Waste ^f	Total	
1950 Total	1,346	NA	NA	NA	5	NA	5	1,351
1955 Total	1,322	NA	NA	NA	3	NA	3	1,325
1960 Total	1,569	(s)	NA	NA	2	NA	2	1,571
1965 Total	2,026	2	NA	NA	3	NA	3	2,031
1970 Total	2,600	6	NA	NA	1	2	4	2,609
1975 Total	3,122	34	NA	NA	(s)	2	2	3,158
1980 Total	2,867	53	NA	NA	3	2	4	2,925
1985 Total	2,937	97	(s)	(s)	8	7	14	3,049
1990 Total ^g	3,014	161	4	29	129	188	317	3,524
1995 Total	3,149	138	5	33	125	296	422	3,747
2000 Total	2,768	144	5	57	134	318	453	3,427
2001 Total	2,209	142	6	70	126	211	337	2,763
2002 Total	2,650	147	6	105	150	230	380	3,288
2003 Total	2,749	146	5	113	167	230	397	3,411
2004 Total	2,655	148	6	142	165	223	388	3,339
2005 Total	2,670	147	6	178	185	221	406	3,406
2006 Total	2,839	145	5	264	182	231	412	3,665
2007 Total	2,430	145	6	341	186	237	423	3,345
2008 Total	2,494	146	9	546	177	258	435	3,630
2009 Total	2,650	146	9	721	180	261	441	3,967
2010 Total	2,521	148	12	923	196	264	459	4,064
2011 Total	3,085	149	17	1,167	182	255	437	4,855
2012 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
Total	2,606	148	40	1,339	190	262	453	4,586
2013 January	R 234	R 13	3	R 141	17	22	R 39	R 429
February	R 191	12	4	R 134	15	19	R 35	R 376
March	R 193	R 13	6	R 150	17	R 23	39	R 402
April	R 237	R 12	R 6	R 167	R 14	21	R 35	R 457
May	R 268	R 12	R 7	155	R 15	22	R 37	R 480
June	R 258	R 12	R 8	131	17	22	39	R 448
July	R 257	13	8	106	R 18	22	41	R 424
August	204	13	9	R 92	20	R 23	R 42	R 360
September	R 160	R 12	9	111	18	21	39	331
October	R 162	R 13	9	130	18	22	39	R 353
November	167	12	R 8	151	19	R 22	R 41	377
December	R 198	R 13	R 8	R 133	20	24	R 43	R 396
Total	2,529	R 151	R 83	R 1,600	207	R 262	R 470	R 4,833
2014 January	R 203	R 14	R 8	R 172	22	R 22	43	R 439
February	R 164	12	8	133	20	R 19	39	R 357
March	229	13	13	169	22	R 22	44	R 469
April	237	13	15	R 179	R 17	21	38	R 482
May	250	13	17	148	R 18	R 22	40	468
June	244	13	19	R 150	R 22	R 22	43	R 469
July	R 230	13	17	115	22	23	45	R 420
August	186	13	18	97	22	22	44	R 359
September	R 150	13	R 17	109	20	21	41	R 331
October	R 161	13	16	R 139	20	22	42	R 371
November	R 176	R 14	13	R 182	21	22	R 43	R 427
December	212	14	9	140	22	22	44	419
Total	2,443	159	170	1,733	247	260	507	5,011

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

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

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

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

^e Wood and wood-derived fuels.

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

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

R=Revised. 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 10.3 Fuel Ethanol Overview

	Feed-stock ^a	Losses and Co-products ^b	Denaturant ^c	Production ^d			Trade ^d	Stocks ^{d,f}	Stock Change ^{d,g}	Consumption ^d			Consumption Minus Denaturant ^h
							Net Imports ^e						
				TBtu	TBtu	Mbbl	Mbbl			MMgal	TBtu	Mbbl	
1981 Total	13	6	40	1,978	83	7	NA	NA	NA	1,978	83	7	7
1985 Total	93	42	294	14,693	617	52	NA	NA	NA	14,693	617	52	51
1990 Total	111	49	356	17,802	748	63	NA	NA	NA	17,802	748	63	62
1995 Total	198	86	647	32,325	1,358	115	387	2,186	-207	32,919	1,383	117	114
2000 Total	233	99	773	38,627	1,622	138	116	3,400	-624	39,367	1,653	140	137
2001 Total	253	108	841	42,028	1,765	150	315	4,298	898	41,445	1,741	148	144
2002 Total	307	130	1,019	50,956	2,140	182	306	6,200	1,902	49,360	2,073	176	171
2003 Total	400	169	1,335	66,772	2,804	238	292	5,978	-222	67,286	2,826	240	233
2004 Total	484	203	1,621	81,058	3,404	289	3,542	6,002	24	84,576	3,552	301	293
2005 Total	552	230	1,859	92,961	3,904	331	3,234	5,563	-439	96,634	4,059	344	335
2006 Total	688	285	2,326	116,294	4,884	414	17,408	8,760	3,197	130,505	5,481	465	453
2007 Total	914	376	3,105	155,263	6,521	553	10,457	10,535	1,775	163,945	6,886	584	569
2008 Total	1,300	531	4,433	221,637	9,309	790	12,610	14,226	3,691	230,556	9,683	821	800
2009 Total	1,517	616	5,688	260,424	10,938	928	4,720	16,594	2,368	262,776	11,037	936	910
2010 Total	1,839	742	6,506	316,617	13,298	1,127	-9,115	17,941	1,347	306,155	12,858	1,090	1,061
2011 Total	1,919	769	6,649	331,646	13,929	1,181	-24,365	18,238	297	306,984	12,893	1,093	1,065
2012 January	167	67	584	29,038	1,220	103	-1,773	21,475	3,237	24,028	1,009	86	83
February	154	61	531	26,647	1,119	95	-1,778	22,393	918	23,951	1,006	85	83
March	159	63	518	27,548	1,157	98	-1,591	22,583	190	25,767	1,082	92	89
April	152	61	495	26,346	1,107	94	-1,549	22,050	-533	25,330	1,064	90	88
May	159	63	520	27,616	1,160	98	-1,013	21,635	-415	27,018	1,135	96	94
June	153	61	502	26,513	1,114	94	-597	21,239	-396	26,312	1,105	94	91
July	145	58	503	25,236	1,060	90	-489	20,224	-1,015	25,762	1,082	92	89
August	150	60	526	26,092	1,096	93	654	19,180	-1,044	27,790	1,167	99	96
September	140	56	496	24,376	1,024	87	699	19,921	741	24,334	1,022	87	84
October	144	57	528	24,976	1,049	89	614	18,626	-1,295	26,885	1,129	96	93
November	142	57	527	24,744	1,039	88	1,011	19,992	1,366	24,389	1,024	87	84
December	147	59	534	25,582	1,074	91	-79	20,350	358	25,145	1,056	90	87
Total	1,814	722	6,264	314,714	13,218	1,120	-5,891	20,350	2,112	306,711	12,882	1,092	1,064
2013 January	143	57	503	24,778	1,041	88	-767	19,894	-456	24,467	1,028	87	85
February	130	52	461	22,494	945	80	-727	19,009	-885	22,652	951	81	79
March	148	59	511	25,620	1,076	91	-169	18,410	-599	26,050	1,094	93	90
April	148	59	515	25,601	1,075	91	-551	17,370	-1,040	26,090	1,096	93	90
May	157	62	537	27,197	1,142	97	-400	16,804	-566	27,363	1,149	97	95
June	154	61	509	26,722	1,122	95	130	16,428	-376	27,228	1,144	97	95
July	155	62	519	26,923	1,131	96	624	17,072	644	26,903	1,130	96	93
August	152	60	494	26,279	1,104	94	413	16,945	-127	26,819	1,126	95	93
September	147	59	499	25,564	1,074	91	-187	15,986	-959	26,336	1,106	94	91
October	161	64	538	27,995	1,176	100	-767	15,750	-236	27,464	1,153	98	95
November	161	64	532	27,915	1,172	99	-1,902	15,569	-181	26,194	1,100	93	91
December	170	68	563	29,405	1,235	105	-1,459	16,424	855	27,091	1,138	96	94
Total	1,825	726	6,181	316,493	13,293	1,126	-5,761	16,424	-3,926	314,658	13,216	1,120	1,092
2014 January	163	65	551	28,344	1,190	101	-2,044	17,086	1,667	25,633	1,077	91	89
February	146	58	491	25,401	1,067	90	-1,561	16,834	-252	24,092	1,012	86	84
March	162	65	538	28,116	1,181	100	-2,065	17,349	515	25,536	1,073	91	89
April	160	64	543	27,837	1,169	99	-1,128	17,356	7	26,702	1,121	95	93
May	167	67	559	29,039	1,220	103	-702	18,117	761	27,576	1,158	98	96
June	166	66	545	28,759	1,208	102	-1,331	18,664	547	26,881	1,129	96	93
July	169	67	609	29,413	1,235	105	-1,496	18,665	1	27,916	1,172	99	97
August	165	66	534	28,665	1,204	102	-1,283	18,471	-194	27,576	1,158	98	96
September	159	63	504	27,577	1,158	98	-1,347	18,660	189	26,041	1,094	93	90
October	165	66	502	28,641	1,203	102	-1,858	17,265	-1,395	28,178	1,183	100	98
November	165	66	540	28,573	1,200	102	-2,133	17,029	-236	26,676	1,120	95	93
December	179	71	609	31,054	1,304	110	-1,506	18,739	1,710	27,838	1,169	99	97
Total	1,969	784	6,525	341,419	14,340	1,215	-18,454	18,739	2,320	320,645	13,467	1,141	1,113

^a Total corn and other biomass inputs to the production of undenatured ethanol used for fuel ethanol.

^b Losses and co-products from the production of fuel ethanol. Does not include natural gas, electricity, and other non-biomass energy used in the production of fuel ethanol—these are included in the industrial sector consumption statistics for the appropriate energy source.

^c The amount of denaturant in fuel ethanol produced.

^d Includes denaturant.

^e Through 2009, data are for fuel ethanol imports only; data for fuel ethanol exports are not available. Beginning in 2010, data are for fuel ethanol imports minus fuel ethanol (including industrial alcohol) exports.

^f Stocks are at end of period.

^g A negative value indicates a decrease in stocks and a positive value indicates an increase.

^h Consumption of fuel ethanol minus denaturant. Data for fuel ethanol minus denaturant are used to develop data for "Renewable Energy/Biomass" in Tables 10.1–10.2b, as well as in Sections 1 and 2.

ⁱ Derived from the preliminary 2013 stocks value (16,419 thousand barrels), not the final 2013 value (16,424 thousand barrels) that is shown under "Stocks."
NA=Not available.

Notes: • Mbbl = thousand barrels. MMgal = million U.S. gallons. TBtu = trillion Btu. • Fuel ethanol data in thousand barrels are converted to million gallons by multiplying by 0.042, and are converted to Btu by multiplying by the approximate heat content of fuel ethanol—see Table A3. • Through 1980, data are not available. For 1981–1992, data are estimates. For 1993–2008, only data for feedstock, losses and co-products, and denaturant are estimates. Beginning in 2009, only data for feedstock, and losses and co-products, are estimates. • See "Denaturant," "Ethanol," "Fuel Ethanol," and "Fuel Ethanol Minus Denaturant" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#renewable> (Excel and CSV files) for all available annual and monthly data beginning in 1981.

Sources: See end of section.

Table 10.4 Biodiesel Overview

	Feed-stock ^a	Losses and Co-products ^b	Production			Trade			Stocks ^d	Stock Change ^e	Balancing Item ^f	Consumption		
						Imports	Exports	Net Imports ^c						
			TBtu	TBtu	Mbbl	MMgal	TBtu	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	MMgal	TBtu
2001 Total	1	(s)	204	9	1	81	41	40	NA	NA	NA	244	10	1
2002 Total	1	(s)	250	10	1	197	57	140	NA	NA	NA	390	16	2
2003 Total	2	(s)	338	14	2	97	113	-17	NA	NA	NA	322	14	2
2004 Total	4	(s)	666	28	4	101	128	-27	NA	NA	NA	639	27	3
2005 Total	12	(s)	2,162	91	12	214	213	1	NA	NA	NA	2,163	91	12
2006 Total	32	(s)	5,963	250	32	1,105	856	250	NA	NA	NA	6,213	261	33
2007 Total	63	1	11,662	490	62	3,455	6,696	-3,241	NA	NA	NA	8,422	354	45
2008 Total	88	1	16,145	678	87	7,755	16,673	-8,918	NA	NA	NA	7,228	304	39
2009 Total	67	1	12,281	516	66	1,906	6,546	-4,640	711	711	733	7,663	322	41
2010 Total	44	1	8,177	343	44	564	2,588	-2,024	672	-39	0	6,192	260	33
2011 Total	125	2	23,035	967	123	890	1,799	-908	2,012	^g 1,035	0	21,092	886	113
2012 January	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
Total	128	2	23,588	991	126	853	3,056	-2,203	2,083	72	0	21,314	895	114
2013 January	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
Total	176	2	32,368	1,359	173	8,152	4,675	3,477	4,506	2,422	0	33,423	1,404	179
2014 January	9	(s)	1,612	68	9	233	135	98	4,171	^h -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
November	13	(s)	2,416	101	13	989	65	924	3,114	247	0	3,093	130	17
December	16	(s)	2,930	123	16	540	51	489	3,342	228	0	3,192	134	17
Total	160	2	29,523	1,240	158	5,059	1,974	3,085	3,342	-1,168	0	33,775	1,419	181

^a 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.

^b Losses and co-products from the production of biodiesel. Does not include natural gas, electricity, and other non-biomass energy used in the production of biodiesel—these are included in the industrial sector consumption statistics for the appropriate energy source.

^c Net imports equal imports minus exports.

^d Stocks are at end of period. Through 2010, includes stocks at bulk terminals only. Beginning in 2011, includes stocks at bulk terminals and biodiesel production plants.

^e A negative value indicates a decrease in stocks and a positive value indicates an increase.

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

^g Derived from the final 2010 stocks value for bulk terminals and biodiesel

production plants (977 thousand barrels), not the final 2010 value for bulk terminals only (672 thousand barrels) that is shown under "Stocks."

^h Derived from the preliminary 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.

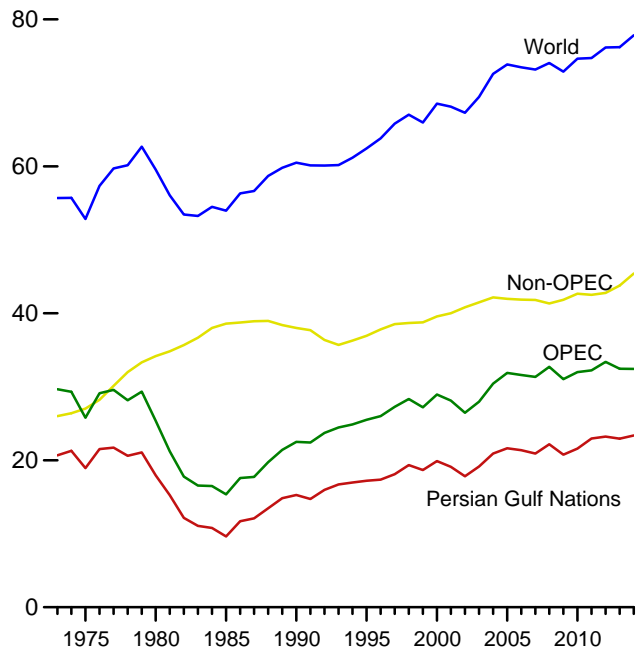
January and February 2009: EIA, PSA, Table 1, data for refinery and blender net inputs of renewable fuels except fuel ethanol.

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

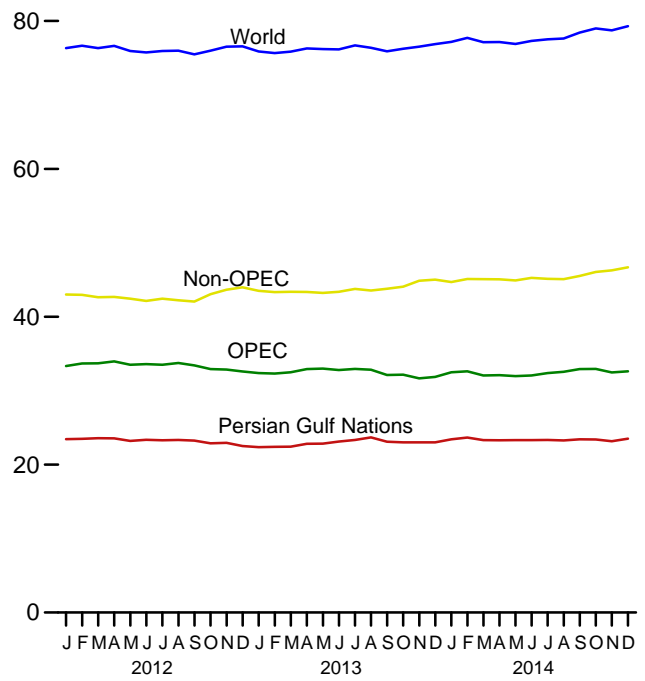
11. International Petroleum

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

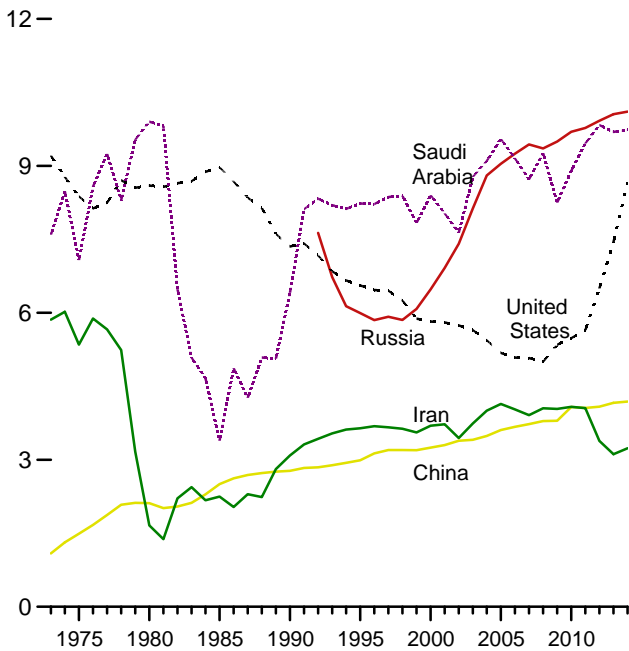
World Production, 1973–2014



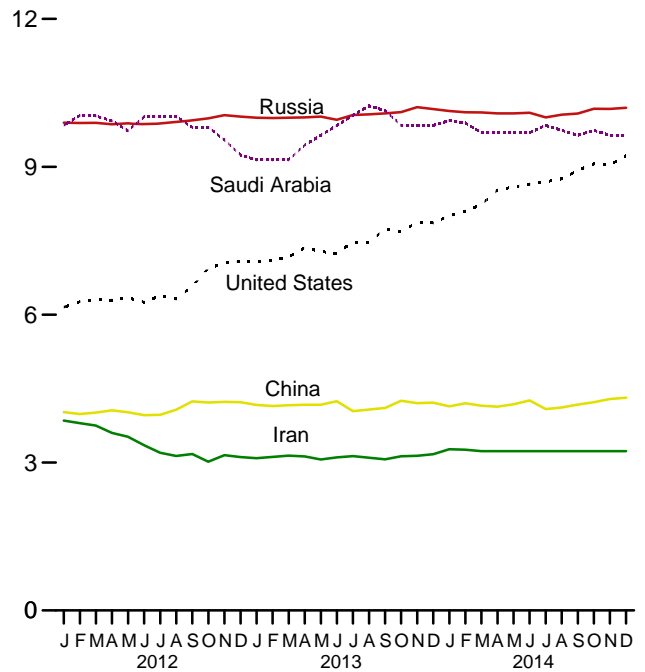
World Production, Monthly



Selected Producers, 1973–2014



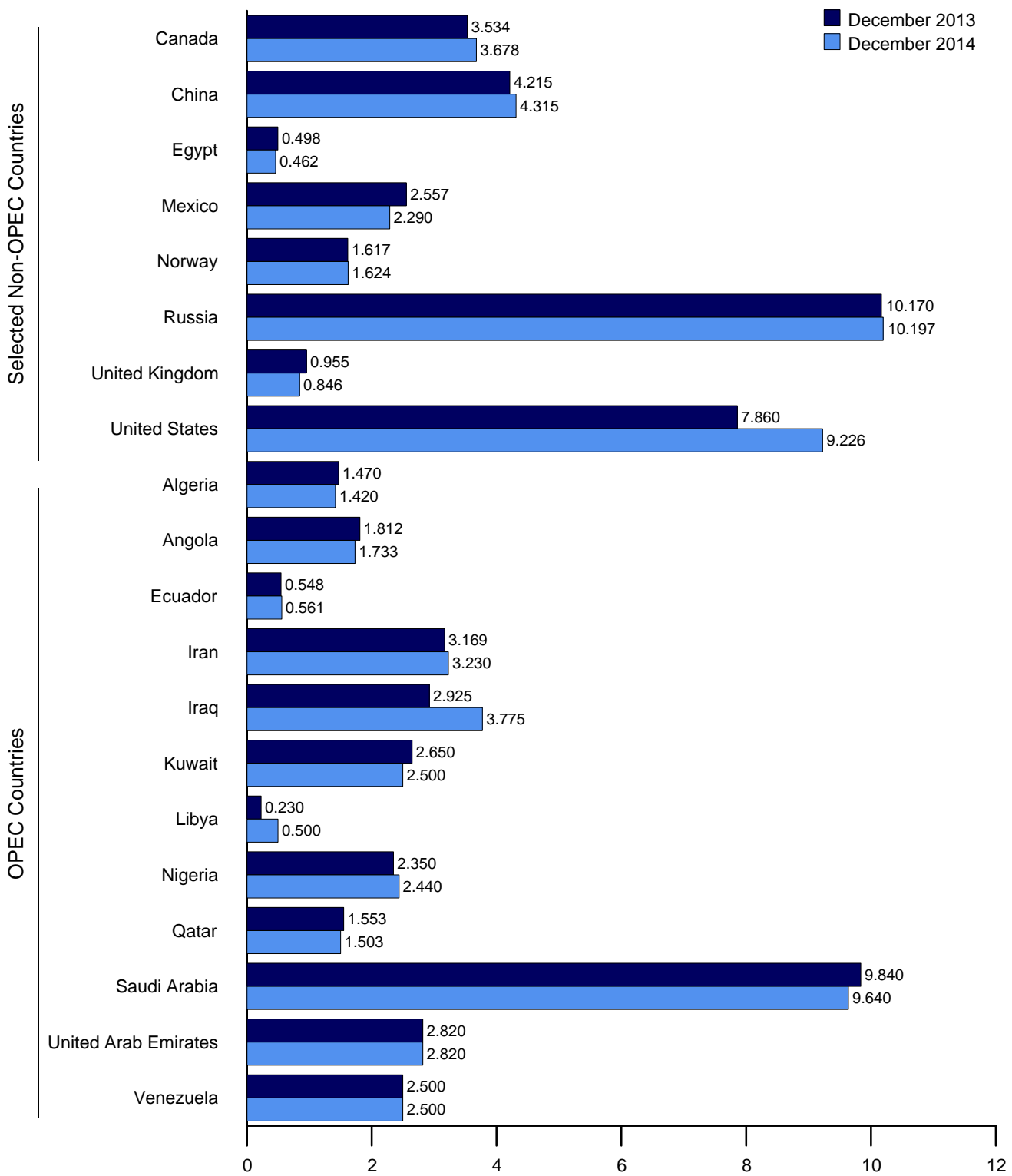
Selected Producers, Monthly



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

sian Gulf Nations.”
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.
Sources: Tables 11.1a and 11.1b.

Figure 11.1b World Crude Oil Production by Selected Country
(Million Barrels per Day)



Note: OPEC is the Organization of the Petroleum Exporting Countries.
 Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.
 Sources: Tables 11.1a and 11.1b.

Table 11.1a World Crude Oil Production: OPEC Members
(Thousand Barrels per Day)

	Algeria	Angola	Ecuador	Iran	Iraq	Kuwait ^a	Libya	Nigeria	Qatar	Saudi Arabia ^a	United Arab Emirates	Venezuela	Total OPEC ^b
1973 Average	1,097	162	209	5,861	2,018	3,020	2,175	2,054	570	7,596	1,533	3,366	29,661
1975 Average	983	165	161	5,350	2,262	2,084	1,480	1,783	438	7,075	1,664	2,346	25,790
1980 Average	1,106	150	204	1,662	2,514	1,656	1,787	2,055	472	9,900	1,709	2,168	25,383
1985 Average	1,036	231	281	2,250	1,433	1,023	1,059	1,495	301	3,388	1,193	1,677	15,367
1990 Average	1,180	475	285	3,088	2,040	1,175	1,375	1,810	406	6,410	2,117	2,137	22,498
1995 Average	1,162	646	392	3,643	560	2,057	1,390	1,993	442	8,231	2,233	2,750	25,500
1996 Average	1,227	709	396	3,686	579	2,062	1,401	2,001	510	8,218	2,278	2,938	26,003
1997 Average	1,259	714	388	3,664	1,155	2,007	1,446	2,132	550	8,362	2,316	3,280	27,274
1998 Average	1,226	735	375	3,634	2,150	2,085	1,390	2,153	696	8,389	2,345	3,167	28,346
1999 Average	1,177	745	373	3,557	2,508	1,898	1,319	2,130	665	7,833	2,169	2,826	27,199
2000 Average	1,214	746	395	3,696	2,571	2,079	1,410	2,165	742	8,404	2,368	3,155	28,944
2001 Average	1,265	742	412	3,724	2,390	1,998	1,367	2,256	730	8,031	2,205	3,010	28,129
2002 Average	1,349	896	393	3,444	2,023	1,894	1,319	2,118	709	7,634	2,082	2,604	26,465
2003 Average	1,516	903	411	3,743	1,308	2,136	1,421	2,275	807	8,775	2,348	2,335	27,977
2004 Average	1,582	1,052	528	4,001	2,011	2,376	1,515	2,329	901	9,101	2,478	2,557	30,432
2005 Average	1,692	1,239	532	4,139	1,878	2,529	1,633	2,627	978	9,550	2,535	2,565	31,897
2006 Average	1,699	1,398	536	4,028	1,996	2,535	1,681	2,440	996	9,152	2,636	2,511	31,607
2007 Average	1,708	1,724	511	3,912	2,086	2,464	1,702	2,350	1,083	8,722	2,603	2,490	31,354
2008 Average	1,705	R 1,951	505	4,050	2,375	2,586	1,736	2,165	1,198	9,261	2,681	2,510	R 32,723
2009 Average	1,585	R 1,877	486	4,037	2,391	2,350	1,650	2,208	1,279	8,250	2,413	2,520	R 31,045
2010 Average	1,540	R 1,909	486	4,080	2,399	2,300	1,650	2,455	1,459	8,900	2,415	2,410	R 32,003
2011 Average	1,540	R 1,756	500	4,054	2,626	2,530	465	2,550	1,571	9,458	2,679	2,500	R 32,229
2012 January	1,550	R 1,860	504	3,850	2,675	2,650	1,000	2,520	1,660	9,840	2,720	2,500	R 33,329
February	1,550	R 1,910	503	3,800	2,575	2,650	1,200	2,580	1,660	10,040	2,720	2,500	R 33,688
March	1,550	R 1,760	499	3,750	2,725	2,640	1,350	2,520	1,560	10,030	2,820	2,500	R 33,704
April	1,550	R 1,860	500	3,600	2,965	2,640	1,400	2,640	1,550	9,930	2,820	2,500	R 33,955
May	1,550	R 1,810	498	3,525	2,925	2,640	1,400	2,580	1,520	9,730	2,820	2,500	R 33,498
June	1,544	R 1,760	502	3,350	2,975	2,630	1,400	2,580	1,515	10,020	2,820	2,500	R 33,596
July	1,546	R 1,710	508	3,200	3,075	2,625	1,400	2,580	1,526	10,015	2,820	2,500	R 33,505
August	1,548	R 1,810	512	3,134	3,175	2,625	1,450	2,640	1,526	10,015	2,820	2,500	R 33,755
September	1,550	R 1,710	506	3,173	3,275	2,610	1,500	2,460	1,526	9,800	2,820	2,500	R 33,430
October	1,482	R 1,760	503	3,018	3,075	2,610	1,500	2,340	1,526	9,800	2,820	2,500	R 32,934
November	1,483	R 1,740	504	3,150	3,225	2,650	1,450	2,280	1,526	9,540	2,820	2,500	R 32,868
December	1,485	R 1,760	503	3,110	3,125	2,650	1,350	2,520	1,526	9,240	2,820	2,500	R 32,589
Average	1,532	R 1,787	504	3,387	2,983	2,635	1,367	2,520	1,551	9,832	2,804	2,500	R 33,402
2013 January	1,470	R 1,812	505	3,088	3,075	2,650	1,350	2,410	1,553	9,140	2,820	2,500	R 32,373
February	1,470	R 1,762	506	3,115	3,075	2,650	1,400	2,320	1,553	9,140	2,820	2,500	R 32,311
March	1,470	R 1,862	504	3,139	3,075	2,650	1,350	2,420	1,553	9,140	2,820	2,500	R 32,483
April	1,470	R 1,827	516	3,124	3,175	2,650	1,450	2,400	1,553	9,440	2,820	2,500	R 32,925
May	1,470	R 1,862	522	3,064	3,075	2,650	1,420	2,420	1,553	9,640	2,820	2,500	R 32,996
June	1,470	R 1,842	524	3,105	3,100	2,650	1,130	2,260	1,553	9,840	2,820	2,500	R 32,794
July	1,470	R 1,762	530	3,130	3,100	2,650	1,000	2,390	1,553	10,040	2,820	2,500	R 32,945
August	1,470	R 1,742	537	3,097	3,275	2,650	590	2,370	1,553	10,240	2,820	2,500	R 32,844
September	1,470	R 1,782	535	3,065	2,825	2,650	360	2,420	1,553	10,140	2,820	2,500	R 32,120
October	1,470	R 1,772	540	3,127	2,975	2,650	550	2,370	1,553	9,840	2,820	2,500	R 32,167
November	1,370	R 1,792	545	3,136	2,975	2,650	220	2,270	1,553	9,840	2,820	2,500	R 31,671
December	1,470	R 1,812	548	3,169	2,925	2,650	230	2,350	1,553	9,840	2,820	2,500	R 31,867
Average	1,462	R 1,803	526	3,113	3,054	2,650	918	2,367	1,553	9,693	2,820	2,500	R 32,460
2014 January	R 1,420	R 1,663	550	3,270	3,125	2,650	510	2,470	1,563	9,940	2,820	2,500	R 32,481
February	R 1,420	R 1,733	551	3,260	3,425	2,650	380	2,420	1,563	9,890	2,820	2,500	R 32,612
March	R 1,420	R 1,673	557	3,230	3,325	2,650	250	2,370	1,563	9,690	2,820	2,500	R 32,048
April	R 1,420	R 1,743	560	3,230	3,300	2,650	210	2,420	1,553	9,690	2,820	2,500	R 32,096
May	R 1,420	R 1,683	554	3,230	3,325	2,650	230	2,320	1,553	9,690	2,820	2,500	R 31,975
June	R 1,420	R 1,663	555	3,230	3,325	2,650	235	2,420	1,553	9,690	2,820	2,500	R 32,061
July	R 1,420	R 1,713	558	3,230	3,195	2,650	435	2,470	1,553	9,840	2,820	2,500	R 32,384
August	R 1,420	R 1,813	558	3,230	3,225	2,650	530	2,520	1,553	9,740	2,820	2,500	R 32,559
September	R 1,420	R 1,823	551	3,230	3,515	2,650	785	2,470	1,513	9,640	2,820	2,500	R 32,917
October	R 1,420	R 1,848	557	3,230	3,465	2,575	950	2,320	1,513	9,740	2,820	2,500	R 32,938
November	R 1,420	R 1,813	563	3,230	3,425	2,500	615	2,440	1,503	9,640	2,820	2,500	R 32,469
December	1,420	1,733	561	3,230	3,775	2,500	500	2,440	1,503	9,640	2,820	2,500	32,622
Average	1,420	1,742	556	3,236	3,368	2,619	470	2,423	1,540	9,735	2,820	2,500	32,429

^a Except for the period from August 1990 through May 1991, includes about one-half of the production in the Kuwait-Saudi Arabia Neutral Zone. Kuwaiti Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In December 2014, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 195 thousand barrels per day. Data for Saudi Arabia include approximately 150 thousand barrels per day from the Abu Safah field produced on behalf of Bahrain.

^b See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On Tables 11.1a and 11.1b, countries are classified as "OPEC" or "Non-OPEC" in all years based on their status in the most current year. For example, Ecuador rejoined OPEC in 2007, and is thus included in "Total OPEC" for all years; and

Indonesia left OPEC at the end of 2008, and is thus included in "Total Non-OPEC" for all years.

R=Revised.

Notes: • Data are for crude oil and lease condensate; they exclude natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available.

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

Sources: See end of section.

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

	Persian Gulf Nations ^b	Selected Non-OPEC ^a Producers									Total Non-OPEC ^a	World
		Canada	China	Egypt	Mexico	Norway	Former U.S.S.R.	Russia	United Kingdom	United States		
1973 Average	20,668	1,798	1,090	165	465	32	8,324	NA	2	9,208	26,018	55,679
1975 Average	18,934	1,430	1,490	235	705	189	9,523	NA	12	8,375	27,039	52,828
1980 Average	17,961	1,435	2,114	595	1,936	486	11,706	NA	1,622	8,597	34,175	59,558
1985 Average	9,630	1,471	2,505	887	2,745	773	11,585	NA	2,530	8,971	38,598	53,965
1990 Average	15,278	1,553	2,774	873	2,553	1,630	10,975	NA	1,820	7,355	37,999	60,497
1995 Average	17,208	1,805	2,990	920	2,711	2,766	---	5,995	2,489	6,560	36,934	62,434
1996 Average	17,367	1,837	3,131	922	2,944	3,091	---	5,850	2,568	6,465	37,815	63,818
1997 Average	18,095	1,922	3,200	856	3,104	3,142	---	5,920	2,518	6,452	38,532	65,806
1998 Average	19,337	1,981	3,198	834	3,160	3,011	---	5,854	2,616	6,252	38,685	67,032
1999 Average	18,667	1,907	3,195	852	2,998	3,019	---	6,079	2,684	5,881	38,768	65,967
2000 Average	19,897	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	74,067
2009 Average	20,754	2,579	3,796	587	2,646	2,067	---	9,495	1,328	5,350	41,836	72,881
2010 Average	21,589	2,741	4,078	568	2,621	1,871	---	9,694	1,233	5,482	42,661	74,665
2011 Average	22,953	2,901	4,059	551	2,600	1,760	---	9,774	1,026	5,645	42,521	74,751
2012 January	23,436	3,108	4,022	544	2,566	1,762	---	9,894	1,021	6,153	43,009	76,338
February	23,486	3,249	3,986	544	2,591	1,753	---	9,889	1,034	6,262	42,968	76,656
March	23,566	3,037	4,015	544	2,600	1,708	---	9,891	977	6,297	42,636	76,340
April	23,546	3,155	4,060	541	2,590	1,736	---	9,861	975	6,296	42,689	76,645
May	23,201	3,035	4,021	541	2,591	1,707	---	9,882	899	6,342	42,435	75,933
June	23,351	3,014	3,963	541	2,588	1,575	---	9,861	950	6,252	42,151	75,747
July	23,302	3,114	3,968	538	2,571	1,572	---	9,882	946	6,391	42,437	75,942
August	23,336	3,064	4,071	538	2,600	1,572	---	9,907	792	6,318	42,238	75,993
September	23,245	3,011	4,242	538	2,602	1,310	---	9,941	601	6,574	42,051	75,482
October	22,890	3,173	4,217	535	2,584	1,561	---	9,984	682	6,941	43,051	75,985
November	22,952	3,271	4,232	535	2,622	1,517	---	10,048	864	7,044	43,660	76,529
December	22,512	3,427	4,224	535	2,606	1,565	---	10,018	923	7,081	43,977	76,567
Average	23,233	3,138	4,085	539	2,593	1,612	---	9,922	888	6,497	42,776	76,178
2013 January	22,374	3,329	4,168	531	2,602	1,550	---	9,995	825	7,083	43,496	75,869
February	22,401	3,259	4,146	528	2,595	1,512	---	9,990	823	7,098	43,341	75,652
March	22,425	3,429	4,164	525	2,555	1,507	---	9,995	812	7,169	43,368	75,851
April	22,810	3,237	4,174	522	2,557	1,567	---	10,002	830	7,362	43,357	76,282
May	22,850	3,026	4,174	519	2,548	1,583	---	10,018	861	7,282	43,216	76,212
June	23,116	3,146	4,244	516	2,559	1,390	---	9,955	781	7,241	43,373	76,167
July	23,341	3,306	4,043	513	2,522	1,642	---	10,052	792	7,474	43,756	76,701
August	23,683	3,471	4,075	510	2,554	1,547	---	10,064	630	7,467	43,542	76,385
September	23,101	3,352	4,107	507	2,563	1,375	---	10,082	744	7,742	43,781	75,902
October	23,013	3,335	4,255	504	2,580	1,483	---	10,109	732	7,682	44,070	76,237
November	23,022	3,468	4,205	501	2,553	1,611	---	10,209	833	7,874	44,862	76,533
December	23,005	3,534	4,215	498	2,557	1,617	---	10,170	955	7,860	45,016	76,883
Average	22,932	3,325	4,164	514	2,562	1,533	---	10,054	801	7,446	43,767	76,227
2014 January	23,417	3,568	4,141	495	2,545	1,628	---	10,131	825	8,001	44,692	77,173
February	23,657	3,578	4,201	492	2,541	1,610	---	10,106	929	8,099	45,108	77,720
March	23,327	3,685	4,153	489	2,511	1,606	---	10,103	909	8,234	45,081	77,129
April	23,292	3,556	4,132	486	2,518	1,621	---	10,083	820	8,524	45,060	77,156
May	23,317	3,467	4,181	483	2,530	1,358	---	10,083	869	8,591	44,915	76,890
June	23,317	3,548	4,259	480	2,476	1,466	---	10,095	752	8,647	45,252	77,314
July	23,338	3,589	4,084	477	2,427	1,597	---	10,003	705	8,696	45,132	77,516
August	23,268	3,547	4,118	474	2,455	1,556	---	10,056	468	8,757	45,075	77,635
September	23,418	3,595	4,175	471	2,430	1,519	---	10,079	748	8,923	45,520	78,437
October	23,393	3,717	4,224	468	2,402	1,625	---	10,176	790	9,060	46,058	78,997
November	23,168	3,704	4,290	465	2,391	1,610	---	10,173	798	9,039	46,267	78,735
December	23,518	3,678	4,315	462	2,290	1,624	---	10,197	846	9,226	46,678	79,300
Average	23,368	3,603	4,189	478	2,459	1,568	---	10,107	787	8,653	45,404	77,834

^a See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On Tables 11.1a and 11.1b, countries are classified as "OPEC" or "Non-OPEC" in all years based on their status in the most current year. For example, Ecuador rejoined OPEC in 2007, and is thus included in "Total OPEC" for all years; and Indonesia left OPEC at the end of 2008, and is thus included in "Total Non-OPEC" for all years.

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

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

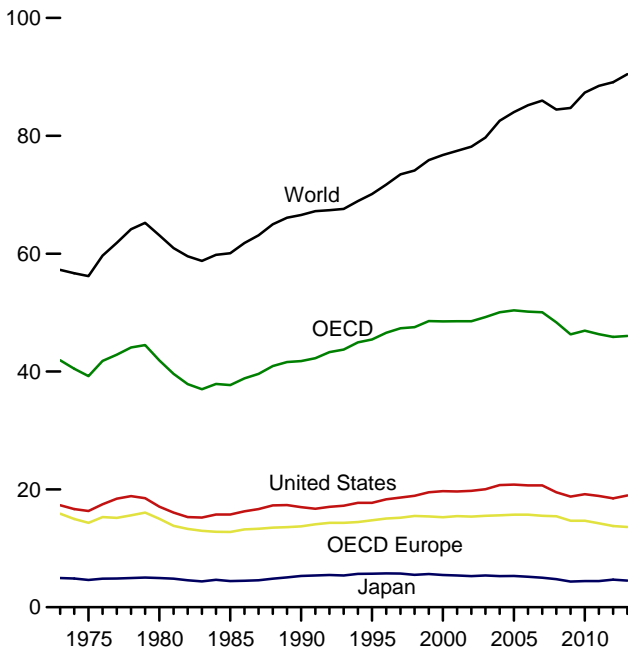
Notes: • Data are for crude oil and lease condensate; they exclude natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available. • Data for countries may not sum to World totals due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

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

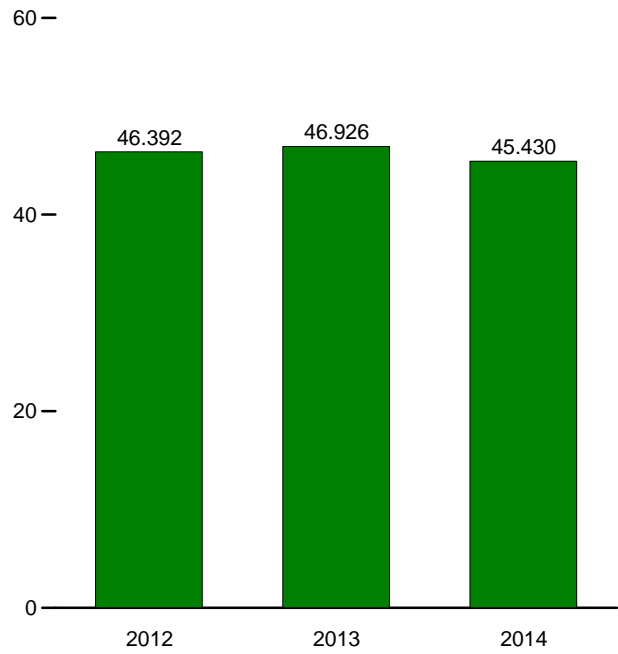
Sources: See end of section.

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

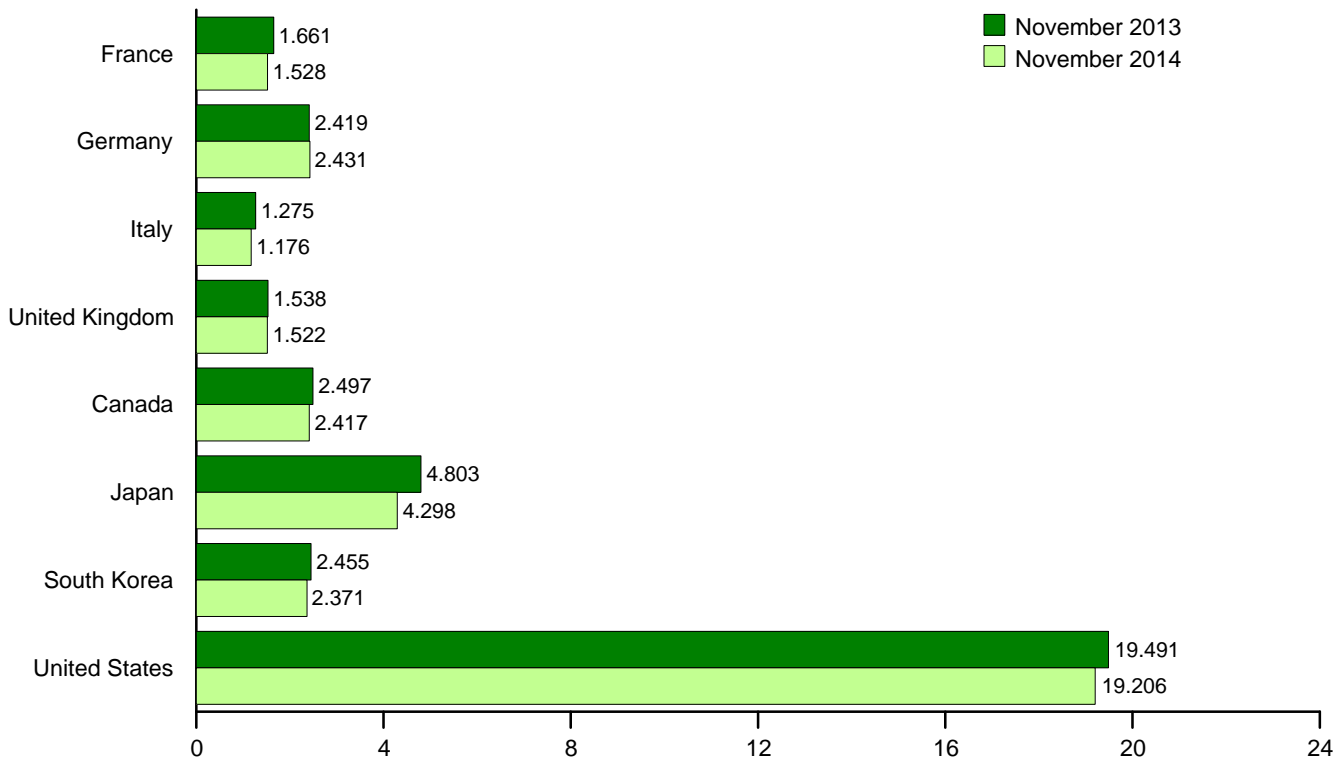
Overview, 1973–2013



OECD Total, November



By Selected OECD Country



Note: OECD is the Organization for Economic Cooperation and Development.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.
Source: Table 11.2.

Table 11.2 Petroleum Consumption in OECD Countries
(Thousand Barrels per Day)

	France	Germany ^a	Italy	United Kingdom	OECD Europe ^b	Canada	Japan	South Korea	United States	Other OECD ^c	OECD ^d	World
1973 Average	2,601	3,324	2,068	2,341	15,879	1,729	4,949	281	17,308	1,768	41,913	57,237
1975 Average	2,252	2,957	1,855	1,911	14,314	1,779	4,621	311	16,322	1,885	39,232	56,198
1980 Average	2,256	3,082	1,934	1,725	14,995	1,873	4,960	537	17,056	2,449	41,870	63,113
1985 Average	1,753	2,651	1,705	1,617	12,772	1,514	4,436	552	15,726	2,699	37,699	60,085
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	20,731	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	50,507	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
2012												
January	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
Average	1,772	2,389	1,370	1,528	13,772	2,352	4,695	2,322	18,490	4,237	45,868	89,111
2013												
January	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
Average	1,767	2,403	1,315	1,508	13,618	2,431	4,531	2,324	18,961	4,165	46,030	90,443
2014												
January	1,644	2,269	1,189	1,424	R 12,628	R 2,418	4,986	2,363	18,921	R 3,938	R 45,254	NA
February	1,749	2,282	1,234	R 1,540	R 13,188	R 2,532	5,231	2,385	18,994	R 4,147	R 46,476	NA
March	1,677	2,432	1,196	1,445	R 13,149	2,344	4,852	2,337	18,526	R 4,077	R 45,285	NA
April	1,741	2,387	1,204	R 1,515	R 13,450	R 2,265	4,064	2,289	18,783	R 4,016	R 44,867	NA
May	1,587	2,314	1,241	R 1,472	R 13,145	R 2,342	3,788	2,338	18,516	4,089	R 44,218	NA
June	1,735	2,267	1,229	1,546	13,520	2,415	3,774	2,330	18,833	4,015	44,887	NA
July	1,839	2,501	1,317	R 1,497	R 14,015	R 2,473	3,929	2,313	19,164	R 4,124	R 46,017	NA
August	1,675	2,457	1,187	1,533	R 13,533	R 2,401	3,900	2,380	19,276	R 3,964	R 45,454	NA
September	1,782	2,530	1,284	1,512	R 14,042	R 2,491	3,796	2,304	19,039	R 4,011	R 45,683	NA
October	1,776	2,519	1,278	1,506	R 13,931	R 2,431	3,930	2,257	19,630	R 4,100	R 46,279	NA
November	1,528	2,431	1,176	1,522	13,132	2,417	4,298	2,371	19,206	4,005	45,430	NA
11-Month Average	1,703	2,400	1,230	1,500	13,431	2,411	4,226	2,333	18,990	4,044	45,434	NA
2013 11-Month Average	1,776	2,427	1,316	1,513	13,673	2,434	4,470	2,309	18,959	4,165	46,009	NA
2012 11-Month Average	1,784	2,405	1,377	1,527	13,842	2,346	4,624	2,310	18,524	4,231	45,878	NA

^a Data are for unified Germany, i.e., the former East Germany and West Germany.

^b "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom; for 1984 forward, Czech Republic, Hungary, Poland, and Slovakia; and, for 2000 forward, Slovenia.

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

^d The Organization for Economic Cooperation and Development (OECD) consists of "OECD Europe," Canada, Japan, South Korea, the United States, and "Other OECD."

R=Revised. NA=Not available.

Notes: • Totals may not equal sum of components due to independent

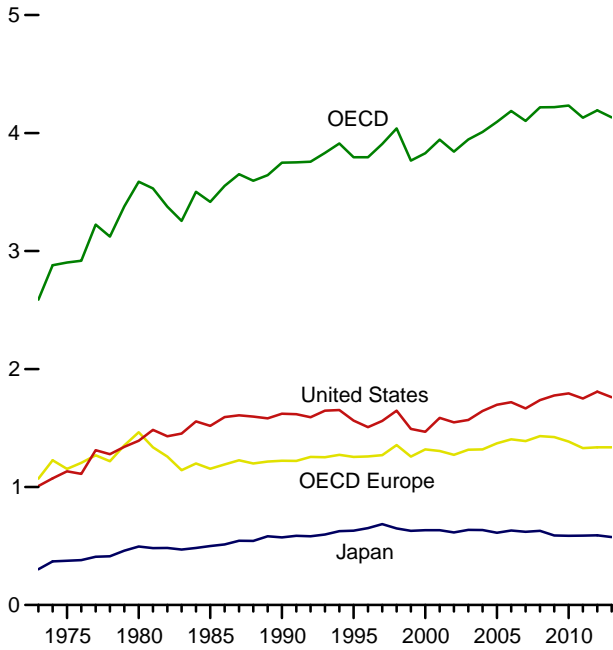
rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

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

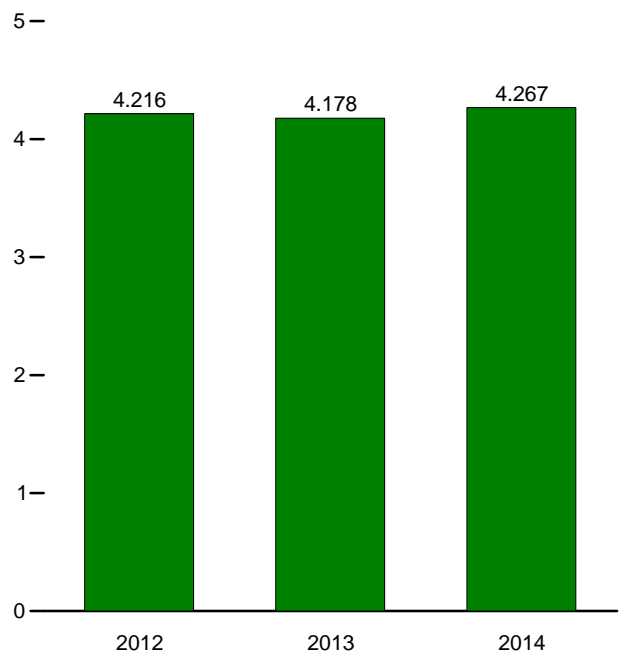
Sources: • **United States:** Table 3.1. • **Chile, East Germany, Former Czechoslovakia, Hungary, Mexico, Poland, South Korea, Non-OECD Countries, U.S. Territories, and World: 1973–1979—**U.S. Energy Information Administration (EIA), International Energy Database. • **Countries Other Than United States: 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*, March 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)

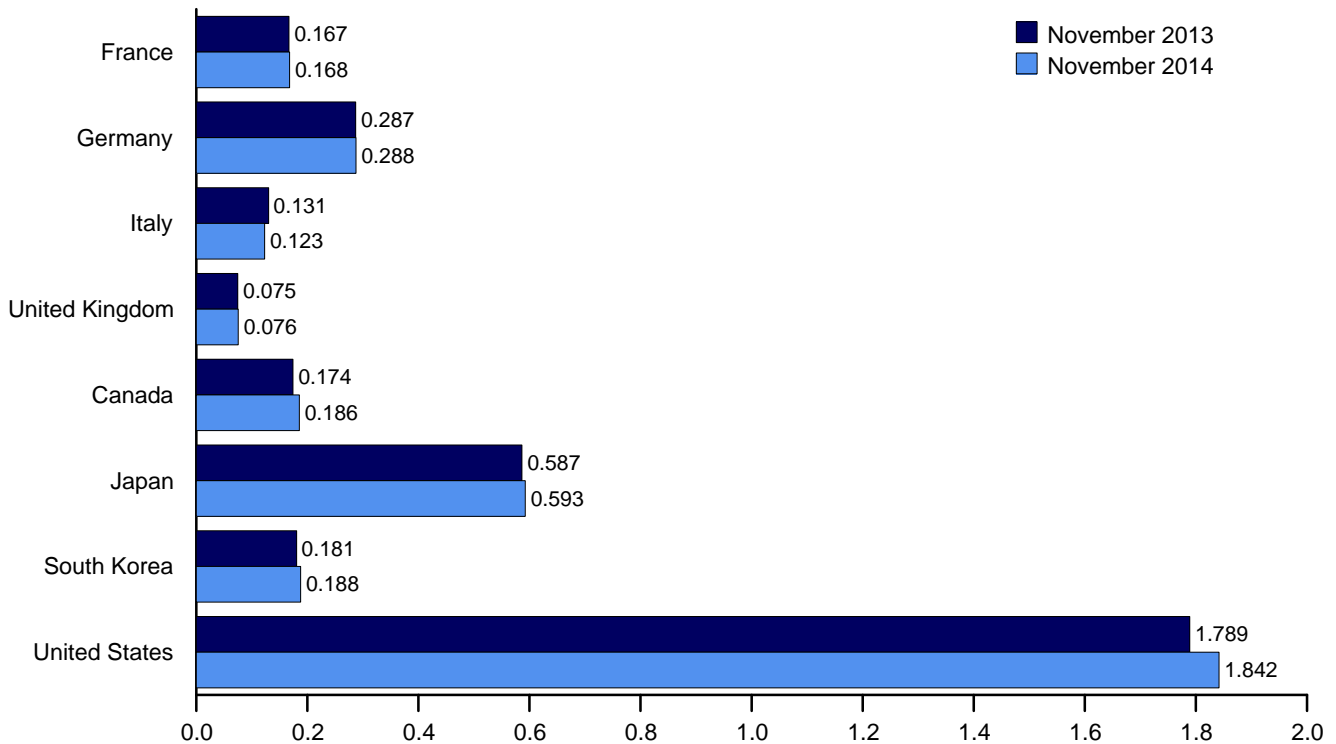
Overview, End of Year, 1973–2013



OECD Stocks, End of Month, November



By Selected OECD Country, End of Month



Note: OECD is the Organization for Economic Cooperation and Development.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.
Source: Table 11.3.

Table 11.3 Petroleum Stocks in OECD Countries
(Million Barrels)

	France	Germany ^a	Italy	United Kingdom	OECD Europe ^b	Canada	Japan	South Korea	United States	Other OECD ^c	OECD ^d
1973 Year	201	181	152	156	1,070	140	303	NA	1,008	67	2,588
1975 Year	225	187	143	165	1,154	174	375	NA	1,133	67	2,903
1980 Year	243	319	170	168	1,464	164	495	NA	1,392	72	3,587
1985 Year	139	277	156	131	1,154	112	500	13	1,519	119	3,417
1990 Year	143	280	171	103	1,222	143	572	64	1,621	126	3,749
1995 Year	155	302	162	101	1,256	132	631	92	1,563	122	3,795
1996 Year	154	303	152	103	1,259	127	651	123	1,507	127	3,794
1997 Year	161	299	147	100	1,271	144	685	124	1,560	123	3,907
1998 Year	169	323	153	104	1,355	139	649	129	1,647	120	4,039
1999 Year	160	290	148	101	1,258	141	629	132	1,493	114	3,766
2000 Year	170	272	157	100	1,318	143	634	140	1,468	126	3,829
2001 Year	165	273	151	113	1,306	154	634	143	1,586	120	3,944
2002 Year	170	253	156	104	1,273	155	615	140	1,548	112	3,843
2003 Year	179	273	153	100	1,316	165	636	155	1,568	105	3,945
2004 Year	177	267	154	101	1,319	154	635	149	1,645	108	4,010
2005 Year	185	283	151	95	1,371	168	612	135	1,698	112	4,095
2006 Year	182	283	153	103	1,404	169	631	152	1,720	113	4,187
2007 Year	180	275	152	92	1,389	163	621	143	1,665	121	4,103
2008 Year	179	279	148	93	1,431	162	629	135	1,737	124	4,218
2009 Year	175	284	146	89	1,424	157	589	155	1,776	118	4,219
2010 Year	168	287	143	83	1,385	184	587	165	1,794	119	4,234
2011 Year	165	281	135	80	1,330	178	589	167	1,750	117	4,131
2012 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
2013 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
2014 January	171	291	128	76	1,360	170	579	178	1,743	111	4,140
February	167	296	124	77	1,355	176	576	182	1,743	114	4,146
March	167	289	123	77	1,344	174	586	187	1,753	110	4,153
April	167	291	122	75	1,339	178	576	180	1,780	112	4,165
May	172	294	128	76	1,362	176	584	184	1,809	114	4,230
June	168	292	122	75	1,347	179	585	180	1,814	112	4,217
July	170	287	120	73	1,341	187	591	180	1,818	113	4,231
August	173	288	125	76	^R 1,361	187	601	188	1,822	117	4,275
September	171	287	123	75	1,356	186	604	187	1,835	^R 115	^R 4,284
October	169	^R 287	117	^R 72	^R 1,344	185	606	184	1,830	114	^R 4,263
November	168	288	123	76	1,346	186	593	188	1,842	113	4,267

^a Through December 1983, the data for Germany are for the former West Germany only. Beginning with January 1984, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

^b "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom; for 1984 forward, Czech Republic, Hungary, Poland, and Slovakia; and, for 2000 forward, Slovenia.

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

^d The Organization for Economic Cooperation and Development (OECD) consists of "OECD Europe," Canada, Japan, South Korea, the United States, and "Other OECD."

^R—Revised. NA=Not available.

Notes: • Stocks are at end of period. • Petroleum stocks include crude oil

(including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. • In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, thereby affecting subsequent stocks reported. New-basis end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,425 in 1980, and 1,461 in 1982. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> (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, March 13, 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, March 2015.

All Other Countries and World, Monthly Data

1973–1980: *Petroleum Intelligence Weekly (PIW)*, *Oil & Gas Journal (OGJ)*, and EIA adjustments.

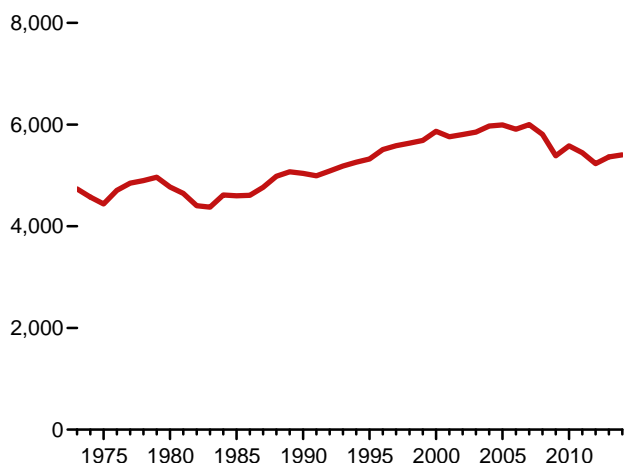
1981–1993: *PIW*, *OGJ*, and other industry sources.

1994 forward: EIA, International Energy Database, March 2015.

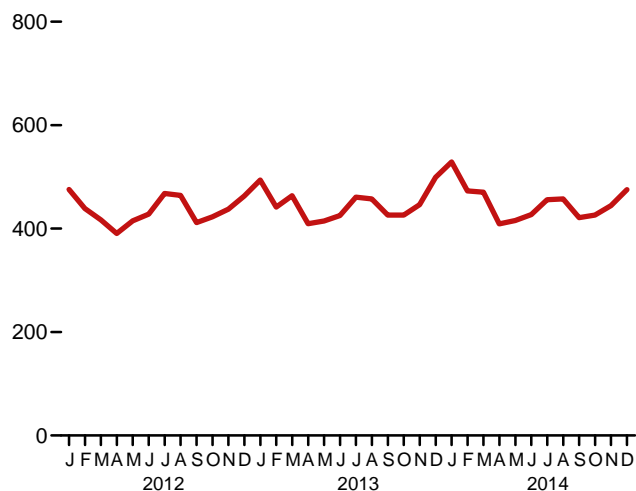
12. Environment

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

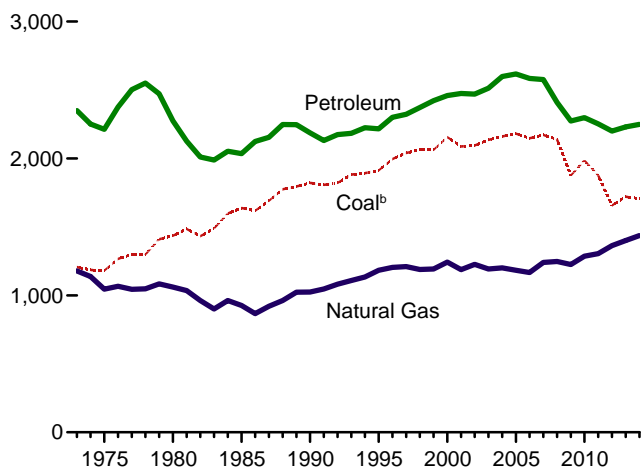
Total,^a 1973–2014



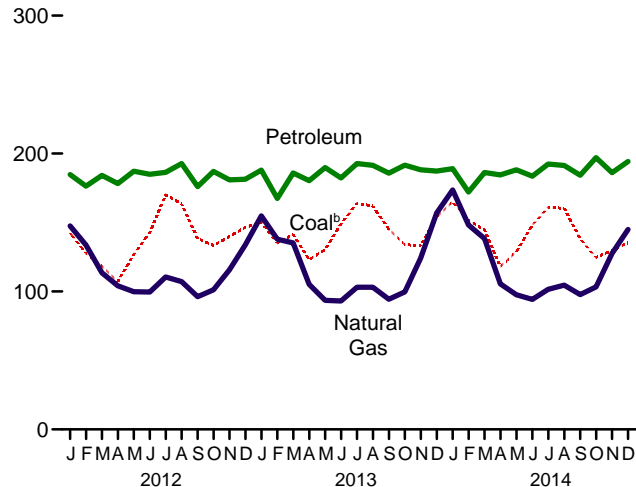
Total,^a Monthly



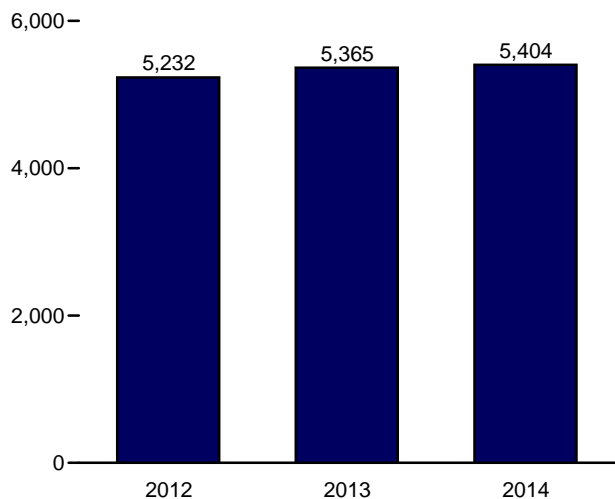
By Major Source, 1973–2014



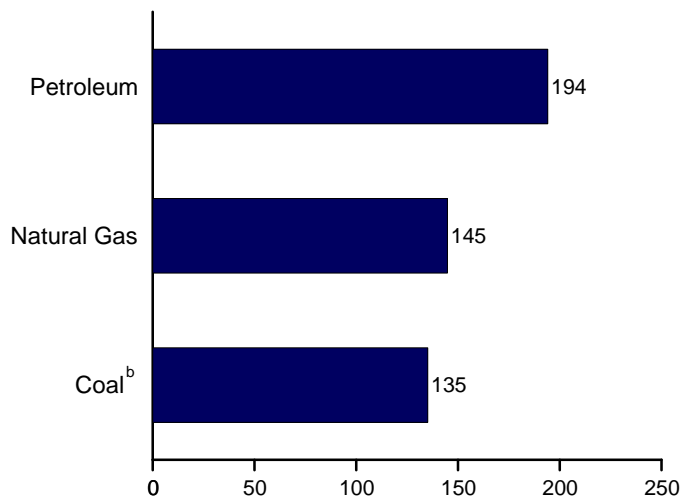
By Major Source, Monthly



Total,^a January–December



By Major Source, December 2014



^a Excludes emissions from biomass energy consumption.
^b 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^a)

	Coal ^b	Natural Gas ^c	Petroleum										Total ^{h,i}	
			Aviation Gasoline	Distillate Fuel Oil ^d	Jet Fuel	Kero-sene	LPG ^e	Lubri-cants	Motor Gasoline ^f	Petroleum Coke	Residual Fuel Oil	Other ^g		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	2,299	5,582
2011 Total	1,876	1,305	2	599	209	2	78	10	1,078	79	79	117	2,252	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	R 130	R 94	(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	R 461
August	162	103	(s)	47	19	(s)	6	1	95	7	6	9	192	R 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	1,721	R 1,401	2	581	210	1	88	10	1,087	77	56	119	2,231	R 5,365
2014 January	165	R 174	(s)	55	17	(s)	10	1	85	8	4	9	189	529
February	152	148	(s)	49	15	(s)	7	1	82	5	3	10	172	473
March	145	138	(s)	52	18	(s)	7	1	91	4	3	9	186	470
April	R 118	R 106	(s)	50	17	(s)	6	1	91	6	4	10	R 184	R 409
May	129	R 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	R 102	(s)	50	19	(s)	6	1	96	7	4	9	192	456
August	160	R 105	(s)	49	19	(s)	6	1	97	7	3	9	191	457
September	138	R 98	(s)	49	18	(s)	6	1	R 88	7	4	11	184	421
October	125	103	(s)	55	18	(s)	7	1	96	7	4	9	197	426
November	130	R 128	(s)	49	18	(s)	8	1	90	7	5	9	186	444
December	135	145	(s)	54	19	(s)	8	1	94	5	4	8	194	475
Total	1,706	1,437	2	610	216	1	82	10	1,095	77	45	111	2,249	5,404

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

^b Includes coal coke net imports.

^c Natural gas, excluding supplemental gaseous fuels.

^d Distillate fuel oil, excluding biodiesel.

^e Liquefied petroleum gases.

^f Finished motor gasoline, excluding fuel ethanol.

^g Aviation gasoline blending components, crude oil, motor gasoline blending components, pentanes plus, petrochemical feedstocks, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products.

^h Includes electric power sector use of geothermal energy and non-biomass waste. See Table 12.6.

ⁱ Excludes emissions from biomass energy consumption. See Table 12.7.

R=Revised. (s)=Less than 0.5 million metric tons.

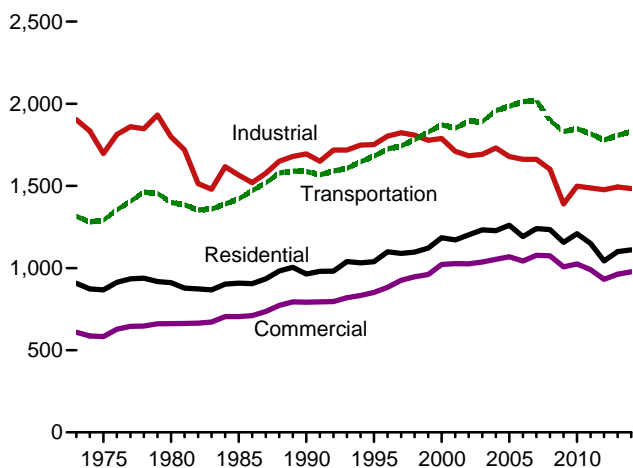
Notes: • Data are estimates for carbon dioxide emissions from energy consumption, including the nonfuel use of fossil fuels. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of 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.

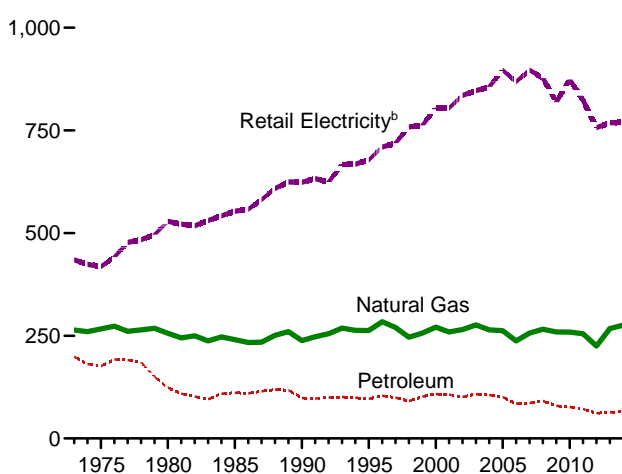
Sources: See end of section.

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

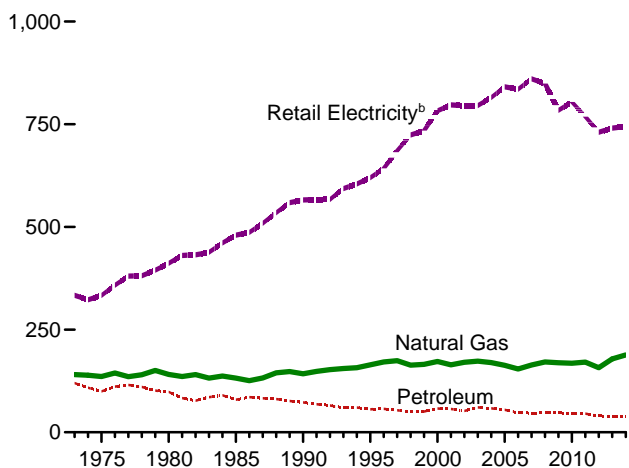
Total^a by End-Use Sector,^b 1973–2014



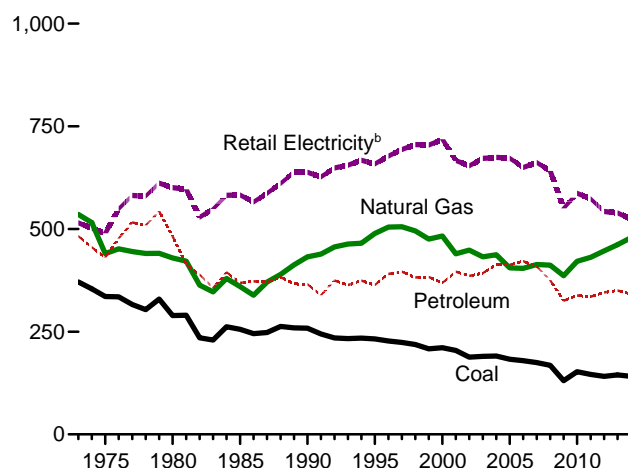
Residential Sector by Major Source, 1973–2014



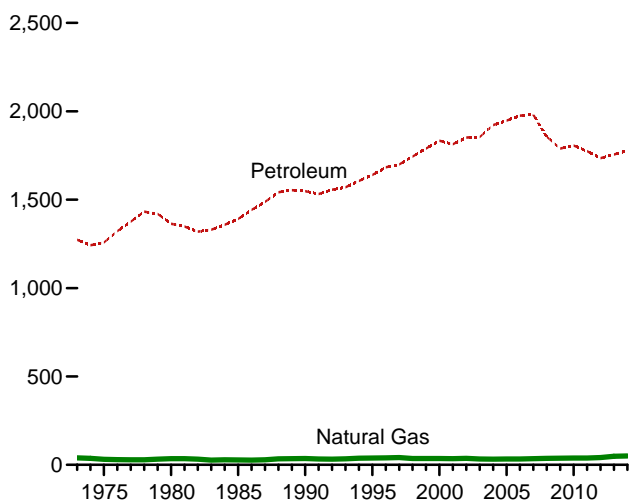
Commercial Sector by Major Source, 1973–2014



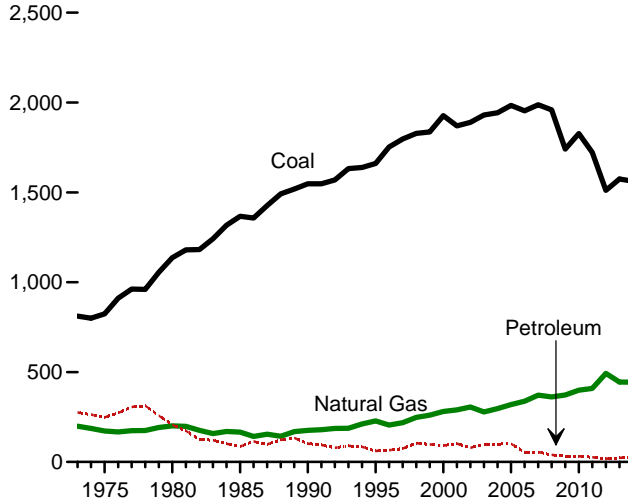
Industrial Sector by Major Source, 1973–2014



Transportation Sector by Major Source, 1973–2014



Electric Power Sector by Major Source, 1973–2014



^a Excludes emissions from biomass energy consumption.

^b Emissions from energy consumption in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of

total electricity retail sales.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#environment>.
Sources: Tables 12.2–12.6.

Table 12.2 Carbon Dioxide Emissions From Energy Consumption: Residential Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Natural Gas ^b	Petroleum				Retail Electricity ^e	Total ^f
			Distillate Fuel Oil ^c	Kerosene	LPG ^d	Total		
1973 Total	9	264	147	16	36	199	435	907
1975 Total	6	266	132	12	32	176	419	867
1980 Total	3	256	96	8	20	124	529	911
1985 Total	4	241	80	11	20	111	553	909
1990 Total	3	238	72	5	22	98	624	963
1995 Total	2	263	66	5	25	96	678	1,039
1996 Total	2	284	68	6	30	104	710	1,099
1997 Total	2	270	64	7	29	99	719	1,090
1998 Total	1	247	56	8	27	91	759	1,097
1999 Total	1	257	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	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	67	6	32	106	856	1,227
2005 Total	1	262	62	6	32	101	897	1,261
2006 Total	1	237	52	5	28	85	869	1,191
2007 Total	1	257	53	3	31	86	897	1,241
2008 Total	NA	266	55	2	35	91	877	1,234
2009 Total	NA	259	43	2	35	79	819	1,157
2010 Total	NA	259	41	2	33	77	874	1,210
2011 Total	NA	255	38	1	32	72	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	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	35	1	25	61	757	1,043
2013 January	NA	48	6	(s)	3	8	72	128
February	NA	41	5	(s)	2	8	61	R 109
March	NA	36	5	(s)	2	7	62	R 105
April	NA	20	3	(s)	2	6	50	R 75
May	NA	11	2	(s)	2	4	51	66
June	NA	7	2	(s)	2	3	R 66	77
July	NA	6	2	(s)	2	4	R 82	R 92
August	NA	6	2	(s)	2	4	79	89
September	NA	6	2	(s)	2	4	R 66	77
October	NA	12	2	(s)	2	4	R 53	70
November	NA	28	3	(s)	2	5	54	R 87
December	NA	46	3	(s)	3	6	74	126
Total	NA	267	36	1	27	64	R 769	R 1,100
2014 January	NA	56	4	(s)	3	R 7	84	R 148
February	NA	46	R 5	(s)	2	R 7	R 72	R 125
March	NA	38	4	(s)	2	6	63	R 108
April	NA	19	2	(s)	2	4	47	70
May	NA	11	R 3	(s)	2	R 5	51	67
June	NA	7	2	(s)	2	4	66	R 77
July	NA	6	2	(s)	2	4	78	R 88
August	NA	6	2	(s)	2	4	78	R 88
September	NA	7	R 3	(s)	2	5	64	75
October	NA	12	3	(s)	2	R 6	51	R 68
November	NA	29	R 4	(s)	2	6	54	R 90
December	NA	39	4	(s)	3	7	63	109
Total	NA	276	38	1	26	65	770	1,111

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

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Liquefied petroleum gases.

^e Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

^f Excludes emissions from biomass energy consumption. See Table 12.7.

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.

Table 12.3 Carbon Dioxide Emissions From Energy Consumption: Commercial Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Natural Gas ^b	Petroleum							Retail Electricity ^f	Total ^g
			Distillate Fuel Oil ^c	Kerosene	LPG ^d	Motor Gasoline ^e	Petroleum Coke	Residual Fuel Oil	Total		
1973 Total	15	141	47	5	9	6	NA	52	120	334	609
1975 Total	14	136	43	4	8	6	NA	39	100	333	583
1980 Total	11	141	38	3	6	8	NA	44	98	412	662
1985 Total	13	132	46	2	6	7	NA	18	79	480	704
1990 Total	12	142	39	1	6	8	0	18	73	566	793
1995 Total	11	164	35	2	7	1	(s)	11	56	620	851
1996 Total	12	171	35	2	8	2	(s)	11	57	643	883
1997 Total	12	174	32	2	8	3	(s)	9	54	686	926
1998 Total	9	164	31	2	7	3	(s)	7	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	60	796	1,037
2004 Total	10	170	34	1	10	3	(s)	10	58	815	1,053
2005 Total	9	163	33	2	8	3	(s)	9	55	841	1,069
2006 Total	6	154	29	1	8	3	(s)	6	47	835	1,043
2007 Total	7	164	28	1	8	4	(s)	6	46	861	1,078
2008 Total	8	171	28	(s)	10	3	(s)	6	47	849	1,075
2009 Total	7	169	29	(s)	9	4	(s)	6	47	784	1,007
2010 Total	7	168	29	(s)	9	3	(s)	5	46	804	1,025
2011 Total	6	171	29	(s)	9	3	(s)	4	45	768	990
2012 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	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	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	75
November	(s)	17	2	(s)	1	(s)	(s)	(s)	3	59	79
December	(s)	21	2	(s)	1	(s)	(s)	(s)	4	59	84
Total	4	157	26	(s)	9	3	(s)	2	40	731	932
2013 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)	4	58	84
April	(s)	13	2	(s)	1	(s)	(s)	(s)	4	53	R 70
May	(s)	9	2	(s)	1	(s)	0	(s)	3	R 58	R 70
June	(s)	7	1	(s)	1	(s)	0	(s)	2	67	R 76
July	(s)	7	1	(s)	1	(s)	(s)	(s)	2	R 73	83
August	(s)	7	1	(s)	1	(s)	(s)	(s)	3	73	R 83
September	(s)	8	2	(s)	1	(s)	(s)	(s)	3	65	76
October	(s)	11	1	(s)	1	(s)	(s)	(s)	2	61	R 74
November	(s)	19	2	(s)	1	(s)	(s)	(s)	3	R 57	R 79
December	(s)	26	2	(s)	1	(s)	(s)	(s)	4	R 62	92
Total	4	178	25	(s)	9	3	(s)	2	39	R 741	R 962
2014 January	(s)	31	R 3	(s)	1	(s)	(s)	(s)	4	66	R 102
February	(s)	27	3	(s)	1	(s)	(s)	(s)	4	59	R 91
March	(s)	23	R 3	(s)	1	(s)	(s)	(s)	4	R 60	R 87
April	(s)	14	1	(s)	1	(s)	(s)	(s)	2	52	R 69
May	(s)	10	2	(s)	1	(s)	(s)	(s)	3	59	R 72
June	(s)	8	R 2	(s)	1	(s)	0	(s)	R 3	R 67	77
July	(s)	7	1	(s)	1	(s)	(s)	(s)	2	72	82
August	(s)	7	1	(s)	1	(s)	(s)	(s)	R 3	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	74
November	(s)	20	R 3	(s)	1	(s)	(s)	(s)	R 4	57	R 81
December	1	23	3	(s)	1	(s)	(s)	(s)	4	57	85
Total	4	188	26	(s)	9	3	(s)	1	40	745	977

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

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Liquefied petroleum gases.

^e Finished motor gasoline, excluding fuel ethanol.

^f Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

^g Excludes emissions from biomass energy consumption. See Table 12.7.

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.

Table 12.4 Carbon Dioxide Emissions From Energy Consumption: Industrial Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Coal Coke Net Imports	Natural Gas ^b	Petroleum									Retail Elec- tricity ^g	Total ^h
				Distillate Fuel Oil ^c	Kero- sene	LPG ^d	Lubri- cants	Motor Gasoline ^e	Petroleum Coke	Residual Fuel Oil	Other ^f	Total		
1973 Total	371	-1	536	106	11	44	7	18	52	144	100	483	515	1,904
1975 Total	336	2	440	97	9	39	6	16	51	117	97	431	490	1,697
1980 Total	289	-4	429	96	13	61	7	11	48	105	142	483	601	1,798
1985 Total	256	-2	360	81	3	59	6	15	54	57	93	369	583	1,566
1990 Total	258	1	432	84	1	37	7	13	67	31	127	366	638	1,695
1995 Total	233	7	489	82	1	47	7	14	67	25	121	364	659	1,751
1996 Total	227	3	505	86	1	48	6	14	71	24	139	391	678	1,803
1997 Total	224	5	505	88	1	50	7	15	70	21	145	396	694	1,824
1998 Total	219	8	495	88	2	47	7	14	80	16	128	382	706	1,809
1999 Total	208	7	475	86	1	47	7	11	85	14	133	383	704	1,778
2000 Total	211	7	483	87	1	52	7	11	76	17	118	369	719	1,788
2001 Total	204	3	440	95	2	45	6	21	79	14	135	396	667	1,711
2002 Total	188	7	448	88	1	47	6	22	79	13	130	386	654	1,683
2003 Total	190	6	432	85	2	41	6	23	78	16	142	392	672	1,692
2004 Total	191	16	437	88	2	44	6	26	85	18	144	413	674	1,731
2005 Total	183	5	405	92	3	42	6	25	82	20	143	413	672	1,678
2006 Total	179	7	404	91	2	43	6	26	85	16	152	422	650	1,662
2007 Total	175	3	414	91	1	43	6	21	83	13	150	408	662	1,661
2008 Total	168	5	412	98	(s)	32	6	17	78	13	132	376	642	1,602
2009 Total	131	-3	386	78	(s)	33	5	16	73	8	112	325	550	1,390
2010 Total	153	-1	421	84	1	35	6	17	68	6	122	338	587	1,498
2011 Total	146	1	431	90	(s)	34	5	17	65	6	117	335	574	1,487
2012 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	7	(s)	8	28	46	122
June	11	(s)	35	6	(s)	3	(s)	1	6	(s)	10	28	47	121
July	11	(s)	36	5	(s)	3	(s)	1	6	(s)	10	26	52	125
August	12	(s)	37	6	(s)	3	(s)	1	7	(s)	10	28	50	127
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
Total	141	(s)	447	93	(s)	45	5	17	70	3	113	346	543	1,477
2013 January	12	(s)	41	10	(s)	6	(s)	1	7	(s)	9	33	R 44	R 130
February	12	(s)	38	7	(s)	5	(s)	1	4	(s)	9	26	R 41	R 117
March	12	(s)	40	7	(s)	5	(s)	1	R 5	(s)	8	27	44	R 123
April	12	(s)	37	7	(s)	4	(s)	1	4	(s)	9	26	41	116
May	12	(s)	37	7	(s)	3	(s)	2	6	(s)	11	30	R 45	R 124
June	12	(s)	36	6	(s)	3	(s)	1	6	(s)	9	27	R 47	R 121
July	12	(s)	37	6	(s)	4	(s)	2	6	(s)	11	28	R 49	R 126
August	12	(s)	37	6	(s)	3	(s)	2	6	(s)	9	26	R 50	R 125
September	12	(s)	36	7	(s)	3	(s)	1	6	(s)	12	31	R 45	123
October	12	(s)	38	11	(s)	4	(s)	2	5	(s)	9	31	44	126
November	12	(s)	40	9	(s)	4	(s)	1	6	(s)	11	33	R 44	129
December	12	(s)	43	9	(s)	5	(s)	1	5	(s)	11	32	44	R 132
Total	145	-2	462	92	(s)	49	5	18	65	2	119	350	R 539	R 1,494
2014 January	12	(s)	44	R 11	(s)	6	(s)	1	7	(s)	9	R 34	45	R 135
February	12	(s)	40	R 9	(s)	4	(s)	1	4	(s)	10	R 28	41	R 121
March	12	(s)	42	R 9	(s)	4	(s)	1	3	(s)	9	R 27	43	R 124
April	12	(s)	39	R 9	(s)	3	(s)	1	5	(s)	10	R 29	R 39	R 119
May	12	(s)	38	R 7	(s)	2	(s)	2	6	(s)	9	R 27	44	R 121
June	12	(s)	37	R 6	(s)	3	(s)	1	5	(s)	9	R 25	46	R 120
July	12	(s)	38	R 7	(s)	3	(s)	2	6	(s)	9	R 27	48	R 125
August	12	(s)	39	R 6	(s)	3	(s)	2	6	(s)	9	R 26	49	R 126
September	R 12	(s)	38	R 7	(s)	3	(s)	1	6	(s)	11	R 29	43	R 121
October	12	(s)	39	R 10	(s)	4	(s)	2	6	(s)	9	R 31	42	R 124
November	11	(s)	41	R 7	(s)	4	(s)	1	7	(s)	9	R 29	42	R 123
December	11	(s)	43	10	(s)	5	(s)	2	4	(s)	8	29	41	123
Total	141	-2	479	97	(s)	44	5	18	65	2	111	342	524	1,484

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

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Liquefied petroleum gases.

^e Finished motor gasoline, excluding fuel ethanol.

^f Aviation gasoline blending components, crude oil, motor gasoline blending components, pentanes plus, petrochemical feedstocks, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products.

^g Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

^h Excludes emissions from biomass energy consumption. See Table 12.7.

R=Revised. (s)=Less than 0.5 million metric tons and greater than -0.5 million metric tons.

Notes: • Data are estimates for carbon dioxide emissions from energy consumption, including the nonfuel use of fossil fuels. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

Sources: See end of section.

Table 12.5 Carbon Dioxide Emissions From Energy Consumption: Transportation Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Natural Gas ^b	Petroleum							Retail Electricity ^f	Total ^g	
			Aviation Gasoline	Distillate Fuel Oil ^c	Jet Fuel	LPG ^d	Lubricants	Motor Gasoline ^e	Residual Fuel Oil			Total
1973 Total	(s)	39	6	163	152	3	6	886	57	1,273	2	1,315
1975 Total	(s)	32	5	155	145	3	6	889	56	1,258	2	1,292
1980 Total	(h)	34	4	204	155	1	6	881	110	1,363	2	1,400
1985 Total	(h)	28	3	232	178	2	6	908	62	1,391	3	1,421
1990 Total	(h)	36	3	268	223	1	7	967	80	1,548	3	1,588
1995 Total	(h)	38	3	307	222	1	6	1,029	72	1,640	3	1,681
1996 Total	(h)	39	3	327	232	1	6	1,047	67	1,683	3	1,725
1997 Total	(h)	41	3	341	234	1	6	1,057	56	1,700	3	1,744
1998 Total	(h)	35	2	352	238	1	7	1,090	53	1,743	3	1,782
1999 Total	(h)	36	3	365	245	1	7	1,115	52	1,789	3	1,828
2000 Total	(h)	36	3	377	254	1	7	1,122	70	1,833	4	1,873
2001 Total	(h)	35	2	387	243	1	6	1,128	46	1,813	4	1,852
2002 Total	(h)	37	2	394	237	1	6	1,158	53	1,852	4	1,892
2003 Total	(h)	33	2	408	231	1	6	1,161	45	1,854	5	1,892
2004 Total	(h)	32	2	433	240	1	6	1,181	58	1,922	5	1,959
2005 Total	(h)	33	2	444	246	2	6	1,182	66	1,948	5	1,986
2006 Total	(h)	33	2	467	240	2	5	1,188	71	1,976	5	2,014
2007 Total	(h)	35	2	469	238	1	6	1,186	78	1,981	5	2,021
2008 Total	(h)	37	2	424	226	3	5	1,124	73	1,856	5	1,898
2009 Total	(h)	38	2	405	204	2	5	1,109	62	1,789	5	1,832
2010 Total	(h)	38	2	426	210	2	5	1,091	70	1,806	5	1,849
2011 Total	(h)	39	2	437	209	2	5	1,058	61	1,774	4	1,818
2012 January	(h)	4	(s)	32	16	(s)	(s)	84	5	139	(s)	143
February	(h)	4	(s)	31	16	(s)	(s)	83	5	134	(s)	139
March	(h)	3	(s)	34	17	(s)	(s)	88	5	145	(s)	149
April	(h)	3	(s)	34	16	(s)	(s)	87	5	143	(s)	147
May	(h)	3	(s)	36	18	(s)	(s)	92	4	151	(s)	154
June	(h)	3	(s)	36	19	(s)	(s)	89	4	148	(s)	152
July	(h)	3	(s)	37	18	(s)	(s)	91	6	152	(s)	155
August	(h)	3	(s)	37	18	(s)	(s)	94	5	155	(s)	158
September	(h)	3	(s)	35	17	(s)	(s)	85	5	142	(s)	145
October	(h)	3	(s)	37	17	(s)	(s)	89	4	147	(s)	151
November	(h)	4	(s)	34	17	(s)	(s)	84	4	140	(s)	143
December	(h)	4	(s)	33	17	(s)	(s)	86	2	139	(s)	144
Total	(h)	41	2	416	206	2	5	1,051	53	1,735	4	1,780
2013 January	(h)	5	(s)	33	16	(s)	(s)	86	4	139	(s)	145
February	(h)	5	(s)	30	15	(s)	(s)	78	3	127	(s)	132
March	(h)	5	(s)	34	17	(s)	(s)	89	6	146	(s)	151
April	(h)	4	(s)	35	17	(s)	(s)	88	3	144	(s)	148
May	(h)	3	(s)	37	18	(s)	(s)	93	3	151	(s)	155
June	(h)	3	(s)	36	18	(s)	(s)	90	3	148	(s)	152
July	(h)	4	(s)	38	19	(s)	(s)	94	4	156	(s)	160
August	(h)	4	(s)	38	19	(s)	(s)	94	5	156	(s)	160
September	(h)	3	(s)	35	17	(s)	(s)	89	5	146	(s)	150
October	(h)	3	(s)	38	18	(s)	(s)	91	3	152	(s)	156
November	(h)	4	(s)	35	17	(s)	(s)	88	4	146	(s)	150
December	(h)	5	(s)	35	18	(s)	(s)	89	2	144	(s)	150
Total	(h)	49	2	424	210	3	5	1,066	46	1,755	4	1,808
2014 January	(h)	6	(s)	^R 35	17	(s)	(s)	84	2	138	(s)	144
February	(h)	5	(s)	32	15	(s)	(s)	80	2	130	(s)	^R 136
March	(h)	5	(s)	36	18	(s)	(s)	89	2	146	(s)	151
April	(h)	4	(s)	^R 37	17	(s)	(s)	89	3	147	(s)	151
May	(h)	3	(s)	38	17	(s)	(s)	92	3	^R 152	(s)	^R 156
June	(h)	3	(s)	^R 38	19	(s)	(s)	89	3	^R 150	(s)	^R 154
July	(h)	4	(s)	^R 40	19	(s)	(s)	94	3	^R 157	(s)	^R 161
August	(h)	4	(s)	^R 40	19	(s)	(s)	95	2	^R 157	(s)	^R 161
September	(h)	3	(s)	^R 37	18	(s)	(s)	87	3	145	(s)	149
October	(h)	4	(s)	39	18	(s)	(s)	94	4	156	(s)	^R 160
November	(h)	4	(s)	35	18	(s)	(s)	88	4	^R 146	(s)	^R 151
December	(h)	5	(s)	37	19	(s)	(s)	92	4	153	(s)	158
Total	(h)	50	2	444	216	2	5	1,075	35	1,778	4	1,832

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

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Liquefied petroleum gases.

^e Finished motor gasoline, excluding fuel ethanol.

^f Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

^g Excludes emissions from biomass energy consumption. See Table 12.7.

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

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.

Table 12.6 Carbon Dioxide Emissions From Energy Consumption: Electric Power Sector
(Million Metric Tons of Carbon Dioxide^a)

	Coal	Natural Gas ^b	Petroleum				Geo-thermal	Non-Biomass Waste ^d	Total ^e
			Distillate Fuel Oil ^c	Petroleum Coke	Residual Fuel Oil	Total			
1973 Total	812	199	20	2	254	276	NA	NA	1,286
1975 Total	824	172	17	(s)	231	248	NA	NA	1,244
1980 Total	1,137	200	12	1	194	207	NA	NA	1,544
1985 Total	1,367	166	6	1	79	86	NA	NA	1,619
1990 Total	1,548	176	7	3	92	102	(s)	6	1,831
1995 Total	1,661	228	8	8	45	61	(s)	10	1,960
1996 Total	1,752	205	8	8	50	66	(s)	10	2,033
1997 Total	1,797	219	8	10	56	75	(s)	10	2,101
1998 Total	1,828	248	10	13	82	105	(s)	10	2,192
1999 Total	1,836	260	10	11	76	97	(s)	10	2,204
2000 Total	1,927	281	13	10	69	91	(s)	10	2,310
2001 Total	1,870	290	12	11	79	102	(s)	11	2,273
2002 Total	1,890	306	9	18	52	79	(s)	13	2,288
2003 Total	1,931	278	12	18	69	98	(s)	11	2,319
2004 Total	1,943	297	8	22	69	99	(s)	11	2,350
2005 Total	1,984	319	8	24	69	101	(s)	11	2,416
2006 Total	1,954	338	5	21	28	55	(s)	12	2,358
2007 Total	1,987	372	6	17	31	54	(s)	11	2,425
2008 Total	1,959	362	5	15	19	39	(s)	12	2,373
2009 Total	1,741	373	5	13	14	33	(s)	11	2,158
2010 Total	1,828	399	6	14	12	32	(s)	11	2,270
2011 Total	1,723	409	5	14	7	26	(s)	11	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)	(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)	1	(s)	1	169
Total	1,511	493	4	9	6	19	(s)	11	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	R 31	(s)	1	(s)	2	(s)	1	144
May	118	33	(s)	1	(s)	2	(s)	1	155
June	R 137	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 177
October	121	35	(s)	1	(s)	2	(s)	1	159
November	121	R 33	(s)	1	(s)	2	(s)	1	156
December	141	36	(s)	1	1	2	(s)	1	R 181
Total	R 1,574	R 444	4	13	6	23	(s)	11	R 2,053
2014 January	153	36	2	1	2	5	(s)	1	195
February	R 139	30	1	1	1	2	(s)	1	173
March	132	30	1	1	1	3	(s)	1	166
April	R 106	30	(s)	1	(s)	1	(s)	1	R 139
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	R 148	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
November	118	33	(s)	1	(s)	R 2	(s)	1	153
December	124	35	(s)	1	(s)	2	(s)	1	161
Total	1,562	444	6	12	8	25	(s)	11	2,043

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

^b Natural gas, excluding supplemental gaseous fuels.

^c Distillate fuel oil, excluding biodiesel.

^d Municipal solid waste from non-biogenic sources, and tire-derived fuels.

^e Excludes emissions from biomass energy consumption. See Table 12.7.

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.

Table 12.7 Carbon Dioxide Emissions From Biomass Energy Consumption
(Million Metric Tons of Carbon Dioxide^a)

	By Source					By Sector					
	Wood ^b	Biomass Waste ^c	Fuel Ethanol ^d	Bio-diesel	Total	Residential	Commercial ^e	Industrial ^f	Transportation	Electric Power ^g	Total
1973 Total	143	(s)	NA	NA	143	33	1	109	NA	(s)	143
1975 Total	140	(s)	NA	NA	141	40	1	100	NA	(s)	141
1980 Total	232	(s)	NA	NA	232	80	2	150	NA	(s)	232
1985 Total	252	14	3	NA	270	95	2	168	3	1	270
1990 Total	208	24	4	NA	237	54	8	147	4	23	237
1995 Total	222	30	8	NA	260	49	9	166	8	28	260
1996 Total	229	32	6	NA	266	51	10	170	6	30	266
1997 Total	222	30	7	NA	259	40	10	172	7	30	259
1998 Total	205	30	8	NA	242	36	9	160	8	30	242
1999 Total	208	29	8	NA	245	37	9	161	8	30	245
2000 Total	212	27	9	NA	248	39	9	161	9	29	248
2001 Total	188	33	10	(s)	231	35	9	147	10	31	231
2002 Total	187	36	12	(s)	235	36	9	144	12	35	235
2003 Total	188	36	16	(s)	240	38	9	141	16	37	240
2004 Total	199	35	20	(s)	255	38	10	151	20	36	255
2005 Total	200	37	23	1	261	40	10	150	23	37	261
2006 Total	197	36	31	2	266	36	9	151	33	38	266
2007 Total	196	37	39	3	276	39	9	146	41	39	276
2008 Total	193	39	55	3	290	44	10	139	57	40	290
2009 Total	181	41	62	3	287	47	10	125	64	41	287
2010 Total	186	42	73	2	303	41	10	136	74	42	303
2011 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
Total	189	42	73	8	312	39	10	141	80	42	312
2013 January	17	4	6	1	R 28	5	1	12	6	4	R 28
February	R 16	3	5	1	25	4	1	11	6	3	25
March	17	4	6	1	28	5	1	12	7	4	28
April	16	R 4	6	1	R 27	4	1	11	7	3	R 27
May	R 17	4	6	1	28	5	1	R 12	7	3	28
June	17	4	6	1	28	4	1	R 12	7	4	28
July	18	4	6	1	29	5	1	12	7	4	29
August	R 18	4	6	1	R 29	5	1	12	7	4	R 29
September	R 17	R 4	6	1	R 28	4	1	11	7	4	R 28
October	17	4	7	2	29	5	1	R 12	8	4	29
November	17	4	6	1	28	4	1	R 12	7	4	28
December	18	4	6	2	R 30	5	1	12	8	4	R 30
Total	R 204	R 45	75	13	R 336	54	11	R 141	87	43	R 336
2014 January	R 18	4	6	1	28	5	1	R 12	7	4	28
February	16	3	6	1	R 26	4	1	R 11	7	4	R 26
March	17	4	6	1	28	5	1	R 12	7	4	28
April	R 17	R 4	6	1	R 28	4	1	R 12	7	4	R 28
May	17	R 4	7	1	R 29	5	1	R 12	8	4	R 29
June	17	R 4	6	1	R 29	4	1	R 12	7	4	R 29
July	18	4	7	1	R 30	5	1	12	8	4	R 30
August	18	4	7	1	R 30	5	1	12	8	4	R 30
September	17	R 4	6	1	28	4	1	11	7	4	28
October	R 18	4	7	1	29	5	1	12	8	4	29
November	17	4	6	1	R 29	4	1	R 12	7	4	R 29
December	18	4	7	1	30	5	1	12	8	4	30
Total	208	44	76	13	341	54	11	141	88	47	341

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

^b Wood and wood-derived fuels.

^c Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass.

^d Fuel ethanol minus denaturant.

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

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

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

R=Revised. 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 (CO₂), methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride—that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

Energy-related carbon dioxide emissions account for about 98 percent of U.S. CO₂ emissions. The vast majority of CO₂ emissions come from fossil fuel combustion, with smaller amounts from the nonfuel use of fossil fuels, as well as from electricity generation using geothermal energy and non-biomass waste. Other sources of CO₂ emissions include industrial processes, such as cement and limestone production. Data in the U.S. Energy Information Administration's (EIA) *Monthly Energy Review (MER)* Tables 12.1–12.6 are estimates for U.S. CO₂ emissions from energy consumption, including the nonfuel use of fossil fuels (excluded are estimates for CO₂ emissions from biomass energy consumption, which appear in Table 12.7).

For annual U.S. estimates for emissions of CO₂ from all sources, as well as for emissions of other greenhouse gases, see EIA's *Emissions of Greenhouse Gases Report* at http://www.eia.gov/environment/emissions/ghg_report/.

Note 2. Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion. Carbon dioxide (CO₂) emissions from the combustion of biomass to produce energy are excluded from the energy-related CO₂ emissions reported in MER Tables 12.1–12.6, but appear in Table 12.7. According to current international convention (see the Intergovernmental Panel on Climate Change's "2006 IPCC Guidelines for National Greenhouse Gas Inventories"), carbon released through biomass combustion is excluded from reported energy-related emissions. The release of carbon from biomass combustion is assumed to be balanced by the uptake of carbon when the feedstock is grown, resulting in zero net emissions over some period of time. (This is not to say that biomass energy is carbon-neutral. Energy inputs are required in order to grow, fertilize, and harvest the feedstock and to produce and process the biomass into fuels.)

However, analysts have debated whether increased use of biomass energy may result in a decline in terrestrial carbon stocks, leading to a net positive release of carbon rather than the zero net release assumed by its exclusion from reported energy-related emissions. For example, the clearing of forests for biofuel crops could result in an initial release of carbon that is not fully recaptured in subsequent use of the land for agriculture.

To reflect the potential net emissions, the international convention for greenhouse gas inventories is to report

biomass emissions in the category "agriculture, forestry, and other land use," usually based on estimates of net changes in carbon stocks over time.

This indirect accounting of CO₂ emissions from biomass can potentially lead to confusion in accounting for and understanding the flow of CO₂ emissions within energy and non-energy systems. In recognition of this issue, reporting of CO₂ emissions from biomass combustion alongside other energy-related CO₂ emissions offers an alternative accounting treatment. It is important, however, to avoid misinterpreting emissions from fossil energy and biomass energy sources as necessarily additive. Instead, the combined total of direct CO₂ emissions from biomass and energy-related CO₂ emissions implicitly assumes that none of the carbon emitted was previously or subsequently reabsorbed in terrestrial sinks or that other emissions sources offset any such sequestration.

Section 12 Methodology and Sources

To estimate carbon dioxide emissions from energy consumption for the *Monthly Energy Review (MER)*, Tables 12.1–12.7, the U.S. Energy Information Administration (EIA) uses the following methodology and sources:

Step 1. Determine Fuel Consumption

Coal—Coal sectoral (residential, commercial, coke plants, other industrial, transportation, electric power) consumption data in thousand short tons are from MER Table 6.2. Coal sectoral consumption data are converted to trillion Btu by multiplying by the coal heat content factors in MER Table A5.

Coal Coke Net Imports—Coal coke net imports data in trillion Btu are derived from coal coke imports and exports data in MER Tables 1.4a and 1.4b.

Natural Gas (excluding supplemental gaseous fuels)—Natural gas sectoral consumption data in trillion Btu are from MER Tables 2.2–2.6.

Petroleum—Total and sectoral consumption (product supplied) data in thousand barrels per day for asphalt and road oil, aviation gasoline, distillate fuel oil, jet fuel, kerosene, liquefied petroleum gases (LPG), lubricants, motor gasoline, petroleum coke, and residual fuel oil are from MER Tables 3.5 and 3.7a–3.7c. For the component products of LPG (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene) and "other petroleum" (aviation gasoline blending components, crude oil, motor gasoline blending components, naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, pentanes plus, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products), consumption (product supplied) data in thousand barrels per day are from EIA's *Petroleum Supply Annual (PSA)*, *Petroleum Supply Monthly (PSM)*, and earlier

publications (see sources for MER Table 3.5). Petroleum consumption data by product are converted to trillion Btu by multiplying by the petroleum heat content factors in MER 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 (CO₂) emissions data in million metric tons are calculated by multiplying consumption values in trillion Btu from Steps 1 and 2 (minus the carbon sequestered in nonfuel use in Step 3) by the CO₂ emissions factors at http://www.eia.gov/oiaf/1605/ggprt/excel/CO2_coeffs_09_v2.xls. Beginning in 2010, the 2009 factors are used.

Coal—CO₂ emissions for coal are calculated for each sector (residential, commercial, coke plants, other industrial, transportation, electric power). Total coal emissions are the sum of the sectoral coal emissions.

Coal Coke Net Imports—CO₂ emissions for coal coke net imports are calculated.

Natural Gas—CO₂ emissions for natural gas are calculated for each sector (residential, commercial, industrial, transportation, electric power). Total natural gas emissions are the sum of the sectoral natural gas emissions.

Petroleum—CO₂ emissions are calculated for each petroleum product. Total petroleum emissions are the sum of the product emissions. Total LPG emissions are the sum of the emissions for the component products (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene); residential, commercial, and transportation sector LPG emissions are estimated by multiplying consumption values in trillion Btu from MER Tables 3.8a and 3.8c by the propane emissions factor; industrial sector LPG emissions are estimated as total LPG emissions minus emissions by the other sectors.

Geothermal and Non-Biomass Waste—Annual CO₂ emissions data for geothermal and non-biomass waste are EIA estimates based on Form EIA-923, “Power Plant Operations Report” (and predecessor forms). Monthly estimates are created by dividing the annual data by the number of days in the year and then multiplying by the number of days in the month. (Annual estimates for the current year are set equal to those of the previous year.)

Biomass—CO₂ emissions for wood, biomass waste, fuel ethanol (minus denaturant), and biodiesel are calculated for each sector. Total emissions for each biomass fuel are the sum of the sectoral emissions. The following factors, in million metric tons CO₂ per quadrillion Btu, are used: wood—93.80; biomass waste—90.70; fuel ethanol—68.44; and biodiesel—73.84. For 1973–1988, the biomass portion

of waste in MER Tables 10.2a–10.2c is estimated as 67 percent; for 1989–2000, the biomass portion of waste is estimated as 67 percent in 1989 to 58 percent in 2000, based on the biogenic shares of total municipal solid waste shown in EIA’s “Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy,” Table 1 at <http://www.eia.gov/totalenergy/data/monthly/pdf/historical/msw.pdf>.

THIS PAGE INTENTIONALLY LEFT BLANK

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	^a 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	^b 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	^c 6.000
Hydrogen	^a 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			

^a Per residual fuel oil equivalent barrel (6.287 million Btu per barrel).

^b 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.”

^c 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.

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

	Production		Imports				Exports			
			Crude Oil ^a	Natural Gas Plant Liquids	Petroleum Products		Total	Crude Oil ^a	Petroleum Products		Total
	Motor Gasoline ^b	Total Products			Motor Gasoline ^c	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	5.539	5.866	5.800	5.253	5.681	5.693
1994	5.800	3.794	5.950	5.253	5.416	5.835	5.800	5.253	5.693	5.704
1995	5.800	3.796	5.938	5.253	5.345	5.830	5.800	5.253	5.692	5.703
1996	5.800	3.777	5.947	5.253	5.373	5.828	5.800	5.253	5.663	5.678
1997	5.800	3.762	5.954	5.253	5.333	5.836	5.800	5.253	5.663	5.678
1998	5.800	3.769	5.953	5.253	5.314	5.833	5.800	5.253	5.505	5.539
1999	5.800	3.744	5.942	5.253	5.291	5.815	5.800	5.253	5.530	5.564
2000	5.800	3.733	5.959	5.253	5.309	5.823	5.800	5.253	5.529	5.542
2001	5.800	3.735	5.976	5.253	5.330	5.838	5.800	5.253	5.637	5.641
2002	5.800	3.729	5.971	5.253	5.362	5.845	5.800	5.253	5.517	5.519
2003	5.800	3.739	5.970	5.253	5.381	5.845	5.800	5.253	5.628	5.630
2004	5.800	3.724	5.981	5.253	5.429	5.853	5.800	5.253	5.532	5.539
2005	5.800	3.724	5.977	5.253	5.436	5.835	5.800	5.253	5.504	5.513
2006	5.800	3.712	5.980	5.253	5.431	5.836	5.800	5.219	5.415	5.423
2007	5.800	3.701	5.985	5.222	5.483	5.857	5.800	5.188	5.465	5.471
2008	5.800	3.706	5.990	5.222	5.459	5.861	5.800	5.215	5.587	5.591
2009	5.800	3.692	5.988	5.222	5.509	5.878	5.800	5.221	5.674	5.677
2010	5.800	3.674	5.989	5.222	5.545	5.892	5.800	5.214	5.601	5.604
2011	5.800	3.672	6.008	5.222	5.538	5.905	5.800	5.216	5.526	5.530
2012	5.800	3.683	6.165	5.222	5.501	6.035	5.800	5.217	5.520	5.526
2013	5.800	3.714	6.010	5.222	5.497	5.899	5.800	5.216	5.470	5.482
2014 ^P	5.800	^R 3.723	^R 6.086	5.222	^R 5.517	^R 5.970	5.800	^R 5.218	^R 5.365	^R 5.401
2015 ^E	5.800	3.723	6.086	5.222	5.517	5.970	5.800	5.218	5.365	5.401

^a Includes lease condensate.

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

^c 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.

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

	Total Petroleum ^a Consumption by Sector						Distillate Fuel Oil Consumption ^f	Liquefied Petroleum Gases Consumption ^g	Motor Gasoline (Finished) Consumption ^h	Petroleum Coke Consumption ⁱ	Fuel Ethanol ^j	Fuel Ethanol Feedstock Factor ^k
	Residential	Commercial ^b	Industrial ^b	Transportation ^{b,c}	Electric Power ^{d,e}	Total ^{b,c}						
1950	5.473	5.817	5.953	5.461	6.254	5.649	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	^g 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	^d 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	^b 5.504	^b 5.177	^b 5.422	6.230	^b 5.370	5.825	3.606	^h 5.232	6.024	3.563	6.287
1994	5.095	5.512	5.149	5.424	6.213	5.360	^f 5.820	3.635	5.231	6.024	3.563	6.264
1995	5.060	5.475	5.121	5.418	6.187	5.342	5.820	3.623	5.218	6.024	3.563	6.242
1996	4.995	5.430	5.114	5.420	6.194	5.336	5.820	3.613	5.218	6.024	3.563	6.220
1997	4.986	5.388	5.119	5.416	6.198	5.336	5.820	3.616	5.215	6.024	3.563	6.198
1998	4.972	5.362	5.136	5.414	6.210	5.349	5.819	3.614	5.215	6.024	3.563	6.176
1999	4.899	5.288	5.091	5.413	6.204	5.328	5.819	3.616	5.213	6.024	3.563	6.167
2000	4.905	5.313	5.056	5.423	6.188	5.326	5.819	3.607	5.214	6.024	3.563	6.159
2001	4.934	5.322	5.141	5.413	6.199	5.346	5.819	3.614	5.214	6.024	3.563	6.151
2002	4.883	5.290	5.092	5.411	6.172	5.324	5.819	3.613	5.211	6.024	3.563	6.143
2003	4.918	5.312	5.143	5.404	6.182	5.338	5.819	3.629	5.203	6.024	3.563	6.116
2004	4.949	5.323	5.144	5.410	6.134	5.341	5.818	3.618	5.201	ⁱ 5.982	3.563	6.089
2005	4.913	5.359	5.179	5.412	6.126	5.353	5.818	3.620	5.198	5.982	3.563	6.063
2006	4.883	5.296	5.159	5.409	6.038	5.336	5.803	3.605	5.191	5.987	3.563	6.036
2007	4.831	5.271	5.122	5.385	6.064	5.309	5.785	3.591	5.155	5.996	3.563	6.009
2008	4.769	5.156	5.147	5.355	6.013	5.287	5.780	3.600	5.126	5.992	3.563	5.983
2009	4.661	5.216	5.014	^c 5.328	5.987	^c 5.236	5.781	3.558	5.101	6.017	3.563	5.957
2010	4.660	5.193	4.983	5.321	5.956	5.222	5.778	3.557	5.078	6.059	3.561	5.931
2011	4.640	5.163	4.962	5.317	5.900	5.212	5.776	3.541	5.068	6.077	3.560	5.905
2012	4.703	5.117	4.909	5.305	5.925	5.191	5.774	3.534	5.063	6.084	3.560	5.880
2013	^E 4.675	^E 5.060	^E 4.864	^{RE} 5.302	^R 5.892	5.174	5.774	3.556	5.062	6.089	3.559	5.880
2014	^{RE} 4.716	^{RE} 5.081	^{RE} 4.874	^{RE} 5.300	^{RP} 5.908	^{RP} 5.182	^{RP} 5.773	^{RP} 3.535	^{RP} 5.060	^{RP} 6.094	^{RP} 3.558	5.880
2015	^E 4.716	^E 5.081	^E 4.874	^E 5.300	^E 5.908	^E 5.182	^E 5.773	^E 3.535	^E 5.060	^E 6.094	^E 3.558	5.880

^a Petroleum products supplied, including natural gas plant liquids and crude oil burned directly as fuel. Quantity-weighted averages of the petroleum products included in each category are calculated by using heat content values for individual products shown in Tables A1 and A3.

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

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

^d Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

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

^f There is a discontinuity in this time series between 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.

^g 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.

^h 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.

ⁱ 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.

^j 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.

^k 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.

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

	Production		Consumption ^a			Imports	Exports
	Marketed	Dry	End-Use Sectors ^b	Electric Power Sector ^c	Total		
1950	1,119	1,035	1,035	1,035	1,035	--	1,035
1955	1,120	1,035	1,035	1,035	1,035	1,035	1,035
1960	1,107	1,035	1,035	1,035	1,035	1,035	1,035
1965	1,101	1,032	1,032	1,032	1,032	1,032	1,032
1970	1,102	1,031	1,031	1,031	1,031	1,031	1,031
1975	1,095	1,021	1,020	1,026	1,021	1,026	1,014
1980	1,098	1,026	1,024	1,035	1,026	1,022	1,013
1981	1,103	1,027	1,025	1,035	1,027	1,014	1,011
1982	1,107	1,028	1,026	1,036	1,028	1,018	1,011
1983	1,115	1,031	1,031	1,030	1,031	1,024	1,010
1984	1,109	1,031	1,030	1,035	1,031	1,005	1,010
1985	1,112	1,032	1,031	1,038	1,032	1,002	1,011
1986	1,110	1,030	1,029	1,034	1,030	997	1,008
1987	1,112	1,031	1,031	1,032	1,031	999	1,011
1988	1,109	1,029	1,029	1,028	1,029	1,002	1,018
1989	1,107	1,031	1,031	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	1,025	1,027	1,025	1,009
2014	^E 1,100	^{RE} 1,028	^E 1,028	^{RP} 1,029	^{RE} 1,028	^E 1,025	^E 1,009

^a Consumption factors are for natural gas, plus a small amount of supplemental gaseous fuels.

^b Residential, commercial, industrial, and transportation sectors.

^c Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

R=Revised. 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 ^a	Waste Coal Supplied ^b	Consumption					Imports	Exports		Imports and Exports
			Residential and Commercial Sectors ^c	Industrial Sector		Electric Power Sector ^{e,f}	Total				
				Coke Plants	Other ^d						
1950	25.090	NA	24.461	26.798	24.820	23.937	24.989	25.020	26.788	24.800	
1955	25.201	NA	24.373	26.794	24.821	24.056	24.982	25.000	26.907	24.800	
1960	24.906	NA	24.226	26.791	24.609	23.927	24.713	25.003	26.939	24.800	
1965	24.775	NA	24.028	26.787	24.385	23.780	24.537	25.000	26.973	24.800	
1970	23.842	NA	23.203	26.784	22.983	22.573	23.440	25.000	26.982	24.800	
1975	22.897	NA	22.261	26.782	22.436	21.642	22.506	25.000	26.562	24.800	
1980	22.415	NA	22.543	26.790	22.690	21.295	21.947	25.000	26.384	24.800	
1981	22.308	NA	22.474	26.794	22.585	21.085	21.713	25.000	26.160	24.800	
1982	22.239	NA	22.695	26.797	22.712	21.194	21.674	25.000	26.223	24.800	
1983	22.052	NA	22.775	26.798	22.691	21.133	21.576	25.000	26.291	24.800	
1984	22.010	NA	22.844	26.799	22.543	21.101	21.573	25.000	26.402	24.800	
1985	21.870	NA	22.646	26.798	22.020	20.959	21.366	25.000	26.307	24.800	
1986	21.913	NA	22.947	26.798	22.198	21.084	21.462	25.000	26.292	24.800	
1987	21.922	NA	23.404	26.799	22.381	21.136	21.517	25.000	26.291	24.800	
1988	21.823	NA	23.571	26.799	22.360	20.900	21.328	25.000	26.299	24.800	
1989	21.765	^b 10.391	23.650	26.800	22.347	^e 20.898	21.307	25.000	26.160	24.800	
1990	21.822	9.303	23.137	26.799	22.457	20.779	21.197	25.000	26.202	24.800	
1991	21.681	10.758	23.114	26.799	22.460	20.730	21.120	25.000	26.188	24.800	
1992	21.682	10.396	23.105	26.799	22.250	20.709	21.068	25.000	26.161	24.800	
1993	21.418	10.638	22.994	26.800	22.123	20.677	21.010	25.000	26.335	24.800	
1994	21.394	11.097	23.112	26.800	22.068	20.589	20.929	25.000	26.329	24.800	
1995	21.326	11.722	23.118	26.800	21.950	20.543	20.880	25.000	26.180	24.800	
1996	21.322	12.147	23.011	26.800	22.105	20.547	20.870	25.000	26.174	24.800	
1997	21.296	12.158	22.494	26.800	22.172	20.518	20.830	25.000	26.251	24.800	
1998	21.418	12.639	21.620	27.426	23.164	20.516	20.881	25.000	26.800	24.800	
1999	21.070	12.552	23.880	27.426	22.489	20.490	20.818	25.000	26.081	24.800	
2000	21.072	12.360	25.020	27.426	22.433	20.511	20.828	25.000	26.117	24.800	
2001	^a 20.772	12.169	24.909	27.426	22.622	20.337	20.671	25.000	25.998	24.800	
2002	20.673	12.165	22.962	27.426	22.562	20.238	20.541	25.000	26.062	24.800	
2003	20.499	12.360	22.242	27.425	22.468	20.082	20.387	25.000	25.972	24.800	
2004	20.424	12.266	22.324	27.426	22.473	19.980	20.290	25.000	26.108	24.800	
2005	20.348	12.093	22.342	26.279	22.178	19.988	20.246	25.000	25.494	24.800	
2006	20.310	12.080	22.066	26.271	22.050	19.931	20.181	25.000	25.453	24.800	
2007	20.340	12.090	22.069	26.329	22.371	19.909	20.168	25.000	25.466	24.800	
2008	20.208	12.121	^c 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 ^P	20.187	12.428	21.233	28.705	21.623	19.210	19.548	23.367	24.604	24.800	
2014 ^E	20.187	12.428	21.233	28.705	21.623	19.210	19.548	23.367	24.604	24.800	

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

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

^c Through 2007, used as the thermal conversion factor for coal consumption by the residential and commercial sectors. Beginning in 2008, used as the thermal conversion factor for coal consumption by the commercial sector only.

^d Includes transportation. Excludes coal synfuel plants.

^e Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

^f 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 ^a for Electricity Net Generation						Heat Content ^j of Electricity ^k
	Fossil Fuels ^b				Nuclear ^h	Noncombustible Renewable Energy ^{g,i}	
	Coal ^c	Petroleum ^d	Natural Gas ^e	Total Fossil Fuels ^{f,g}			
1950	NA	NA	NA	14,030	--	14,030	3,412
1955	NA	NA	NA	11,699	--	11,699	3,412
1960	NA	NA	NA	10,760	11,629	10,760	3,412
1965	NA	NA	NA	10,453	11,804	10,453	3,412
1970	NA	NA	NA	10,494	10,977	10,494	3,412
1975	NA	NA	NA	10,406	11,013	10,406	3,412
1980	NA	NA	NA	10,388	10,908	10,388	3,412
1981	NA	NA	NA	10,453	11,030	10,453	3,412
1982	NA	NA	NA	10,454	11,073	10,454	3,412
1983	NA	NA	NA	10,520	10,905	10,520	3,412
1984	NA	NA	NA	10,440	10,843	10,440	3,412
1985	NA	NA	NA	10,447	10,622	10,447	3,412
1986	NA	NA	NA	10,446	10,579	10,446	3,412
1987	NA	NA	NA	10,419	10,442	10,419	3,412
1988	NA	NA	NA	10,324	10,602	10,324	3,412
1989	NA	NA	NA	10,432	10,583	10,432	3,412
1990	NA	NA	NA	10,402	10,582	10,402	3,412
1991	NA	NA	NA	10,436	10,484	10,436	3,412
1992	NA	NA	NA	10,342	10,471	10,342	3,412
1993	NA	NA	NA	10,309	10,504	10,309	3,412
1994	NA	NA	NA	10,316	10,452	10,316	3,412
1995	NA	NA	NA	10,312	10,507	10,312	3,412
1996	NA	NA	NA	10,340	10,503	10,340	3,412
1997	NA	NA	NA	10,213	10,494	10,213	3,412
1998	NA	NA	NA	10,197	10,491	10,197	3,412
1999	NA	NA	NA	10,226	10,450	10,226	3,412
2000	NA	NA	NA	10,201	10,429	10,201	3,412
2001	10,378	10,742	10,051	^b 10,333	10,443	10,333	3,412
2002	10,314	10,641	9,533	10,173	10,442	10,173	3,412
2003	10,297	10,610	9,207	10,125	10,422	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	^R 8,160	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	^R 10,459	^R 10,713	^R 7,948	^R 9,541	^R 10,449	^R 9,541	3,412
2014	^{RE} 10,459	^{RE} 10,713	^{RE} 7,948	^{RE} 9,541	^{RE} 10,449	^{RE} 9,541	3,412

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

^b Through 2000, heat rates are for fossil-fueled steam-electric plants at electric utilities. Beginning in 2001, heat rates are for all fossil-fueled plants at electric utilities and electricity-only independent power producers.

^c Includes anthracite, bituminous coal, subbituminous coal, lignite, and, beginning in 2002, waste coal and coal symfuel.

^d Includes distillate fuel oil, residual fuel oil, jet fuel, kerosene, petroleum coke, and waste oil.

^e Includes natural gas and supplemental gaseous fuels.

^f Includes coal, petroleum, natural gas, and, beginning in 2001, other gases (blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels).

^g The fossil-fuels heat rate is used as the thermal conversion factor for electricity net generation from noncombustible renewable energy (hydro, geothermal, solar thermal, photovoltaic, and wind) to approximate the quantity of fossil fuels replaced by these sources. Through 2000, also used as the thermal conversion factor for wood and waste electricity net generation at electric utilities; beginning in 2001, Btu data for wood and waste at electric utilities are available from surveys.

^h Used as the thermal conversion factor for nuclear electricity net generation.

ⁱ Technology-based geothermal heat rates are no longer used in Btu calculations in this report. For technology-based geothermal heat rates for 1960–2010, see the *Annual Energy Review 2010*, Table A6.

^j See "Heat Content" in Glossary.

^k The value of 3,412 Btu per kilowatthour is a constant. It is used as the thermal conversion factor for electricity retail sales, and electricity imports and exports.

^R=Revised. ^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.

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.

Petroleum Consumption, Residential Sector. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the residential sector weighted by the estimated quantities consumed by the residential sector. The quantities of petroleum products consumed by the residential sector are estimated in the State Energy Data System—see documentation at http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf.

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

Petroleum Consumption, Transportation Sector. Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the transportation sector weighted by the estimated quantities consumed by the transportation sector. The quantities of petroleum products consumed by the transportation sector are estimated in the State Energy Data System—see documentation at http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf.

Petroleum Products Exports. Calculated annually by EIA as the average of the thermal conversion factors for each

petroleum product exported weighted by the quantities exported.

Petroleum Products Imports. Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product imported weighted by the quantities imported.

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

Propane/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).

THIS PAGE INTENTIONALLY LEFT BLANK

Appendix B

Metric Conversion Factors, Metric Prefixes, and Other Physical Conversion Factors

Data presented in the *Monthly Energy Review* and in other U.S. Energy Information Administration publications are expressed predominately in units that historically have been used in the United States, such as British thermal units, barrels, cubic feet, and short tons. The metric conversion factors presented in Table B1 can be used to calculate the metric-unit equivalents of values expressed in U.S. Customary units. For example, 500 short tons are the equivalent of 453.6 metric tons (500 short tons x 0.9071847 metric tons/short ton = 453.6 metric tons).

In the metric system of weights and measures, the names of multiples and subdivisions of any unit may be derived

by combining the name of the unit with prefixes, such as deka, hecto, and kilo, meaning, respectively, 10, 100, 1,000, and deci, centi, and milli, meaning, respectively, one-tenth, one-hundredth, and one-thousandth. Common metric prefixes can be found in Table B2.

The conversion factors presented in Table B3 can be used to calculate equivalents in various physical units commonly used in energy analyses. For example, 10 barrels are the equivalent of 420 U.S. gallons (10 barrels x 42 gallons/barrel = 420 gallons).

Table B1. Metric Conversion Factors

Type of Unit	U.S. Unit		Equivalent in	Metric Units
Mass	1 short ton (2,000 lb)	=	0.907 184 7	metric tons (t)
	1 long ton	=	1.016 047	metric tons (t)
	1 pound (lb)	=	0.453 592 37 ^a	kilograms (kg)
	1 pound uranium oxide (lb U ₃ O ₈)	=	0.384 647 ^b	kilograms uranium (kgU)
	1 ounce, avoirdupois (avdp oz)	=	28.349 52	grams (g)
Volume	1 barrel of oil (bbl)	=	0.158 987 3	cubic meters (m ³)
	1 cubic yard (yd ³)	=	0.764 555	cubic meters (m ³)
	1 cubic foot (ft ³)	=	0.028 316 85	cubic meters (m ³)
	1 U.S. gallon (gal)	=	3.785 412	liters (L)
	1 ounce, fluid (fl oz)	=	29.573 53	milliliters (mL)
	1 cubic inch (in ³)	=	16.387 06	milliliters (mL)
Length	1 mile (mi)	=	1.609 344 ^a	kilometers (km)
	1 yard (yd)	=	0.914 4 ^a	meters (m)
	1 foot (ft)	=	0.304 8 ^a	meters (m)
	1 inch (in)	=	2.54 ^a	centimeters (cm)
Area	1 acre	=	0.404 69	hectares (ha)
	1 square mile (mi ²)	=	2.589 988	square kilometers (km ²)
	1 square yard (yd ²)	=	0.836 127 4	square meters (m ²)
	1 square foot (ft ²)	=	0.092 903 04 ^a	square meters (m ²)
	1 square inch (in ²)	=	6.451 6 ^a	square centimeters (cm ²)
Energy	1 British thermal unit (Btu) ^c	=	1,055.055 852 62 ^a	joules (J)
	1 calorie (cal)	=	4.186 8 ^a	joules (J)
	1 kilowatthour (kWh)	=	3.6 ^a	megajoules (MJ)
Temperature^d	32 degrees Fahrenheit (°F)	=	0 ^a	degrees Celsius (°C)
	212 degrees Fahrenheit (°F)	=	100 ^a	degrees Celsius (°C)

^aExact conversion.

^bCalculated by the U.S. Energy Information Administration.

^cThe Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.

^dTo convert degrees Fahrenheit (°F) to degrees Celsius (°C) exactly, subtract 32, then multiply by 5/9.

Notes: • Spaces have been inserted after every third digit to the right of the decimal for ease of reading. • Most metric units belong to the International System of Units (SI), and the liter, hectare, and metric ton are accepted for use with the SI units. For more information about the SI units, see <http://physics.nist.gov/cuu/Units/index.html>.

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

Sources: • General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 1993), pp. 9-11, 13, and 16. • U.S. Department of Commerce, National Institute of Standards and Technology, Special Publications 330, 811, and 814. • American National Standards Institute/Institute of Electrical and Electronic Engineers, ANSI/IEEE Std 268-1992, pp. 28 and 29.

Table B2. Metric Prefixes

Unit Multiple	Prefix	Symbol	Unit Subdivision	Prefix	Symbol
10 ¹	deka	da	10 ⁻¹	deci	d
10 ²	hecto	h	10 ⁻²	centi	c
10 ³	kilo	k	10 ⁻³	milli	m
10 ⁶	mega	M	10 ⁻⁶	micro	μ
10 ⁹	giga	G	10 ⁻⁹	nano	n
10 ¹²	tera	T	10 ⁻¹²	pico	p
10 ¹⁵	peta	P	10 ⁻¹⁵	femto	f
10 ¹⁸	exa	E	10 ⁻¹⁸	atto	a
10 ²¹	zetta	Z	10 ⁻²¹	zepto	z
10 ²⁴	yotta	Y	10 ⁻²⁴	yocto	y

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

Source: U.S. Department of Commerce, National Institute of Standards and Technology, *The International System of Units (SI)*, NIST Special Publication 330, 1991 Edition (Washington, DC, August 1991), p.10.

Table B3. Other Physical Conversion Factors

Energy Source	Original Unit		Equivalent in Final Units
Petroleum	1 barrel (bbl)	=	42 ^a U.S. gallons (gal)
Coal	1 short ton	=	2,000 ^a pounds (lb)
	1 long ton	=	2,240 ^a pounds (lb)
	1 metric ton (t)	=	1,000 ^a kilograms (kg)
Wood	1 cord (cd)	=	1.25 ^b shorts tons
	1 cord (cd)	=	128 ^a cubic feet (ft ³)

^aExact conversion.

^bCalculated by the U.S. Energy Information Administration.

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

Source: U.S. Department of Commerce, National Institute of Standards and Technology, *Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, NIST Handbook 44, 1994 Edition (Washington, DC, October 1993), pp. B-10, C-17 and C-21.

THIS PAGE INTENTIONALLY LEFT BLANK

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 obtained by **petroleum** processing and containing bitumens as the predominant component; used primarily for road construction. It 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. *Note:* The conversion factor for asphalt is 5.5 barrels per short ton.

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**. Oxygenates are reported as **other hydrocarbons**, **hydrogen**, and oxygenates. See **Aviation Gasoline, Finished**.

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-Based Diesel Fuel: Biodiesel and other renewable **diesel fuel** or diesel fuel blending components derived from **biomass**, but excluding renewable diesel fuel coprocessed with petroleum feedstocks. See **Renewable Diesel Fuel (Other)**.

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 (C₄H₁₀): A straight-chain or branch-chain **hydrocarbon** extracted from **natural gas** or **refinery gas** streams, which is gaseous at standard temperature and pressure. It includes **isobutane** and **normal butane** and is designated in ASTM Specification D1835 and Gas Processors Association specifications for commercial butane.

Isobutane (C₄H₁₀): A branch-chain saturated (paraffinic) **hydrocarbon** extracted from both **natural gas** and **refinery gas** streams, which is gaseous at standard temperature and pressure. It is a colorless gas that boils at a temperature of 11 degrees Fahrenheit. See **Paraffinic Hydrocarbons**.

Normal Butane (C₄H₁₀): A straight-chain saturated (paraffinic) **hydrocarbon** extracted from both **natural gas** and **refinery gas** streams, which is gaseous at standard temperature and pressure. It is a colorless gas that boils at a temperature of 31 degrees Fahrenheit. See **Paraffinic Hydrocarbons**.

Butylene (C₄H₈): An olefinic **hydrocarbon** recovered from refinery or petrochemical processes, which is gaseous at standard temperature and pressure. Butylene is used in the production of gasoline and various petrochemical products. See **Olefinic Hydrocarbons (Olefins)**.

Capacity Factor: The ratio of the electrical energy produced by a generating unit for a given period of time to the electrical energy that could have been produced at continuous full-power operation during the same period.

Carbon Dioxide (CO₂): A colorless, odorless, non-poisonous gas that is a normal part of Earth's atmosphere. Carbon dioxide is a product of **fossil-fuel** combustion as well as other processes. It is considered a **greenhouse gas** as it traps heat (infrared energy) radiated by the Earth into the atmosphere and thereby contributes to the potential for **global warming**. The **global warming potential (GWP)** of other greenhouse gases is measured in relation to that of carbon dioxide, which by international scientific convention is assigned a value of one (1).

Chained Dollars: A measure used to express **real prices**. Real prices are those that have been adjusted to remove the effect of changes in the purchasing power of the dollar; they usually reflect buying power relative to a reference year. Prior to 1996, real prices were expressed in constant dollars, a measure based on the weights of goods and services in a single year, usually a recent year. In 1996, the U.S. Department of Commerce introduced the chained-dollar measure. The new measure is based on the average weights of goods and services in successive pairs of years. It is "chained" because the second year in each pair, with its weights, becomes the first year of the next pair. The advantage of using the chained-dollar measure is that it is

more closely related to any given period and is therefore subject to less distortion over time.

CIF: See **Cost, Insurance, Freight**.

Citygate: A point or measuring station at which a distribution gas utility receives gas from a **natural gas** pipeline company or transmission system.

Climate Change: A term used to refer to all forms of climatic inconsistency, but especially to significant change from one prevailing climatic condition to another. In some cases, "climate change" has been used synonymously with the term "**global warming**"; scientists, however, tend to use the term in a wider sense inclusive of natural changes in climate, including climatic cooling.

Coal: A readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time. See **Anthracite, Bituminous Coal, Lignite, Subbituminous Coal, Waste Coal, and Coal Synfuel**.

Coal Coke: See **Coke (Coal)**.

Coal Stocks: Coal quantities that are held in storage for future use and disposition. *Note:* When coal data are collected for a particular reporting period (month, quarter, or year), coal stocks are commonly measured as of the last day of the period.

Coal Synfuel: Coal-based solid fuel that has been processed by a **coal synfuel plant**; and coal-based fuels such as briquettes, pellets, or extrusions, which are formed from fresh or recycled coal and binding materials.

Coal Synfuel Plant: A plant engaged in the chemical transformation of **coal** into **coal synfuel**.

Coke (Coal): A solid carbonaceous residue derived from low-ash, low-sulfur **bituminous coal** from which the volatile constituents are driven off by baking in an oven at temperatures as high as 2,000 degrees Fahrenheit 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 from coal is grey, hard, and porous and 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 (of 42 U.S. gallons each) per short ton. See **Coke (Petroleum), Catalyst and Coke (Petroleum), Marketable**.

Coke (Petroleum), Catalyst: The carbonaceous residue that is deposited on and deactivates the catalyst used in many catalytic operations (e.g., catalytic cracking). Carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refining process. That carbon or coke is not recoverable in a concentrated form.

Coke (Petroleum), Marketable: Those grades of coke produced in delayed or fluid cokers that may be recovered as relatively pure carbon. Marketable petroleum coke may be sold as is or further purified by calcining.

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. 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): The amount of **natural gas** contained at standard temperature and pressure (60 degrees Fahrenheit and 14.73 pounds standard per square inch) in a cube whose edges are one foot long.

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 **kilowatthours** (kWh) or megawatthours (MWh).

Electricity Generation, Gross: The total amount of electric energy produced by generating units and measured at the generating terminal in **kilowatthours** (kWh) or megawatthours (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 (C₂H₆): A straight-chain saturated (paraffinic) **hydrocarbon** extracted predominantly from the **natural gas** stream, which is gaseous at standard temperature and pressure. It is a colorless gas that boils at a temperature of -127 degrees Fahrenheit. See **Paraffinic Hydrocarbons**.

Ethanol (C₂H₅OH): A clear, colorless, flammable **alcohol**. Ethanol is typically produced biologically from **biomass** feedstocks such as agricultural crops and cellulosic residues from agricultural crops or wood. Ethanol can also be produced chemically from **ethylene**. See **Biomass, Fuel Ethanol, and Fuel Ethanol Minus Denaturant**.

Ether: A generic term applied to a group of organic chemical compounds composed of carbon, **hydrogen**, and oxygen, characterized by an oxygen atom attached to two carbon atoms (e.g., **methyl tertiary butyl ether**).

Ethylene (C₂H₄): An olefinic **hydrocarbon** recovered from refinery or petrochemical processes, which is gaseous at standard temperature and pressure. Ethylene is used as a petrochemical feedstock for many chemical applications

and the production of consumer goods. See **Olefinic Hydrocarbons (Olefins)**.

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 production of natural gas from one or more gas zones or reservoirs. Such wells contain no completions for the production of crude oil.

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 kilowatt-hour 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 kilowatt-hour**. *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 gases**, or LRG) and natural gas plants (**natural gas plant liquids**, or NGPL). Excludes **liquefied natural gas** (LNG). See **Olefinic Hydrocarbons (Olefins)**.

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. See **End-Use Sectors** and **Energy-Use Sectors**.

Injections (Natural Gas): **Natural gas** injected into storage reservoirs.

Isobutane (C₄H₁₀): A branch-chain saturated (paraffinic) **hydrocarbon** extracted from both **natural gas** and **refinery**

gas streams, which is gaseous at standard temperature and pressure. It is a colorless gas that boils at a temperature of 11 degrees Fahrenheit. See **Paraffinic Hydrocarbons**.

Isobutylene (C₄H₈): A branch-chain olefinic **hydrocarbon** recovered from refinery or petrochemical processes, which is gaseous at standard temperature and pressure. Isobutylene is used in the production of gasoline and various petrochemical products. See **Olefinic Hydrocarbons (Olefins)**.

Isopentane (C₅H₁₂): 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. See **Jet Fuel, Kerosene-Type** and **Jet Fuel, Naphtha-Type**.

Jet Fuel, Kerosene-Type: A **kerosene**-based product having a maximum distillation temperature of 400 degrees Fahrenheit at the 10-percent recovery point and a final maximum boiling point of 572 degrees Fahrenheit and meeting ASTM Specification D 1655 and Military Specifications MIL-T-5624P and MIL-T-83133D (Grades JP-5 and JP-8). It is used for commercial and military turbo jet and turbo prop aircraft engines.

Jet Fuel, Naphtha-Type: A fuel in the heavy **naphtha** boiling range having an average gravity of 52.8 degrees API, 20% to 90% distillation temperatures of 290 degrees to 470 degrees Fahrenheit, and meeting Military Specification MIL-T-5624L (Grade JP-4). It is used primarily for military turbojet and turboprop aircraft engines because it has a lower freeze point than other aviation fuels and meets engine requirements at high altitudes and speeds.

Kerosene: A light **petroleum** distillate that is used in space heaters, cook stoves, and water heaters and is suitable for use as a light source when burned in wick-fed lamps. Kerosene has a maximum distillation temperature of 400 degrees Fahrenheit at the 10-percent recovery point, a final boiling point of 572 degrees Fahrenheit, and a minimum flash point of 100 degrees Fahrenheit. Included are No. 1-K and No. 2-K, the two grades recognized by ASTM Specification D 3699 as well as all other grades of kerosene called range or stove oil, which have properties similar to those of No. 1 fuel oil. See **Jet Fuel, Kerosene-Type**.

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 degrees Fahrenheit 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.

Liquefied Refinery Gases (LRG): **Hydrocarbon gas liquids** produced in refineries from processing of **crude oil** and **unfinished oils**. They are retained in the liquid state through pressurization and/or refrigeration. The reported categories include **ethane**, **propane**, **normal butane**, **isobutane**, and refinery **olefins** (**ethylene**, **propylene**, **butylene**, and **isobutylene**).

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 (CH₄): A colorless, flammable, odorless **hydrocarbon** gas which is the major component of **natural gas**. It is also an important source of **hydrogen** in various industrial processes. Methane is a greenhouse gas. See **Greenhouse Gases**.

Methanol (CH₃OH): A light, volatile **alcohol** eligible for gasoline blending. See **Motor Gasoline Blending and Oxygenates**.

Methyl Tertiary Butyl Ether (MTBE) ((CH₃)₃COCH₃): An **ether** intended for gasoline blending. See **Motor Gasoline Blending and 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 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 engines. Motor gasoline, as defined in ASTM Specification D 4814 or Federal Specification VV-G-1690C, is characterized as having a boiling range of 122 to 158 degrees Fahrenheit at the 10 percent recovery point to 365 to 374 degrees Fahrenheit 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, such as **oxygenates**, are not counted in data on finished motor gasoline until the blending components are blended into the gasoline. See **Motor Gasoline, Conventional**; **Motor Gasoline, Oxygenated**; and **Motor Gasoline, Reformulated**.

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 refined or partially refined **petroleum** fraction with an approximate boiling range between 122 degrees and 400 degrees Fahrenheit.

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 Liquids (NGL): A group of **hydrocarbons** including **ethane, propane, normal butane, isobutane, and natural gasoline**. Generally include **natural gas plant liquids** and all **liquefied refinery gases** except **olefins**. See **Paraffinic Hydrocarbons**.

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**.

Normal Butane (C₄H₁₀): A straight-chain saturated (paraffinic) **hydrocarbon** extracted from both **natural gas** and **refinery gas** streams, which is gaseous at standard temperature and pressure. It is a colorless gas that boils at a temperature of 31 degrees Fahrenheit. See **Paraffinic Hydrocarbons**.

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**.

Olefinic Hydrocarbons (Olefins): Unsaturated **hydrocarbon** compounds with the general formula C_nH_{2n} containing at least one carbon-to-carbon double-bond. Olefins are produced at crude oil refineries and petrochemical plants and are not naturally occurring constituents of oil and natural gas. Sometimes referred to as alkenes or unsaturated hydrocarbons. Excludes aromatics.

Olefins: See **Olefinic Hydrocarbons (Olefins)**.

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.

Paraffinic Hydrocarbons: Saturated hydrocarbon compounds with the general formula C_nH_{2n+2} containing only single bonds. Sometimes referred to as alkanes or **natural gas liquids**.

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** fractions, 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: Liquid hydrocarbons recovered at inlet separators or scrubbers in **natural gas** processing plants at

atmospheric pressure and ambient temperatures. Mostly pentanes and heavier hydrocarbons.

Primary Energy: Energy in the form that it is first accounted for in a statistical energy balance, before any transformation to secondary or tertiary forms of energy. For example, coal can be converted to synthetic gas, which can be converted to **electricity**; in this example, coal is primary energy, synthetic gas is secondary energy, and electricity is tertiary energy. See **Primary Energy Production** and **Primary Energy Consumption**.

Primary Energy Consumption: Consumption of **primary energy**. (Energy sources that are produced from other energy sources—e.g., **coal coke** from **coal**—are included in primary energy consumption only if their energy content has not already been included as part of the original energy source. Thus, U.S. primary energy consumption does include net imports of coal coke, but not the coal coke produced from domestic coal.) The U.S. Energy Information Administration includes the following in U.S. primary energy consumption: coal consumption; coal coke net imports; **petroleum consumption (petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel)**; **dry natural gas**—excluding **supplemental gaseous fuels**—consumption; **nuclear electricity net generation** (converted to Btu using the nuclear plants **heat rate**); **conventional hydroelectricity** net generation (converted to Btu using the fossil-fueled plants heat rate); **geothermal** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and geothermal heat pump energy and geothermal direct use energy; **solar thermal** and **photovoltaic** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; **wind** electricity net generation (converted to Btu using the fossil-fueled plants heat rate); **wood and wood-derived fuels** consumption; **biomass waste** consumption; **fuel ethanol** and **biodiesel** consumption; losses and co-products from the production of fuel ethanol and biodiesel; and electricity net imports (converted to Btu using the electricity heat content of 3,412 Btu per kilowatt-hour). See **Total Energy Consumption**.

Primary Energy Production: Production of **primary energy**. The U.S. Energy Information Administration includes the following in U.S. primary energy production: **coal** production, **waste coal** supplied, and coal refuse recovery; **crude oil** and **lease condensate** production; **natural gas plant liquids** production; **dry natural gas**—excluding **supplemental gaseous fuels**—production; **nuclear electricity net generation** (converted to Btu using the nuclear plants **heat rate**); **conventional hydroelectricity** net generation (converted to Btu using the fossil-fueled plants heat rate); **geothermal** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and geothermal heat pump energy and geothermal direct use energy; **solar thermal** and **photovoltaic** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; **wind** electricity net generation (converted to Btu

using the fossil-fueled plants heat rate); **wood and wood-derived fuels** consumption; **biomass waste** consumption; and **biofuels** feedstock.

Prime Mover: The engine, turbine, water wheel, or similar machine that drives an electric generator; or, for reporting purposes, a device that converts energy to electricity directly.

Products Supplied (Petroleum): Approximately represents consumption of petroleum products because it measures the disappearance of these products from primary sources, i.e., refineries, natural gas-processing plants, blending plants, pipelines, and bulk terminals. In general, product supplied of each product in any given period is computed as follows: field production, plus refinery production, plus imports, plus unaccounted-for crude oil (plus net receipts when calculated on a PAD District basis) minus stock change, minus crude oil losses, minus refinery inputs, and minus exports.

Propane (C₃H₈): A straight-chain saturated (paraffinic) **hydrocarbon** extracted from **natural gas** or **refinery gas** streams, which is gaseous at standard temperature and pressure. It is a colorless gas that boils at a temperature of -44 degrees Fahrenheit. It includes all products designated in ASTM Specification D1835 and Gas Processors Association specifications for commercial (HD-5) propane. See **Paraffinic Hydrocarbons**.

Propylene (C₃H₆): An olefinic **hydrocarbon** recovered from refinery or petrochemical processes, which is gaseous at standard temperature and pressure. Propylene is an important petrochemical feedstock. See **Olefinic Hydrocarbons (Olefins)**.

Real Dollars: These are dollars that have been adjusted for inflation.

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 Gas: Still gas consumed as refinery fuel.

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 Diesel Fuel: See **Biomass-Based Diesel Fuel and Renewable Diesel Fuel (Other)**.

Renewable Diesel Fuel (Other): **Diesel fuel** and diesel fuel blending components produced from renewable sources that are coprocessed with **petroleum** feedstocks and meet requirements of advanced biofuels. *Note:* This category "other" pertains to the petroleum supply data system. See **Biomass-Based Diesel Fuel**.

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**.

Renewable Fuels Except Fuel Ethanol: See **Biomass-Based Diesel Fuel, Renewable Diesel Fuel (Other), and Renewable Fuels (Other)**.

Renewable Fuels (Other): Fuels and fuel blending components, except **biomass-based diesel fuel, renewable diesel fuel (other), and fuel ethanol**, produced from renewable **biomass**. *Note:* This category "other" pertains to the petroleum supply data system.

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. See **End-Use Sectors** and **Energy-Use Sectors**.

Residual Fuel Oil: A general classification for the heavier oils, known as No. 5 and No. 6 fuel oils, that remain after the **distillate fuel oils** and lighter **hydrocarbons** are distilled away in refinery operations. It conforms to ASTM Specifications D 396 and D 975 and Federal Specification VV-F-815C. No. 5, a residual fuel oil of medium viscosity, is also known as Navy Special and is defined in Military Specification MIL-F-859E, including Amendment 2 (NATO Symbol F-770). It is used in steam-powered vessels in government service and inshore power plants. No. 6 fuel oil includes Bunker C fuel oil and is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes.

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 range that are used as paint thinners, cleaners, or solvents. These products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specification 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: Any form or mixture of gases produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are **methane** and **ethane**. May contain **hydrogen** and small/trace amounts of other gases. Still gas is typically consumed as refinery fuel or used as petrochemical feedstock. Still gas burned for refinery fuel may differ in composition from marketed still gas sold to other users. See **Refinery Gas**.

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. 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 processing, except those requiring only mechanical blending. Unfinished oils are produced by partial refining of **crude oil** and include **naphthas** and lighter oils, **kerosene** and light gas oils, heavy gas oils, and residuum.

Unfractionated Streams: Mixtures of unsegregated **natural gas liquids** 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: See **Biomass Waste** and **Non-Biomass Waste**.

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.

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.

Wax: A solid or semi-solid material consisting of a mixture of **hydrocarbons** obtained or derived from **petroleum**

fractions, or through a Fischer-Tropsch type process, in which the straight-chained paraffin series predominates. This includes all marketable wax, whether crude or refined, with a congealing point (ASTM D 938) between 100 and 200 degrees Fahrenheit and a maximum oil content (ASTM D 3235) of 50 weight percent.

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.