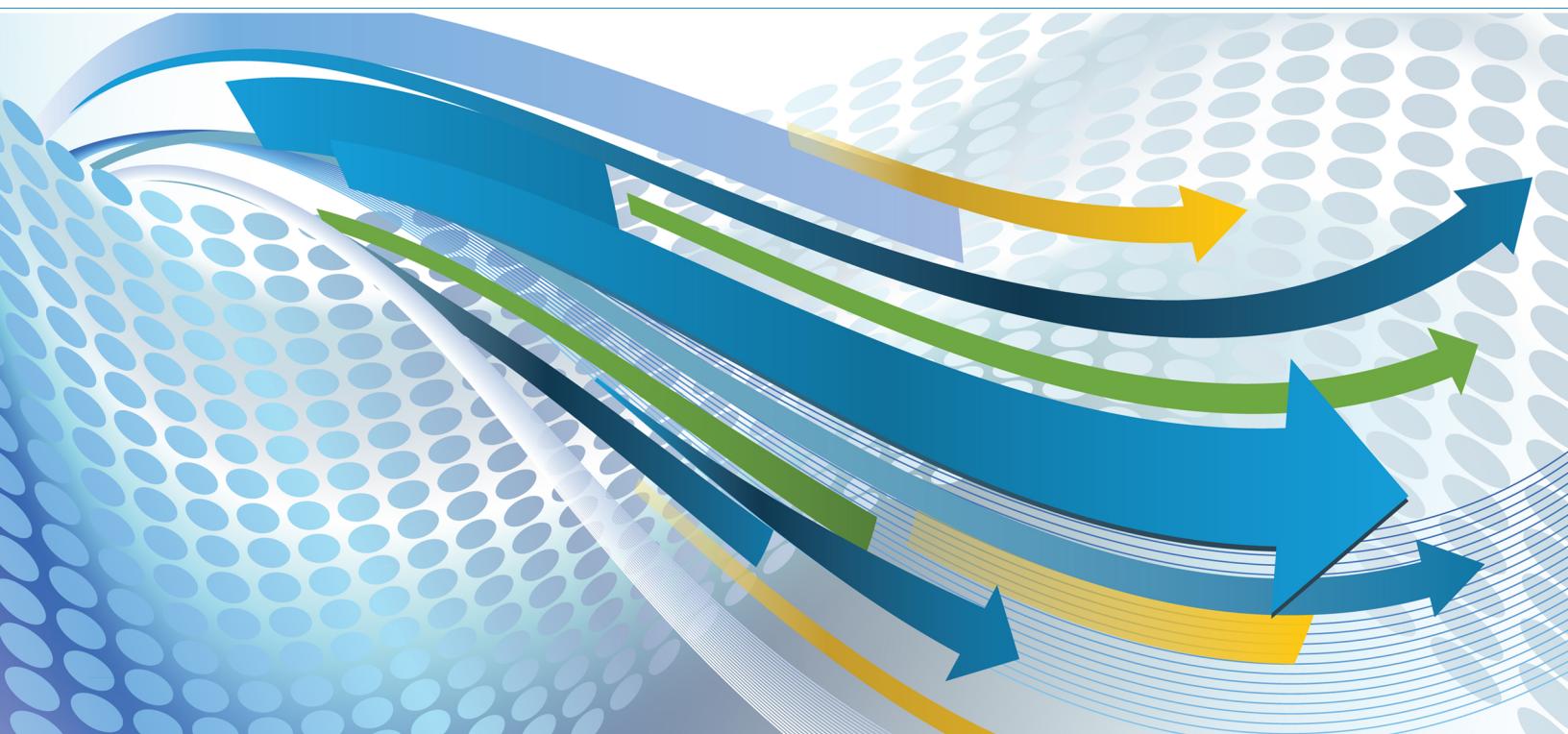


August 2014

# Monthly Energy Review



*Independent Statistics & Analysis*  
U.S. Energy Information  
Administration

[www.eia.gov/mer](http://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](mailto:infoctr@eia.gov).

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**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>.

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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**

## **August 2014**

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

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# Contents

	Page
Section      1. Energy Overview.....	1
Section      2. Energy Consumption by Sector.....	21
Section      3. Petroleum.....	35
Section      4. Natural Gas.....	67
Section      5. Crude Oil and Natural Gas Resource Development.....	75
Section      6. Coal.....	81
Section      7. Electricity.....	91
Section      8. Nuclear Energy.....	113
Section      9. Energy Prices.....	117
Section      10. Renewable Energy.....	135
Section      11. International Petroleum.....	147
Section      12. Environment.....	157
Appendix     A. British Thermal Unit Conversion Factors.....	171
Appendix     B. Metric Conversion Factors, Metric Prefixes, and Other Physical Conversion Factors.....	183
Glossary.....	187

# Tables

	Page
<b>Section 1. Energy Overview</b>	
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
<b>Section 2. Energy Consumption by Sector</b>	
2.1 Energy Consumption by Sector.....	23
2.2 Residential Sector Energy Consumption.....	25
2.3 Commercial Sector Energy Consumption.....	27
2.4 Industrial Sector Energy Consumption.....	29
2.5 Transportation Sector Energy Consumption.....	31
2.6 Electric Power Sector Energy Consumption.....	33
<b>Section 3. Petroleum</b>	
3.1 Petroleum Overview .....	37
3.2 Refinery and Blender Net Inputs and Net Production.....	39
3.3 Petroleum Trade	
3.3a Overview.....	41
3.3b Imports and Exports by Type.....	43
3.3c Imports From OPEC Countries.....	44
3.3d Imports From Non-OPEC Countries.....	45
3.4 Petroleum Stocks.....	47
3.5 Petroleum Products Supplied by Type.....	49
3.6 Heat Content of Petroleum Products Supplied by Type.....	51
3.7 Petroleum Consumption	
3.7a Residential and Commercial Sectors.....	53
3.7b Industrial Sector.....	54
3.7c Transportation and Electric Power Sectors.....	55
3.8 Heat Content of Petroleum Consumption	
3.8a Residential and Commercial Sectors.....	58
3.8b Industrial Sector.....	59
3.8c Transportation and Electric Power Sectors.....	60
<b>Section 4. Natural Gas</b>	
4.1 Natural Gas Overview.....	69
4.2 Natural Gas Trade by Country .....	70
4.3 Natural Gas Consumption by Sector.....	71
4.4 Natural Gas in Underground Storage.....	72
<b>Section 5. Crude Oil and Natural Gas Resource Development</b>	
5.1 Crude Oil and Natural Gas Drilling Activity Measurements.....	77
5.2 Crude Oil and Natural Gas Exploratory and Development Wells.....	78

# Tables

	Page
<b>Section 6. Coal</b>	
6.1    Coal Overview.....	83
6.2    Coal Consumption by Sector.....	84
6.3    Coal Stocks by Sector.....	85
<b>Section 7. Electricity</b>	
7.1    Electricity Overview.....	93
7.2    Electricity Net Generation	
7.2a    Total (All Sectors).....	95
7.2b    Electric Power Sector.....	96
7.2c    Commercial and Industrial Sectors.....	97
7.3    Consumption of Combustible Fuels for Electricity Generation	
7.3a    Total (All Sectors).....	99
7.3b    Electric Power Sector.....	100
7.3c    Commercial and Industrial Sectors (Selected Fuels).....	101
7.4    Consumption of Combustible Fuels for Electricity Generation and Useful Thermal Output	
7.4a    Total (All Sectors).....	103
7.4b    Electric Power Sector.....	104
7.4c    Commercial and Industrial Sectors (Selected Fuels).....	105
7.5    Stocks of Coal and Petroleum: Electric Power Sector.....	107
7.6    Electricity End Use.....	109
<b>Section 8. Nuclear Energy</b>	
8.1    Nuclear Energy Overview.....	115
<b>Section 9. Energy Prices</b>	
9.1    Crude Oil Price Summary.....	119
9.2    F.O.B. Costs of Crude Oil Imports From Selected Countries.....	120
9.3    Landed Costs of Crude Oil Imports From Selected Countries.....	121
9.4    Motor Gasoline Retail Prices, U.S. City Average.....	122
9.5    Refiner Prices of Residual Fuel Oil.....	123
9.6    Refiner Prices of Petroleum Products for Resale.....	124
9.7    Refiner Prices of Petroleum Products to End Users.....	125
9.8    Average Retail Prices of Electricity.....	127
9.9    Cost of Fossil-Fuel Receipts at Electric Generating Plants.....	129
9.10    Natural Gas Prices.....	131
<b>Section 10. Renewable Energy</b>	
10.1    Renewable Energy Production and Consumption by Source.....	137
10.2    Renewable Energy Consumption	
10.2a    Residential and Commercial Sectors.....	138
10.2b    Industrial and Transportation Sectors.....	139
10.2c    Electric Power Sector.....	140
10.3    Fuel Ethanol Overview.....	141
10.4    Biodiesel Overview.....	142

# Tables

	Page
<b>Section 11. International Petroleum</b>	
11.1 World Crude Oil Production	
11.1a OPEC Members . . . . .	150
11.1b Persian Gulf Nations, Non-OPEC, and World . . . . .	151
11.2 Petroleum Consumption in OECD Countries . . . . .	153
11.3 Petroleum Stocks in OECD Countries . . . . .	155
<b>Section 12. Environment</b>	
12.1 Carbon Dioxide Emissions From Energy Consumption by Source . . . . .	159
12.2 Carbon Dioxide Emissions From Energy Consumption: Residential Sector . . . . .	161
12.3 Carbon Dioxide Emissions From Energy Consumption: Commercial Sector . . . . .	162
12.4 Carbon Dioxide Emissions From Energy Consumption: Industrial Sector . . . . .	163
12.5 Carbon Dioxide Emissions From Energy Consumption: Transportation Sector . . . . .	164
12.6 Carbon Dioxide Emissions From Energy Consumption: Electric Power Sector . . . . .	165
12.7 Carbon Dioxide Emissions From Biomass Energy Consumption . . . . .	166
<b>Appendix A. British Thermal Unit Conversion Factors</b>	
A1. Approximate Heat Content of Petroleum Products . . . . .	171
A2. Approximate Heat Content of Petroleum Production, Imports, and Exports . . . . .	172
A3. Approximate Heat Content of Petroleum Consumption and Biofuels Production . . . . .	173
A4. Approximate Heat Content of Natural Gas . . . . .	174
A5. Approximate Heat Content of Coal and Coal Coke . . . . .	175
A6. Approximate Heat Rates for Electricity, and Heat Content of Electricity . . . . .	176
<b>Appendix B. Metric Conversion Factors, Metric Prefixes, and Other Physical Conversion Factors</b>	
B1. Metric Conversion Factors . . . . .	184
B2. Metric Prefixes . . . . .	185
B3. Other Physical Conversion Factors . . . . .	185

# Figures

	Page
<b>Section 1. Energy Overview</b>	
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
<b>Section 2. Energy Consumption by Sector</b>	
2.1 Energy Consumption by Sector .....	22
2.2 Residential Sector Energy Consumption .....	24
2.3 Commercial Sector Energy Consumption .....	26
2.4 Industrial Sector Energy Consumption .....	28
2.5 Transportation Sector Energy Consumption .....	30
2.6 Electric Power Sector Energy Consumption .....	32
<b>Section 3. Petroleum</b>	
3.1 Petroleum Overview .....	36
3.2 Refinery and Blender Net Inputs and Net Production .....	38
3.3 Petroleum Trade	
3.3a Overview .....	40
3.3b Imports .....	42
3.4 Petroleum Stocks .....	46
3.5 Petroleum Products Supplied by Type .....	48
3.6 Heat Content of Petroleum Products Supplied by Type .....	50
3.7 Petroleum Consumption by Sector .....	52
3.8a Heat Content of Petroleum Consumption by End-User Sector .....	56
3.8b Heat Content of Petroleum Consumption by End-User Sector, Monthly .....	57
<b>Section 4. Natural Gas</b>	
4.1 Natural Gas .....	68
<b>Section 5. Crude Oil and Natural Gas Resource Development</b>	
5.1 Crude Oil and Natural Gas Resource Development Indicators .....	76
<b>Section 6. Coal</b>	
6.1 Coal .....	82
<b>Section 7. Electricity</b>	
7.1 Electricity Overview .....	92
7.2 Electricity Net Generation .....	94
7.3 Consumption of Selected Combustible Fuels for Electricity Generation .....	98
7.4 Consumption of Selected Combustible Fuels for Electricity Generation and Useful Thermal Output .....	102
7.5 Stocks of Coal and Petroleum: Electric Power Sector .....	106
7.6 Electricity End Use .....	108

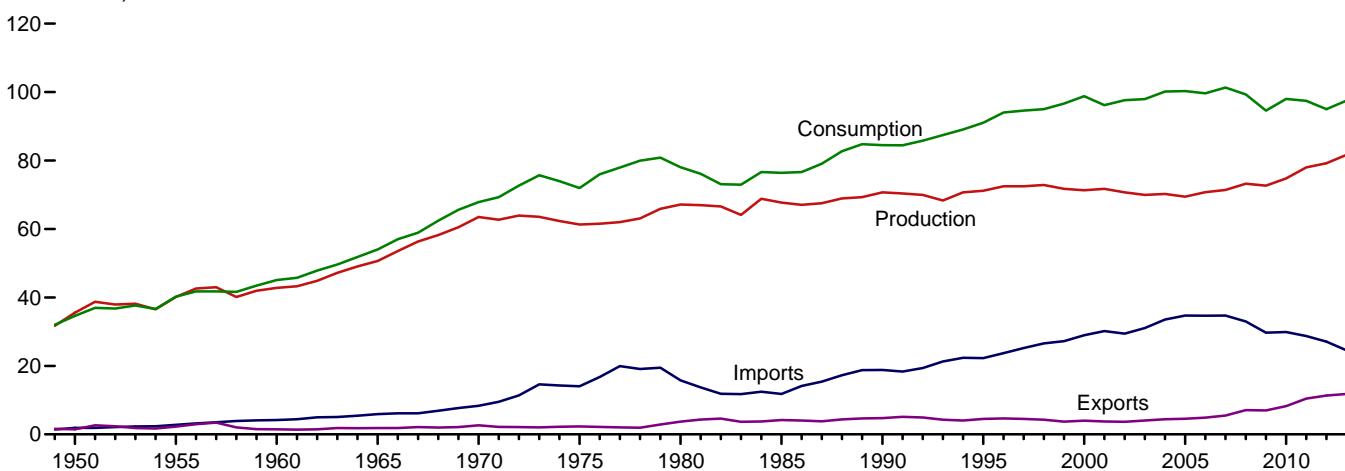
# Figures

	Page
<b>Section 8. Nuclear Energy</b>	
8.1    Nuclear Energy Overview.....	114
<b>Section 9. Energy Prices</b>	
9.1    Petroleum Prices.....	118
9.2    Average Retail Prices of Electricity.....	126
9.3    Cost of Fossil-Fuel Receipts at Electric Generating Plants.....	128
9.4    Natural Gas Prices.....	130
<b>Section 10. Renewable Energy</b>	
10.1    Renewable Energy Consumption.....	136
<b>Section 11. International Petroleum</b>	
11.1    World Crude Oil Production	
11.1a    Overview.....	148
11.1b    By Selected Country.....	149
11.2    Petroleum Consumption in OECD Countries.....	152
11.3    Petroleum Stocks in OECD Countries.....	154
<b>Section 12. Environment</b>	
12.1    Carbon Dioxide Emissions From Energy Consumption by Source.....	158
12.2    Carbon Dioxide Emissions From Energy Consumption by Sector.....	160

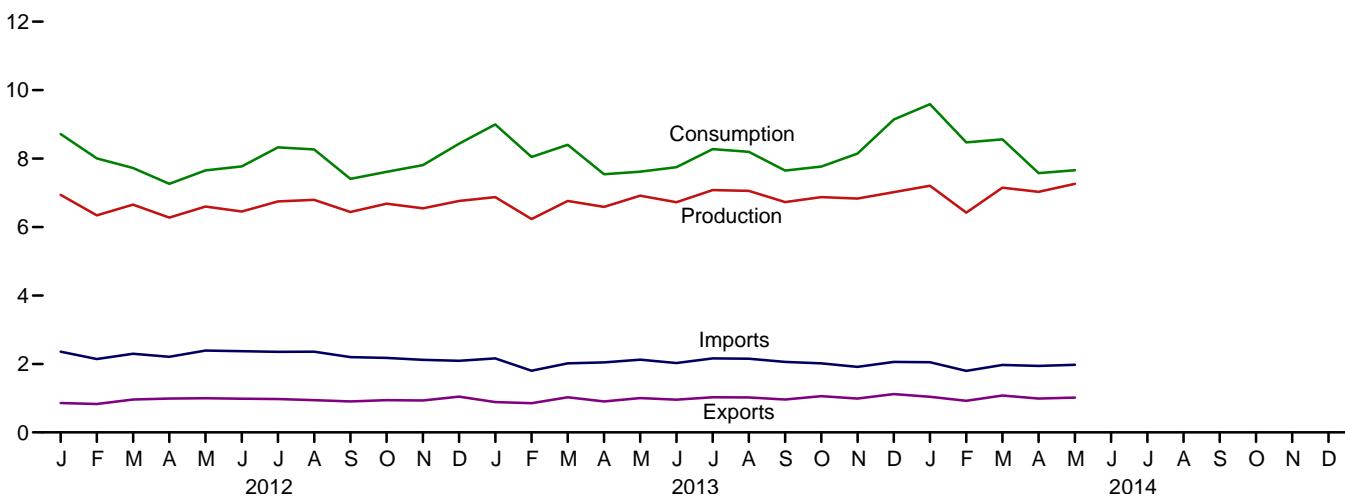
# 1. Energy Overview

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

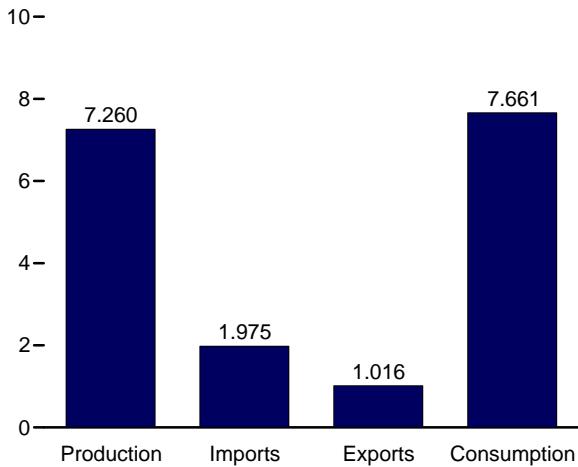
Overview, 1949–2013



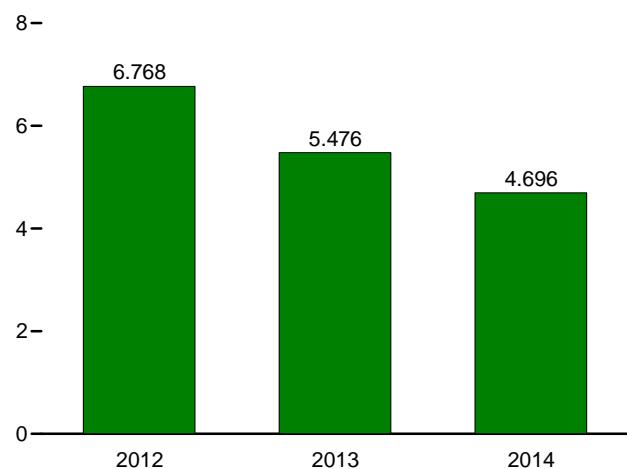
Overview, Monthly



Overview, May 2014



Net Imports, January–May



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

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

	Production				Trade			Stock Change and Other <sup>d</sup>	Consumption			
	Fossil Fuels <sup>a</sup>	Nuclear Electric Power	Renewable Energy <sup>b</sup>	Total	Imports	Exports	Net Imports <sup>c</sup>		Fossil Fuels <sup>e</sup>	Nuclear Electric Power	Renewable Energy <sup>b</sup>	Total <sup>f</sup>
1950 Total .....	32,563	0.000	2,978	35,540	1,913	1,465	0.448	-1,372	31,632	0.000	2,978	34,616
1955 Total .....	37,364	.000	2,784	40,148	2,790	2,286	.504	-.444	37,410	.000	2,784	40,208
1960 Total .....	39,869	.006	2,928	42,803	4,188	1,477	2,710	-.427	42,137	.006	2,928	45,086
1965 Total .....	47,235	.043	3,396	50,674	5,892	1,829	4,063	-.722	50,577	.043	3,396	54,015
1970 Total .....	59,186	.239	4,070	63,495	8,342	2,632	5,709	-1,367	63,522	.239	4,070	67,838
1975 Total .....	54,733	1,900	4,687	61,320	14,032	2,323	11,709	-1,065	65,357	1,900	4,687	71,965
1980 Total .....	59,008	2,739	5,428	67,175	15,796	3,695	12,101	-1,210	69,828	2,739	5,428	78,067
1985 Total .....	57,539	4,076	6,084	67,698	11,781	4,196	7,584	1,110	66,093	4,076	6,084	76,392
1990 Total .....	58,560	6,104	6,041	70,705	18,817	4,752	14,065	-.284	72,332	6,104	6,041	84,485
1995 Total .....	57,540	7,075	6,558	71,174	22,260	4,511	17,750	2,105	77,259	7,075	6,560	91,029
2000 Total .....	57,366	7,862	6,104	71,332	28,973	4,006	24,967	2,515	84,731	7,862	6,106	98,814
2001 Total .....	58,541	8,029	5,164	71,735	30,157	3,771	26,386	-1,953	82,902	8,029	5,163	96,168
2002 Total .....	56,834	8,145	5,734	70,713	29,408	3,669	25,739	1,193	83,699	8,145	5,729	97,645
2003 Total .....	56,033	7,960	5,947	69,939	31,061	4,054	27,007	.998	84,014	7,960	5,948	97,943
2004 Total .....	55,942	8,223	6,069	70,234	33,544	4,434	29,110	.817	85,819	8,223	6,081	100,161
2005 Total .....	55,044	8,161	6,229	69,434	34,709	4,560	30,149	.698	85,794	8,161	6,242	100,282
2006 Total .....	55,938	8,215	6,599	70,751	34,679	4,873	29,806	-.929	84,702	8,215	6,649	99,629
2007 Total .....	56,436	8,459	6,528	71,422	34,704	5,483	29,220	.675	86,211	8,459	6,541	101,317
2008 Total .....	57,587	8,426	7,219	73,233	32,993	7,063	25,931	.129	83,551	8,426	7,202	99,292
2009 Total .....	56,670	8,355	7,655	72,680	29,706	6,966	22,740	-.824	78,487	8,355	7,638	94,596
2010 Total .....	58,207	8,434	8,128	74,769	29,877	8,234	21,643	1,604	81,412	8,434	8,081	98,016
2011 Total .....	60,563	8,269	9,170	78,002	28,720	10,457	18,263	1,196	79,991	8,269	9,074	97,461
2012 January .....	R 5,410	.758	.772	R 6,940	2,361	.858	1,502	R .276	7,198	.758	.751	8,718
February .....	R 4,979	.669	.693	R 6,341	2,142	.830	1,313	R .354	6,648	.669	.681	8,008
March .....	R 5,215	.647	.792	R 6,654	2,296	.960	1,336	R -.267	6,281	.647	.785	7,723
April .....	R 4,925	.585	.765	R 6,275	2,211	.987	1,224	R -.237	5,904	.585	.761	7,263
May .....	R 5,142	.651	.806	R 6,598	2,392	.999	1,393	R -.336	6,187	.651	.803	7,655
June .....	R 4,998	.683	.772	R 6,453	2,371	.985	1,386	R -.065	6,305	.683	.772	7,773
July .....	R 5,279	.724	.743	R 6,746	2,354	.973	1,381	R .204	6,843	.724	.744	8,330
August .....	R 5,351	.729	.712	R 6,793	2,361	.940	1,420	R .056	6,803	.729	.718	8,269
September .....	R 5,121	.676	.644	R 6,441	2,199	.906	1,293	R -.328	6,073	.676	.643	7,406
October .....	R 5,380	.626	.678	R 6,684	2,176	.944	1,232	R -.302	6,293	.626	.683	7,614
November .....	R 5,268	.594	.683	R 6,545	2,119	.930	1,189	R .074	6,517	.594	.684	7,808
December .....	R 5,279	.719	.766	R 6,764	2,093	1,043	1,050	R .623	6,943	.719	.763	8,436
Total .....	R 62,346	8,062	8,826	R 79,234	27,075	11,356	15,719	R .051	77,994	8,062	8,786	95,004
2013 January .....	R 5,333	.748	.795	R 6,876	2,163	.888	1,275	R .847	7,443	.748	.794	8,998
February .....	R 4,884	.644	.706	R 6,234	1,800	.851	.949	R .865	6,684	.644	.707	8,048
March .....	R 5,330	.660	.770	R 6,760	2,017	1,024	.993	R .652	6,960	.660	.771	8,405
April .....	R 5,184	.595	.809	R 6,588	2,044	.906	1,139	R -.186	6,124	.595	.810	7,541
May .....	R 5,402	.659	.857	R 6,918	2,122	1,001	1,122	R -.421	6,087	.659	.857	7,619
June .....	R 5,209	.696	.821	R 6,726	2,029	.957	1,072	R -.051	6,212	.696	.822	7,746
July .....	R 5,525	.739	.813	R 7,078	2,164	1,027	1,137	R .063	6,710	.739	.810	8,278
August .....	R 5,570	.748	.737	R 7,055	2,151	1,021	1,131	R .010	6,694	.748	.734	8,195
September .....	R 5,343	.690	.695	R 6,727	2,058	.961	1,098	R -.175	6,247	.690	.698	7,650
October .....	R 5,473	.662	.739	R 6,875	2,017	1,057	.961	R -.070	6,350	.662	.740	R 7,766
November .....	R 5,393	.681	.758	R 6,832	1,913	.990	.923	R .393	6,700	.681	.752	8,148
December .....	5,471	.747	.799	R 7,017	2,061	1,119	.942	R 1,181	7,585	.747	.795	9,140
Total .....	R 64,118	8,268	9,298	R 81,684	24,541	11,802	12,739	R 3,110	79,796	8,268	9,291	97,534
2014 January .....	R 5,619	.766	.819	R 7,204	2,050	1,040	1,010	R 1,376	7,999	.766	.812	9,590
February .....	R 5,062	.656	.702	R 6,420	1,796	.922	.875	R 1,176	7,106	.656	.699	8,471
March .....	R 5,646	.654	.849	R 7,149	1,972	1,076	.896	R .518	7,058	.654	.840	8,563
April .....	R 5,579	.591	.857	R 7,027	1,944	.988	.956	R -.410	6,118	.591	.854	R 7,573
May .....	5,743	.660	.857	7,260	1,975	1,016	.959	-.558	6,131	.660	.856	7,661
5-Month Total ....	27,649	3,326	4,085	35,060	9,738	5,042	4,696	2,102	34,413	3,326	4,062	41,858
2013 5-Month Total ....	26,134	3,306	3,937	33,376	10,147	4,670	5,476	1,758	33,299	3,306	3,938	40,611
2012 5-Month Total ....	25,671	3,310	3,828	32,809	11,402	4,634	6,768	-.210	32,218	3,310	3,781	39,367

<sup>a</sup> Coal, natural gas (dry), crude oil, and natural gas plant liquids.

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

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

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

<sup>e</sup> Coal, coal coke net imports, natural gas, and petroleum.

<sup>f</sup> Also includes electricity net imports.

R=Revised.

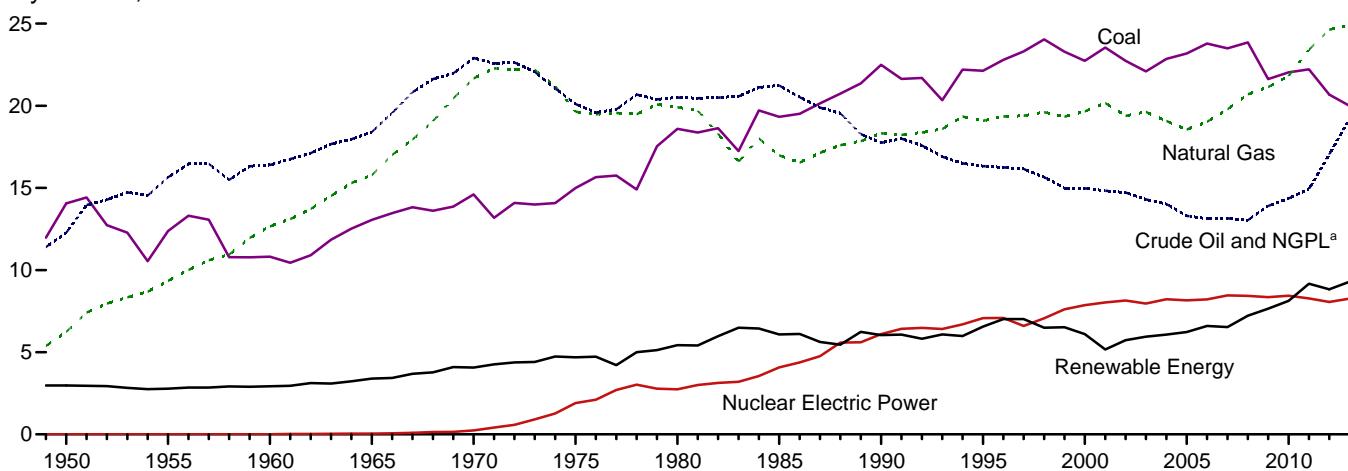
Notes: • See "Primary Energy," "Primary Energy Production," and "Primary Energy Consumption," in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

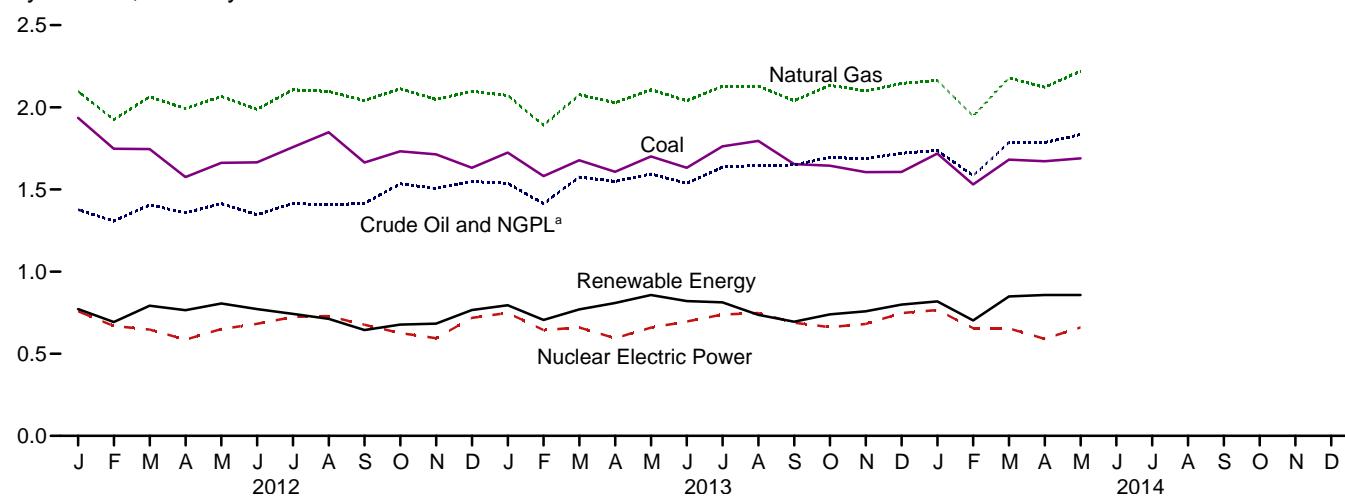
Sources: • Production: Table 1.2. • Trade: Tables 1.4a and 1.4b. • Stock Change and Other: Calculated as consumption minus production and net imports. • Consumption: Table 1.3.

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

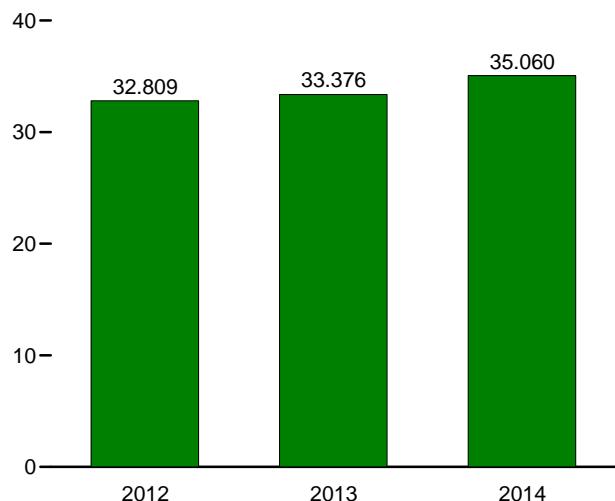
By Source, 1949–2013



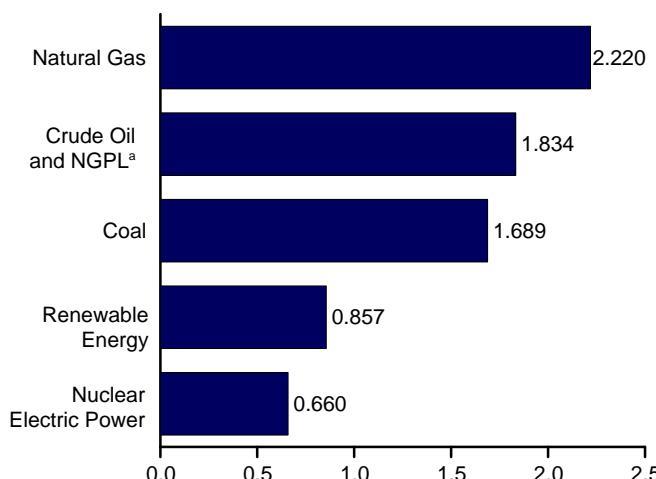
By Source, Monthly



Total, January–May



By Source, May 2014



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

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

Source: Table 1.2.

**Table 1.2 Primary Energy Production by Source**  
(Quadrillion Btu)

	Fossil Fuels					Nuclear Electric Power	Renewable Energy <sup>a</sup>					Total	
	Coal <sup>b</sup>	Natural Gas (Dry)	Crude Oil <sup>c</sup>	NGPL <sup>d</sup>	Total		Hydro-electric Power <sup>e</sup>	Geo-thermal	Solar/PV	Wind	Bio-mass		
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	11,333	2,574	56,670	8,355	2,669	.200	.098	.721	3,967	7,655	72,680
2010 Total .....	22,038	21,806	11,581	2,781	58,207	8,434	2,539	.208	.126	.923	4,332	8,128	74,769
2011 Total .....	22,221	23,406	11,966	2,970	60,563	8,269	3,103	.212	.171	1,168	4,516	9,170	78,002
2012 January .....	1,935	2,098	R 1,105	.272	R 5,410	.758	.220	.017	.017	.130	.388	.772	R 6,940
February .....	1,747	1,924	R 1,051	.256	R 4,979	.669	.193	.016	.016	.105	.363	.693	R 6,341
March .....	1,745	2,064	R 1,133	.272	R 5,215	.647	.247	.018	.018	.133	.377	.792	R 6,654
April .....	1,575	1,992	R 1,095	.263	R 4,925	.585	.250	.017	.018	.121	.358	.765	R 6,275
May .....	1,662	2,067	R 1,140	.273	R 5,142	.651	.273	.018	.020	.119	.376	.806	R 6,598
June .....	1,665	1,987	R 1,088	.258	R 4,998	.683	.254	.017	.020	.114	.367	.772	R 6,453
July .....	1,757	2,107	R 1,149	.266	R 5,279	.724	.252	.018	.021	.084	.368	.743	R 6,746
August .....	1,848	2,097	R 1,135	.271	R 5,351	.729	.219	.018	.020	.081	.375	.712	R 6,793
September .....	1,664	2,041	R 1,144	.272	R 5,121	.676	.168	.018	.020	.084	.356	.644	R 6,441
October .....	1,732	2,113	R 1,248	.286	R 5,380	.626	.157	.018	.020	.120	.363	.678	R 6,684
November .....	1,714	2,048	R 1,226	.280	R 5,268	.594	.178	.018	.019	.111	.358	.683	R 6,545
December .....	1,632	2,098	R 1,273	.276	R 5,279	.719	.219	.019	.019	.138	.372	.766	R 6,764
Total .....	20,677	24,635	R 13,788	3,246	R 62,346	8,062	2,629	.212	.227	1,340	4,419	8,826	R 79,234
2013 January .....	1,724	E 2,072	RE 1,265	.272	R 5,333	.748	.239	.019	.022	.139	.376	.795	R 6,876
February .....	1,581	E 1,890	RE 1,158	.255	R 4,884	.644	.195	.017	.021	.132	.340	.706	R 6,234
March .....	1,678	E 2,077	RE 1,290	.285	R 5,330	.660	.197	.019	.025	.149	.381	.770	R 6,760
April .....	1,607	E 2,028	RE 1,274	.275	R 5,184	.595	.236	.018	.025	.165	.366	.809	R 6,588
May .....	1,701	E 2,107	RE 1,309	.285	R 5,402	.659	.272	.018	.026	.155	.386	.857	R 6,918
June .....	1,631	E 2,040	RE 1,259	.278	R 5,209	.696	.260	.018	.027	.131	.385	.821	R 6,726
July .....	1,763	E 2,128	RE 1,342	.294	R 5,525	.739	.259	.019	.027	.106	.402	.813	R 7,078
August .....	1,796	E 2,128	RE 1,340	.306	R 5,570	.748	.207	.019	.028	.091	.392	.737	R 7,055
September .....	1,654	E 2,040	RE 1,347	.302	R 5,343	.690	.161	.018	.027	.111	.377	.695	R 6,727
October .....	1,644	E 2,134	RE 1,386	.309	R 5,473	.662	.165	.019	.028	.131	.397	.739	6,875
November .....	1,606	E 2,099	RE 1,383	.305	R 5,393	.681	.169	.018	.025	.151	.396	.758	R 6,832
December .....	1,606	E 2,145	E 1,419	.301	R 5,471	.747	.203	.019	.026	.134	.417	.799	R 7,017
Total .....	19,990	E 24,889	RE 15,773	3,465	R 64,118	8,268	2,561	.221	.307	1,595	4,614	9,298	R 81,684
2014 January .....	1,719	E 2,163	RE 1,434	.304	R 5,619	.766	.206	.019	.029	.171	.395	.819	R 7,204
February .....	1,531	E 1,946	RE 1,306	.279	R 5,062	.656	.166	.017	.027	.133	.359	.702	R 6,420
March .....	1,681	E 2,179	RE 1,465	.322	R 5,646	.654	.231	.018	.034	.169	.396	.849	R 7,149
April .....	1,672	RE 2,121	RE 1,460	.325	R 5,579	.591	.239	.018	.036	.178	.386	.857	R 7,027
May .....	1,689	E 2,220	E 1,503	.332	R 5,743	.660	.252	.019	.039	.148	.400	.857	7,260
5-Month Total ...	8,291	E 10,629	E 7,167	1,561	27,649	3,326	1,092	.091	.166	.800	1,936	4,085	35,060
2013 5-Month Total ...	8,291	E 10,175	E 6,297	1,372	26,134	3,306	1,138	.092	.119	.740	1,848	3,937	33,376
2012 5-Month Total ...	8,665	10,145	5,524	1,337	25,671	3,310	1,182	.086	.089	.609	1,861	3,828	32,809

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

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

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

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

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

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

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

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

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

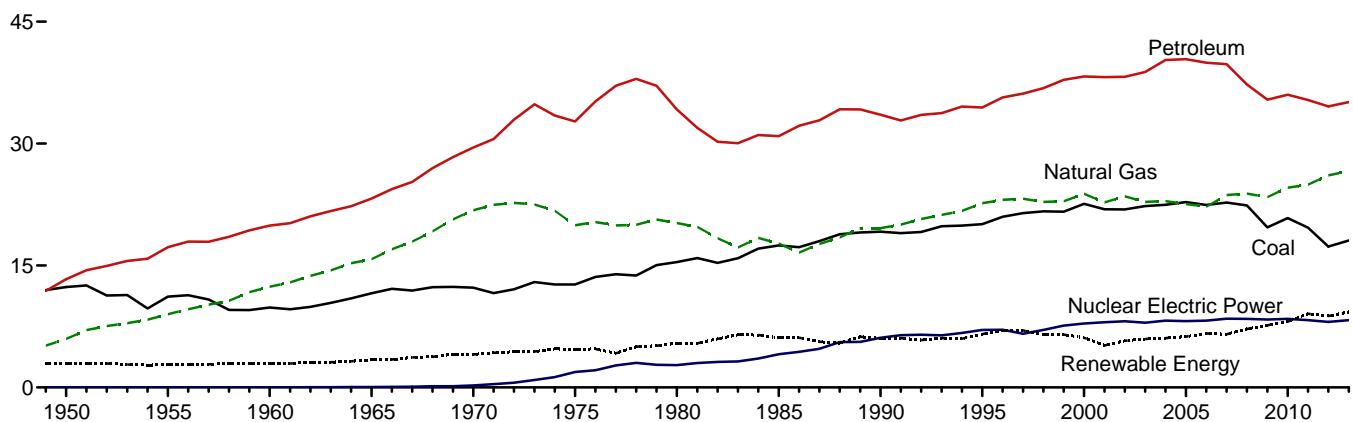
Sources: • **Coal:** Tables 6.1 and A5. • **Natural Gas (Dry):** Tables 4.1 and A4. • **Crude Oil and Natural Gas Plant Liquids:** Tables 3.1 and A2.

• **Nuclear Electric Power:** Tables 7.2a and A6 ("Nuclear Plants" heat rate).

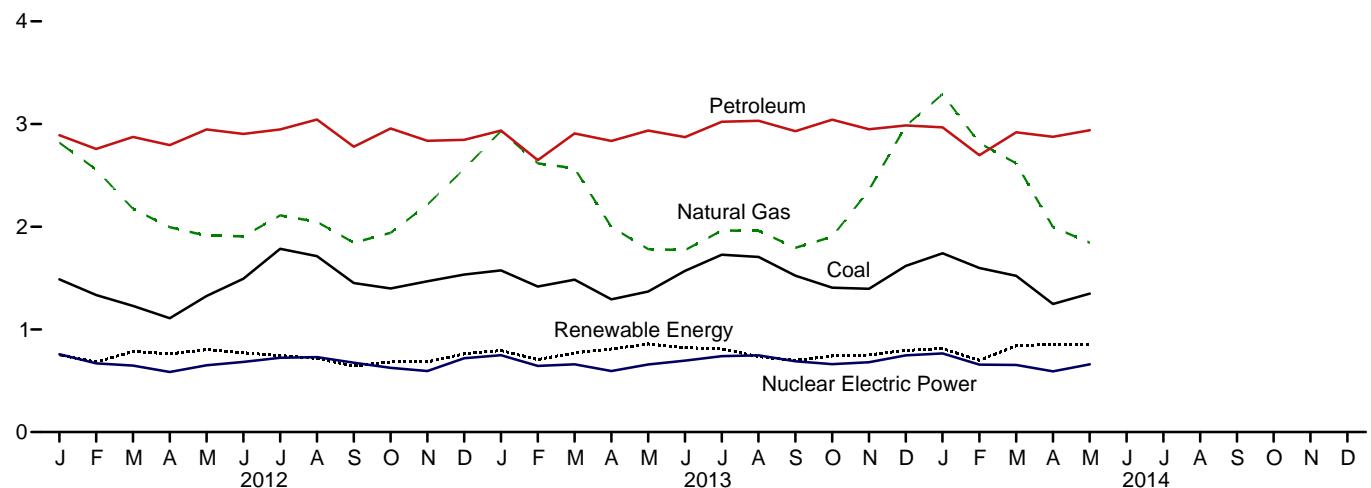
• **Renewable Energy:** Table 10.1.

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

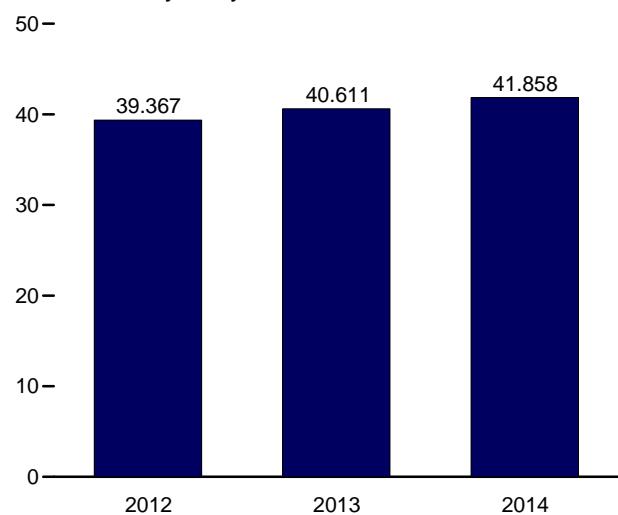
By Source,<sup>a</sup> 1949–2013



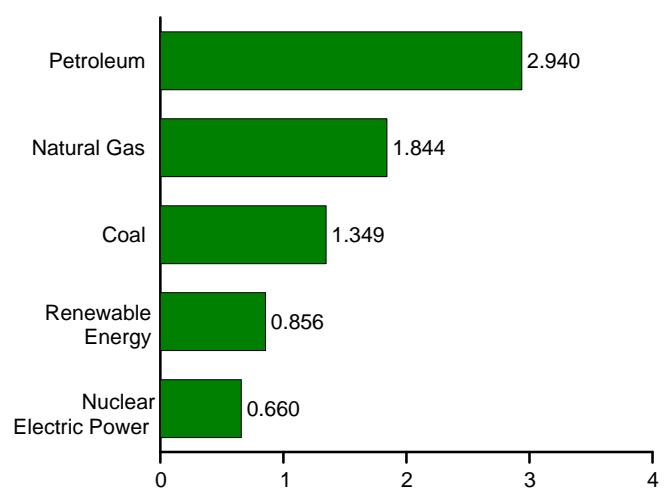
By Source,<sup>a</sup> Monthly



Total, January–May



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



<sup>a</sup> Small quantities of net imports of coal coke and electricity are not shown.

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

Source: Table 1.3.

**Table 1.3 Primary Energy Consumption by Source**  
 (Quadrillion Btu)

	Fossil Fuels				Nuclear Electric Power	Renewable Energy <sup>a</sup>						Total
	Coal	Natural Gas <sup>b</sup>	Petroleum <sup>c</sup>	Total <sup>d</sup>		Hydro-electric Power <sup>e</sup>	Geo-thermal	Solar/PV	Wind	Bio-mass	Total	
1950 Total .....	12,347	5,968	13,315	31,632	0.000	1.415	NA	NA	NA	1,562	2,978	34,616
1955 Total .....	11,167	8,998	17,255	37,410	.000	1.360	NA	NA	NA	1,424	2,784	40,208
1960 Total .....	9,838	12,385	19,919	42,137	.006	1.608	(s)	NA	NA	1,320	2,928	45,086
1965 Total .....	11,581	15,769	23,246	50,577	.043	2.059	.002	NA	NA	1,335	3,396	54,015
1970 Total .....	12,265	21,795	29,521	63,522	.239	2.634	.006	NA	NA	1,431	4,070	67,838
1975 Total .....	12,663	19,948	32,732	65,357	1.900	3.155	.034	NA	NA	1,499	4,687	71,965
1980 Total .....	15,423	20,235	34,205	69,828	2.739	2.900	.053	NA	NA	2,475	5,428	78,067
1985 Total .....	17,478	17,703	30,925	66,093	4.076	2.970	.097	(s)	(s)	3,016	6,084	76,392
1990 Total .....	19,173	19,603	33,552	72,332	6.104	3.046	.171	.059	.029	2,735	6,041	84,485
1995 Total .....	20,089	22,671	34,438	77,259	7.075	3.205	.152	.069	.033	3,101	6,560	91,029
2000 Total .....	22,580	23,824	38,262	84,731	7.862	2.811	.164	.066	.057	3,008	6,106	98,814
2001 Total .....	21,914	22,773	38,186	82,902	8.029	2.242	.164	.064	.070	2,622	5,163	96,168
2002 Total .....	21,904	23,510	38,224	83,699	8.145	2.689	.171	.063	.105	2,701	5,729	97,645
2003 Total .....	22,321	22,831	38,811	84,014	7.960	2.793	.173	.062	.113	2,807	5,948	97,943
2004 Total .....	22,466	22,923	40,292	85,819	8.223	2.668	.178	.063	.142	3,010	6,081	100,161
2005 Total .....	22,797	22,565	40,388	85,794	8.161	2.703	.181	.063	.178	3,117	6,242	100,282
2006 Total .....	22,447	22,239	39,955	84,702	8.215	2.869	.181	.068	.264	3,267	6,649	99,629
2007 Total .....	22,749	23,663	39,774	86,211	8,459	2.446	.186	.076	.341	3,492	6,541	101,317
2008 Total .....	22,387	23,843	37,280	83,551	8,426	2.511	.192	.089	.546	3,865	7,202	99,292
2009 Total .....	19,691	23,416	35,403	78,487	8,355	2.669	.200	.098	.721	3,950	7,638	94,596
2010 Total .....	20,834	24,575	36,010	81,412	8,434	2.539	.208	.126	.923	4,285	8,081	98,016
2011 Total .....	19,658	24,955	35,368	79,991	8,269	3.103	.212	.171	1,168	4,420	9,074	97,461
2012 January .....	1,487	2,818	2,891	7,198	.758	.220	.017	.017	.130	.367	.751	8,718
February .....	1,334	2,557	2,757	6,648	.669	.193	.016	.016	.105	.351	.681	8,008
March .....	1,229	2,174	2,874	6,281	.647	.247	.018	.018	.133	.370	.785	7,723
April .....	1,109	1,995	2,794	5,904	.585	.250	.017	.018	.121	.354	.761	7,263
May .....	1,326	1,913	2,947	6,187	.651	.273	.018	.020	.119	.373	.803	7,655
June .....	1,494	1,907	2,904	6,305	.683	.254	.017	.020	.114	.367	.772	7,773
July .....	1,785	2,111	2,947	6,843	.724	.252	.018	.021	.084	.369	.744	8,330
August .....	1,713	2,046	3,044	6,803	.729	.219	.018	.020	.081	.380	.718	8,269
September .....	1,451	1,843	2,780	6,073	.676	.168	.018	.020	.084	.355	.643	7,406
October .....	1,399	1,941	2,956	6,293	.626	.157	.018	.020	.120	.368	.683	7,614
November .....	1,468	2,214	2,837	6,517	.594	.178	.018	.019	.111	.358	.684	7,808
December .....	1,534	2,562	2,847	6,943	.719	.219	.019	.019	.138	.369	.763	8,436
Total .....	17,329	26,083	34,577	77,994	8,062	2.629	.212	.227	1,340	4,379	8,786	95,004
2013 January .....	1,575	2,932	2,936	7,443	.748	.239	.019	.022	.139	.375	.794	8,998
February .....	1,418	2,617	2,648	6,684	.644	.195	.017	.021	.132	.340	.707	8,048
March .....	1,484	2,569	2,909	6,960	.660	.197	.019	.025	.149	.382	.771	8,405
April .....	1,293	1,998	2,836	6,124	.595	.236	.018	.025	.165	.367	.810	7,541
May .....	1,369	1,782	2,937	6,087	.659	.272	.018	.026	.155	.386	.857	7,619
June .....	1,570	1,772	2,872	6,212	.696	.260	.018	.027	.131	.386	.822	7,746
July .....	1,727	1,963	3,022	6,710	.739	.259	.019	.027	.106	.399	.810	8,278
August .....	1,705	1,959	3,032	6,694	.748	.207	.019	.028	.091	.390	.734	8,195
September .....	1,523	1,794	2,930	6,247	.690	.161	.018	.027	.111	.380	.698	7,650
October .....	1,406	1,903	3,042	6,350	.662	.165	.019	.028	.131	.398	.740	R 7,766
November .....	1,395	2,358	2,950	6,700	.681	.169	.018	.025	.151	.390	.752	8,148
December .....	1,619	2,982	2,986	7,585	.747	.203	.019	.026	.134	.414	.795	9,140
Total .....	18,084	26,630	35,099	79,796	8,268	2.561	.221	.307	1,595	4,607	9,291	97,534
2014 January .....	1,741	3,292	2,968	7,999	.766	.206	.019	.029	.171	.388	.812	9,590
February .....	1,597	2,814	2,696	7,106	.656	.166	.017	.027	.133	.356	.699	8,471
March .....	1,522	2,617	2,920	7,058	.654	.231	.018	.034	.169	.387	.840	8,563
April .....	1,248	2,876	.591	.239	.018	.036	.178	.383	.854			
May .....	1,349	1,844	2,940	6,131	.660	.252	.019	.039	.148	.399	.856	7,661
5-Month Total ....	7,457	12,562	14,400	34,413	3,326	1,092	.091	.166	.800	1,913	4,062	41,858
2013 5-Month Total ....	7,138	11,899	14,266	33,299	3,306	1,138	.092	.119	.740	1,850	3,938	40,611
2012 5-Month Total ....	6,485	11,457	14,264	32,218	3,310	1,182	.086	.089	.609	1,814	3,781	39,367

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

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

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

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

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

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

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

Notes:

- See "Primary Energy Consumption" in Glossary.

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

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

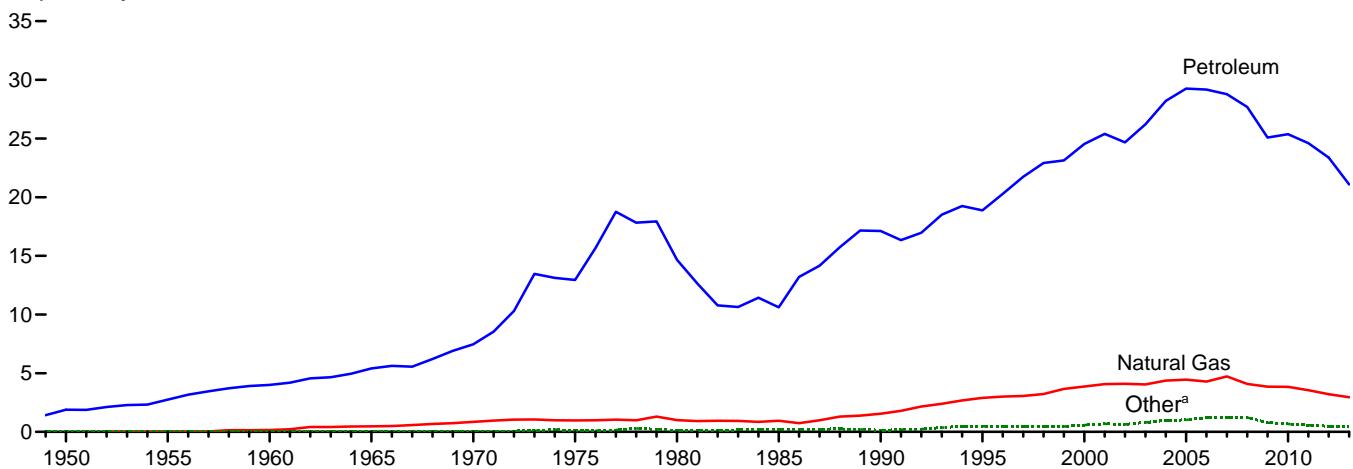
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources:

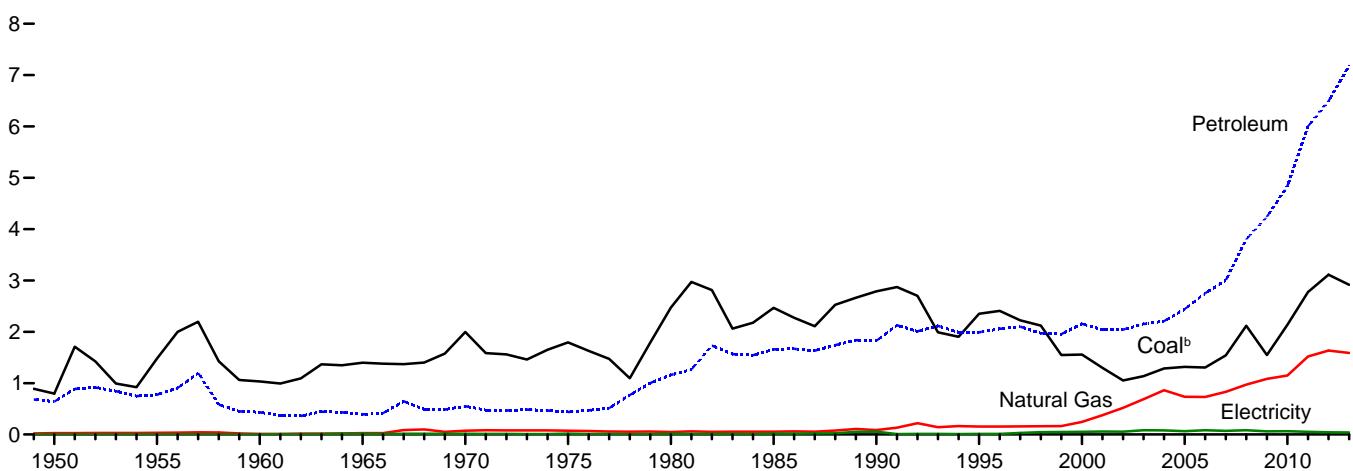
- **Coal:** Tables 6.1 and A5.
- **Natural Gas:** Tables 4.1 and A4.
- **Petroleum:** Table 3.6.
- **Nuclear Electric Power:** Tables 7.2a and A6 ("Nuclear Plants" heat rate).
- **Renewable Energy:** Table 10.1.
- **Net Imports of Coal Coke and Electricity:** Tables 1.4a and 1.4b.

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

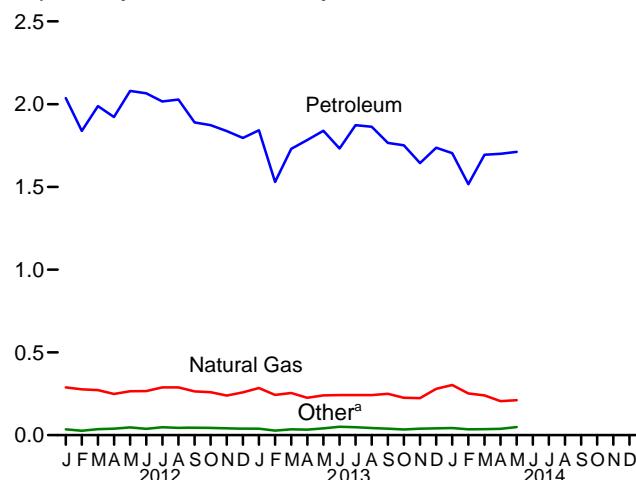
Imports by Source, 1949–2013



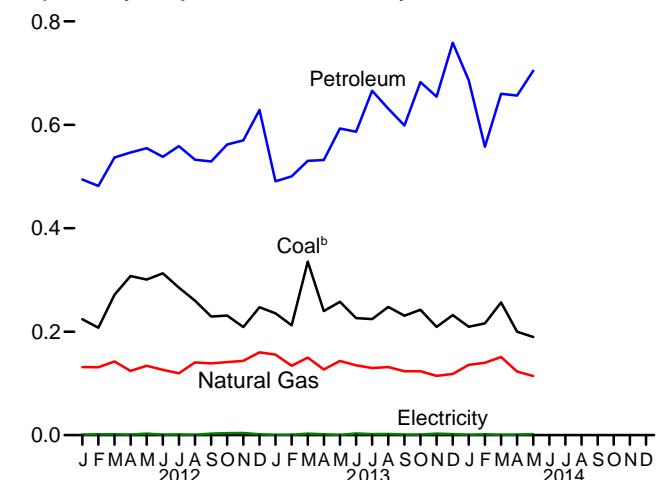
Exports by Source, 1949–2013



Imports by Source, Monthly



Exports by Major Source, Monthly



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

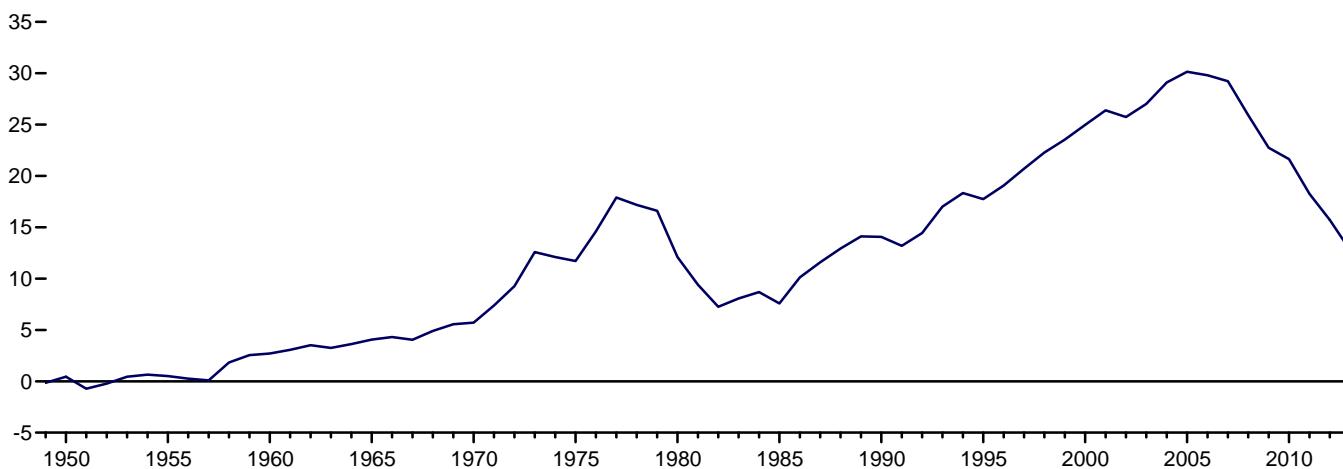
<sup>b</sup> Includes coal coke.

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

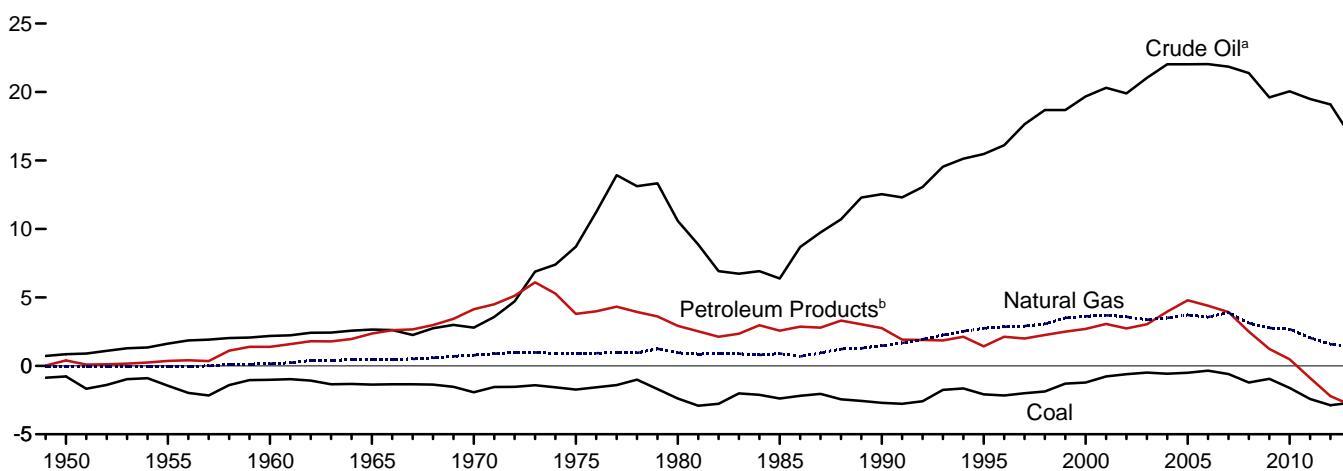
Sources: Tables 1.4a and 1.4b.

**Figure 1.4b Primary Energy Net Imports**  
(Quadrillion Btu)

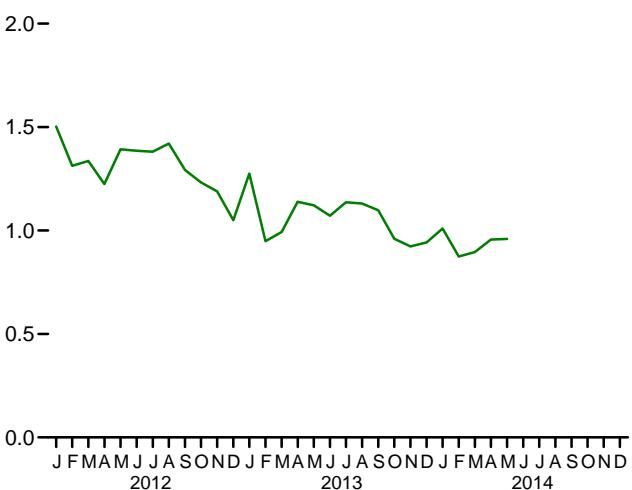
Total, 1949–2013



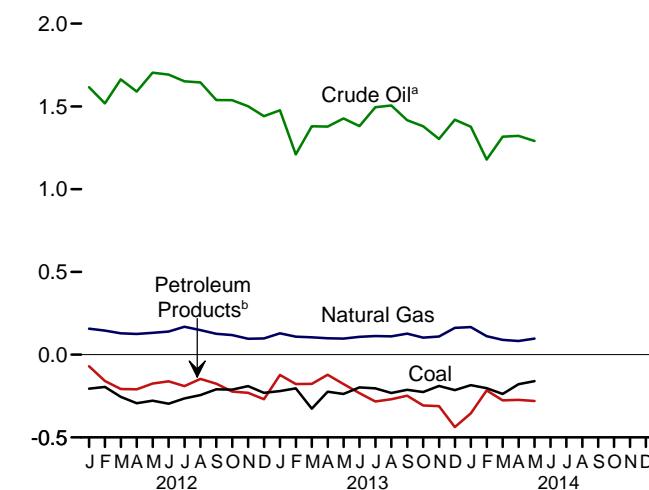
By Major Source, 1949–2013



Total, Monthly



By Major Source, Monthly



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

<sup>b</sup> Petroleum products, unfinished oils, pentanes plus, and gasoline

blending components. Does not include biofuels.

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

Sources: Tables 1.4a and 1.4b.

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

	Imports									
	Coal	Coal Coke	Natural Gas	Petroleum			Total	Biofuels <sup>c</sup>	Electricity	Total
				Crude Oil <sup>a</sup>	Petroleum Products <sup>b</sup>	Total				
1950 Total .....	0.009	0.011	0.000	1.056	0.830	1.886	NA	0.007	1.913	
1955 Total .....	.008	.003	.011	1.691	1.061	2.752	NA	.016	2.790	
1960 Total .....	.007	.003	.161	2.196	1.802	3.999	NA	.018	4.188	
1965 Total .....	.005	.002	.471	2.654	2.748	5.402	NA	.012	5.892	
1970 Total .....	.001	.004	.846	2.814	4.656	7.470	NA	.021	8.342	
1975 Total .....	.024	.045	.978	8.721	4.227	12.948	NA	.038	14.032	
1980 Total .....	.030	.016	1.006	11.195	3.463	14.658	NA	.085	15.796	
1985 Total .....	.049	.014	.952	6.814	3.796	10.609	NA	.157	11.781	
1990 Total .....	.067	.019	1.551	12.766	4.351	17.117	NA	.063	18.817	
1995 Total .....	.237	.095	2.901	15.669	3.211	18.881	.001	.146	22.260	
2000 Total .....	.313	.094	3.869	19.783	4.749	24.531	(s)	.166	28.973	
2001 Total .....	.495	.063	4.068	20.348	5.051	25.398	.002	.131	30.157	
2002 Total .....	.422	.080	4.104	19.920	4.754	24.674	.002	.125	29.408	
2003 Total .....	.626	.068	4.042	21.060	5.159	26.219	.002	.104	31.061	
2004 Total .....	.682	.170	4.365	22.082	6.114	28.197	.013	.117	33.544	
2005 Total .....	.762	.088	4.450	22.091	7.157	29.248	.012	.150	34.709	
2006 Total .....	.906	.101	4.291	22.085	7.084	29.169	.066	.146	34.679	
2007 Total .....	.909	.061	4.723	21.914	6.868	28.781	.055	.175	34.704	
2008 Total .....	.855	.089	4.084	21.448	6.237	27.685	.085	.195	32.993	
2009 Total .....	.566	.009	3.845	19.699	5.383	25.082	.027	.178	29.706	
2010 Total .....	.484	.030	3.834	20.140	5.231	25.371	.004	.154	29.877	
2011 Total .....	.327	.035	3.555	19.595	5.010	24.605	.019	.178	28.720	
2012 January .....	.018	.003	.288	1.630	.407	2.037	(s)	.014	2.361	
February .....	.012	.002	.277	1.531	.308	1.839	(s)	.012	2.142	
March .....	.016	.004	.272	1.676	.312	1.988	.002	.014	2.296	
April .....	.014	.007	.249	1.597	.325	1.923	.001	.017	2.211	
May .....	.023	.004	.265	1.718	.361	2.080	.002	.019	2.392	
June .....	.017	.001	.266	1.700	.365	2.065	.004	.018	2.371	
July .....	.021	.001	.288	1.665	.351	2.016	.004	.023	2.354	
August .....	.015	.001	.288	1.656	.372	2.028	.007	.022	2.361	
September .....	.020	.002	.264	1.550	.339	1.889	.007	.017	2.199	
October .....	.020	.001	.260	1.549	.324	1.874	.007	.015	2.176	
November .....	.018	.001	.240	1.513	.323	1.837	.007	.016	2.119	
December .....	.017	.002	.258	1.453	.343	1.796	.005	.015	2.093	
<b>Total</b> .....	<b>.212</b>	<b>.028</b>	<b>3.216</b>	<b>19.239</b>	<b>4.132</b>	<b>23.371</b>	<b>.045</b>	<b>.202</b>	<b>27.075</b>	
2013 January .....	.015	(s)	.285	1.490	.352	1.842	.004	.017	2.163	
February .....	.009	.001	.243	1.230	.300	1.530	.001	.016	1.800	
March .....	.009	(s)	.254	1.398	.332	1.730	.006	.018	2.017	
April .....	.016	(s)	.226	1.401	.383	1.784	.003	.016	2.044	
May .....	.020	.001	.240	1.449	.390	1.839	.004	.019	2.122	
June .....	.028	(s)	.243	1.401	.331	1.732	.006	.020	2.029	
July .....	.020	(s)	.242	1.512	.361	1.873	.006	.022	2.164	
August .....	.017	.001	.242	1.517	.347	1.864	.006	.022	2.151	
September .....	.019	(s)	.250	1.434	.331	1.765	.006	.018	2.058	
October .....	.017	(s)	.226	1.400	.351	1.751	.007	.017	2.017	
November .....	.020	(s)	.224	1.339	.305	1.644	.008	.018	1.913	
December .....	.018	(s)	.280	1.454	.284	1.737	.009	.017	2.061	
<b>Total</b> .....	<b>.208</b>	<b>.003</b>	<b>2.955</b>	<b>17.025</b>	<b>4.066</b>	<b>21.091</b>	<b>.065</b>	<b>.217</b>	<b>24.541</b>	
2014 January .....	.025	(s)	.303	1.421	.283	1.704	.001	.017	2.050	
February .....	.014	(s)	.252	1.218	.298	1.516	.001	.014	1.796	
March .....	.019	(s)	.240	1.361	.333	1.694	.002	.017	1.972	
April .....	.022	(s)	R .206	1.368	.332	1.700	.002	.015	1.944	
May .....	.030	(s)	.212	1.342	.370	1.712	.005	.017	1.975	
<b>5-Month Total</b> .....	<b>.109</b>	<b>(s)</b>	<b>1.212</b>	<b>6.710</b>	<b>1.616</b>	<b>8.327</b>	<b>.011</b>	<b>.079</b>	<b>9.738</b>	
2013 5-Month Total .....	.069	.002	1.248	6.967	1.757	8.724	.018	.085	10.147	
2012 5-Month Total .....	.084	.020	1.351	8.152	1.714	9.866	.005	.077	11.402	

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

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

<sup>c</sup> Fuel ethanol (minus denaturant) and biodiesel.

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

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

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

Sources: • **Coal:** Tables 6.1 and A5. • **Coal Coke:** 1949 forward—U.S. Department of Commerce, Bureau of the Census, Monthly Report IM 145 and Table A5. • **Natural Gas:** Tables 4.1 and A4. • **Crude Oil and Petroleum Products:** Tables 3.3b, 10.3, 10.4, and A2. • **Biofuels:** Tables 10.3, 10.4 and A3. • **Electricity:** Tables 7.1 and A6.

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

	Exports										Net Imports <sup>a</sup>	
	Coal	Coal Coke	Natural Gas	Petroleum			Total	Biofuels <sup>d</sup>	Electricity	Total		
				Crude Oil <sup>b</sup>	Petroleum Products <sup>c</sup>	Total						
1950 Total .....	0.786	0.010	0.027	0.202	0.440	0.642	NA	0.001	1.465	0.448		
1955 Total .....	1.465	.013	.032	.067	.707	.774	NA	.002	2.286	.504		
1960 Total .....	1.023	.009	.012	.018	.413	.431	NA	.003	1.477	2.710		
1965 Total .....	1.376	.021	.027	.006	.386	.392	NA	.013	1.829	4.063		
1970 Total .....	1.936	.061	.072	.029	.520	.549	NA	.014	2.632	5.709		
1975 Total .....	1.761	.032	.074	.012	.427	.439	NA	.017	2.323	11.709		
1980 Total .....	2.421	.051	.049	.609	.551	1.160	NA	.014	3.695	12.101		
1985 Total .....	2.438	.028	.056	.432	1.225	1.657	NA	.017	4.196	7.584		
1990 Total .....	2.772	.014	.087	.230	1.594	1.824	NA	.055	4.752	14.065		
1995 Total .....	2.318	.034	.156	.200	1.791	1.991	NA	.012	4.511	17.750		
2000 Total .....	1.528	.028	.245	.106	2.048	2.154	NA	.051	4.006	24.967		
2001 Total .....	1.265	.033	.377	.043	1.996	2.039	(s)	.056	3.771	26.386		
2002 Total .....	1.032	.020	.520	.019	2.023	2.042	(s)	.054	3.669	25.739		
2003 Total .....	1.117	.018	.686	.026	2.124	2.151	.001	.082	4.054	27.007		
2004 Total .....	1.253	.033	.862	.057	2.151	2.208	.001	.078	4.434	29.110		
2005 Total .....	1.273	.043	.735	.067	2.374	2.442	.001	.065	4.560	30.149		
2006 Total .....	1.264	.040	.730	.052	2.699	2.751	.005	.083	4.873	29.806		
2007 Total .....	1.507	.036	.830	.058	2.949	3.007	.036	.069	5.483	29.220		
2008 Total .....	2.071	.049	.972	.061	3.739	3.800	.089	.083	7.063	25.931		
2009 Total .....	1.515	.032	1.082	.093	4.147	4.240	.035	.062	6.966	22.740		
2010 Total .....	2.101	.036	1.147	.088	4.750	4.838	.047	.065	8.234	21.643		
2011 Total .....	2.751	.024	1.519	.100	5.904	6.004	.108	.051	10.457	18.263		
2012 January .....	.224	.001	.132	.014	.477	.491	.008	.003	.858	1.502		
February .....	.208	.002	.131	.012	.467	.479	.007	.003	.830	1.313		
March .....	.271	.002	.142	.013	.520	.533	.008	.004	.960	1.336		
April .....	.308	.001	.124	.007	.535	.542	.007	.004	.987	1.224		
May .....	.301	.003	.134	.015	.536	.551	.007	.004	.999	1.393		
June .....	.313	.001	.126	.008	.526	.534	.007	.004	.985	1.386		
July .....	.285	.001	.119	.014	.542	.556	.008	.003	.973	1.381		
August .....	.260	.001	.141	.011	.519	.530	.006	.003	.940	1.420		
September .....	.229	.003	.139	.012	.514	.526	.006	.003	.906	1.293		
October .....	.231	.004	.141	.012	.547	.559	.006	.003	.944	1.232		
November .....	.209	.004	.144	.013	.555	.567	.004	.003	.930	1.189		
December .....	.247	.002	.160	.013	.613	.625	.005	.004	1.043	1.050		
Total .....	3.087	.024	1.633	.143	6.350	6.493	.078	.041	11.356	15.719		
2013 January .....	.236	.001	.156	.013	.474	.487	.005	.003	.888	1.275		
February .....	.212	.001	.134	.020	.477	.498	.004	.003	.851	.949		
March .....	.336	.003	.150	.018	.509	.527	.006	.003	1.024	.993		
April .....	.240	.002	.127	.023	.505	.528	.005	.004	.906	1.139		
May .....	.258	(s)	.143	.022	.567	.590	.006	.003	1.001	1.122		
June .....	.226	.003	.135	.021	.563	.584	.006	.003	.957	1.072		
July .....	.225	.002	.130	.018	.645	.662	.005	.003	1.027	1.137		
August .....	.248	.002	.131	.012	.616	.628	.008	.003	1.021	1.131		
September .....	.231	.001	.124	.017	.579	.596	.007	.003	.961	1.098		
October .....	.242	.001	.124	.020	.659	.679	.007	.003	1.057	.961		
November .....	.209	.003	.115	.035	.616	.651	.008	.003	.990	.923		
December .....	.232	.002	.118	.034	.721	.755	.007	.004	1.119	.942		
Total .....	2.895	.021	1.587	.254	6.932	7.186	.075	.039	11.802	12.739		
2014 January .....	.210	.001	.136	.044	.637	.682	.008	.004	1.040	1.010		
February .....	.216	.002	.140	.039	.514	.553	.006	.004	.922	.875		
March .....	.257	.001	.151	.044	.609	.653	.008	.007	1.076	.896		
April .....	.200	.001	.123	.047	.605	.652	.007	.005	.988	.956		
May .....	.190	.002	.114	.052	.650	.702	.005	.003	1.016	.959		
5-Month Total .....	1.072	.006	.664	.226	3.016	3.242	.034	.023	5.042	4.696		
2013 5-Month Total .....	1.281	.006	.710	.097	2.533	2.629	.027	.017	4.670	5.476		
2012 5-Month Total .....	1.312	.008	.664	.061	2.534	2.596	.036	.018	4.634	6.768		

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

<sup>b</sup> Crude oil and lease condensate.

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

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

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

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

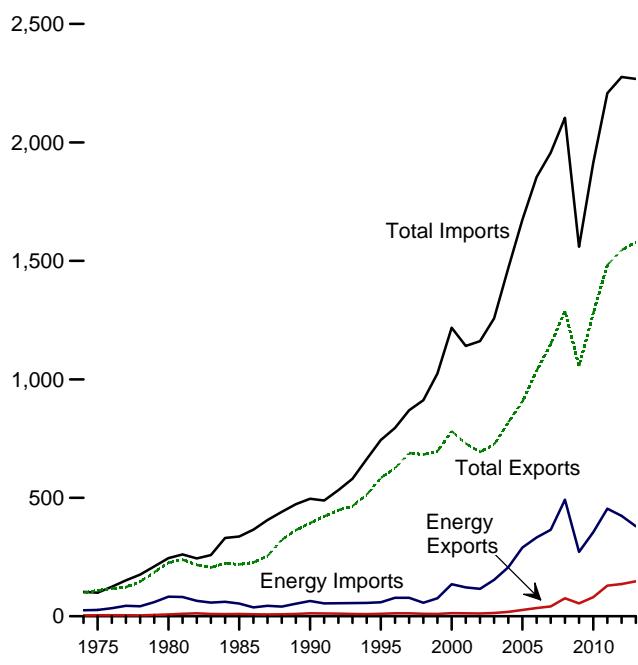
and the District of Columbia.

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

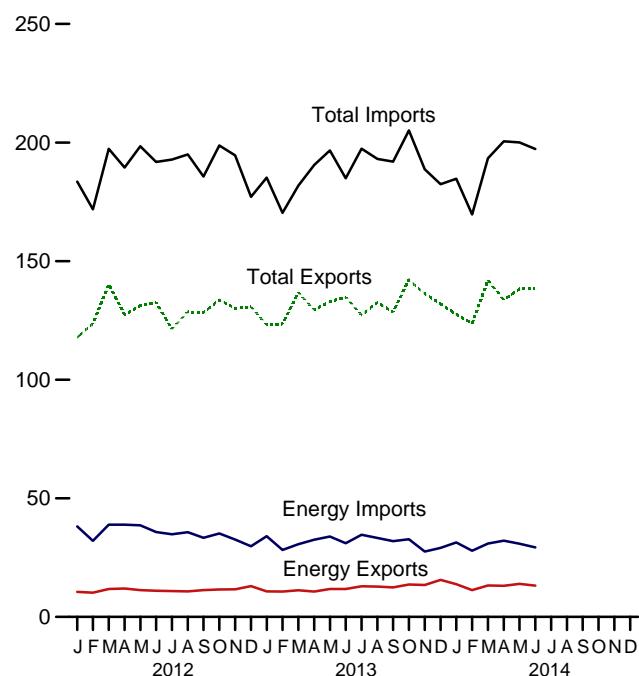
Sources: • Coal: Tables 6.1 and A5. • Coal Coke: 1949 forward—U.S. Department of Commerce, Bureau of the Census, Monthly Report EM 545 and Table A5. • Natural Gas: Tables 4.1 and A4. • Crude Oil and Petroleum Products: Tables 3.3b, 10.4, and A2. • Biofuels: Tables 10.3, 10.4 and A3. • Electricity: Tables 7.1 and A6.

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

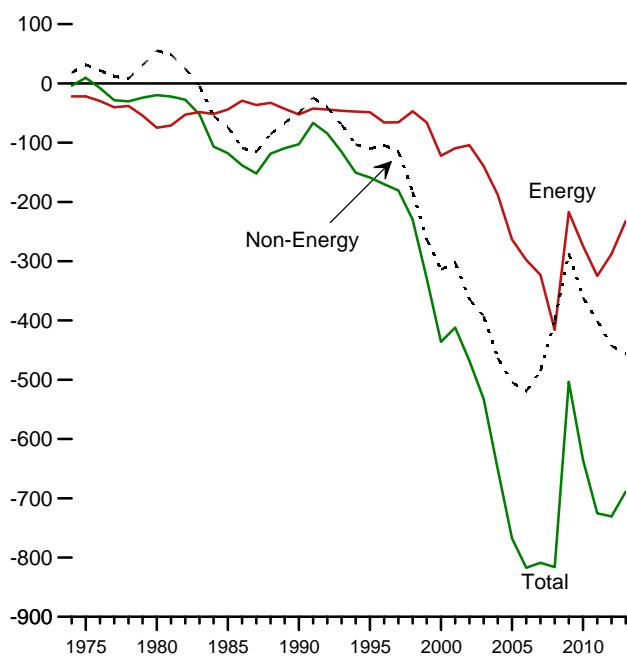
Imports and Exports, 1974–2013



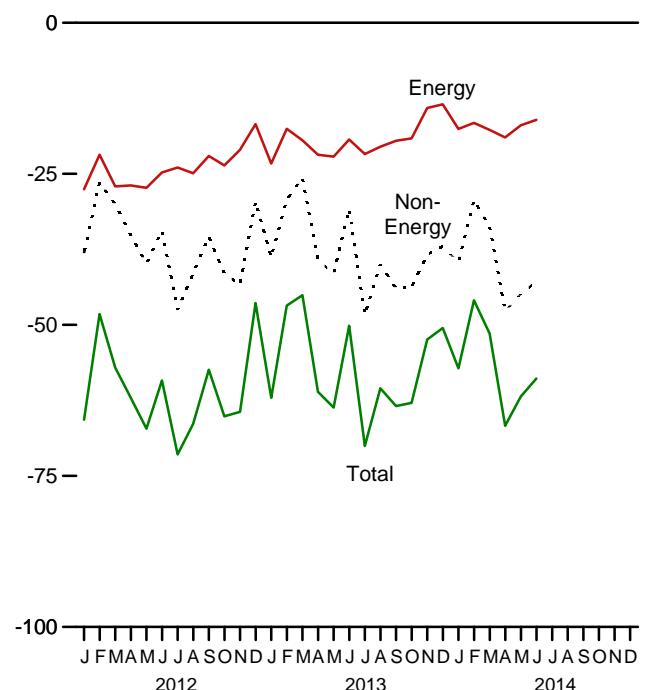
Imports and Exports, Monthly



Trade Balance, 1974–2013



Trade Balance, Monthly



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

Source: Table 1.5.

**Table 1.5 Merchandise Trade Value**  
(Million Dollars<sup>a</sup>)

	Petroleum <sup>b</sup>			Energy <sup>c</sup>			Non-Energy Balance	Total Merchandise		
	Exports	Imports	Balance	Exports	Imports	Balance		Exports	Imports	Balance
1974 Total .....	792	24,668	-23,876	3,444	25,454	-22,010	18,126	99,437	103,321	-3,884
1975 Total .....	907	25,197	-24,289	4,470	26,476	-22,006	31,557	108,856	99,305	9,551
1980 Total .....	2,833	78,637	-75,803	7,982	82,924	-74,942	55,246	225,566	245,262	-19,696
1985 Total .....	4,707	50,475	-45,768	9,971	53,917	-43,946	-73,765	218,815	336,526	-117,712
1990 Total .....	6,901	61,583	-54,682	12,233	64,661	-52,428	-50,068	393,592	496,088	-102,496
1995 Total .....	6,321	54,368	-48,047	10,358	59,109	-48,751	-110,050	584,742	743,543	-158,801
2000 Total .....	10,192	119,251	-109,059	13,179	135,367	-122,188	-313,916	781,918	1,218,022	-436,104
2001 Total .....	8,868	102,747	-93,879	12,494	121,923	-109,429	-302,470	729,100	1,140,999	-411,899
2002 Total .....	8,569	102,663	-94,094	11,541	115,748	-104,207	-364,056	693,103	1,161,366	-468,263
2003 Total .....	10,209	132,433	-122,224	13,768	153,298	-139,530	-392,820	724,771	1,257,121	-532,350
2004 Total .....	13,130	179,266	-166,136	18,642	206,660	-188,018	-462,912	818,775	1,469,704	-650,930
2005 Total .....	19,155	250,068	-230,913	26,488	289,723	-263,235	-504,242	905,978	1,673,455	-767,477
2006 Total .....	28,171	299,714	-271,543	34,711	332,500	-297,789	-519,515	1,036,635	1,853,938	-817,304
2007 Total .....	33,293	327,620	-294,327	41,725	364,987	-323,262	-485,501	1,148,199	1,956,962	-808,763
2008 Total .....	61,695	449,847	-388,152	76,075	491,885	-415,810	-400,389	1,287,442	2,103,641	-816,199
2009 Total .....	44,509	251,833	-207,324	54,536	271,739	-217,203	-286,379	1,056,043	1,559,625	-503,582
2010 Total .....	64,753	333,472	-268,719	80,625	354,982	-274,357	-361,005	1,278,495	1,913,857	-635,362
2011 Total .....	b102,180	b431,866	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	R -44,880	R 138,225	R 200,077	R -61,852
June .....	11,042	27,667	-16,625	13,218	29,278	-16,060	-42,815	138,413	197,289	-58,875
6-Month Total	63,800	171,510	-107,710	78,587	182,483	-103,897	-238,101	803,597	1,145,596	-341,999
2013 6-Month Total	54,844	182,013	-127,168	66,895	190,477	-123,582	-205,303	780,729	1,109,615	-328,886
2012 6-Month Total	54,058	214,826	-160,768	66,879	222,408	-155,529	-203,912	772,939	1,132,380	-359,441

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

<sup>b</sup> 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.

<sup>c</sup> 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

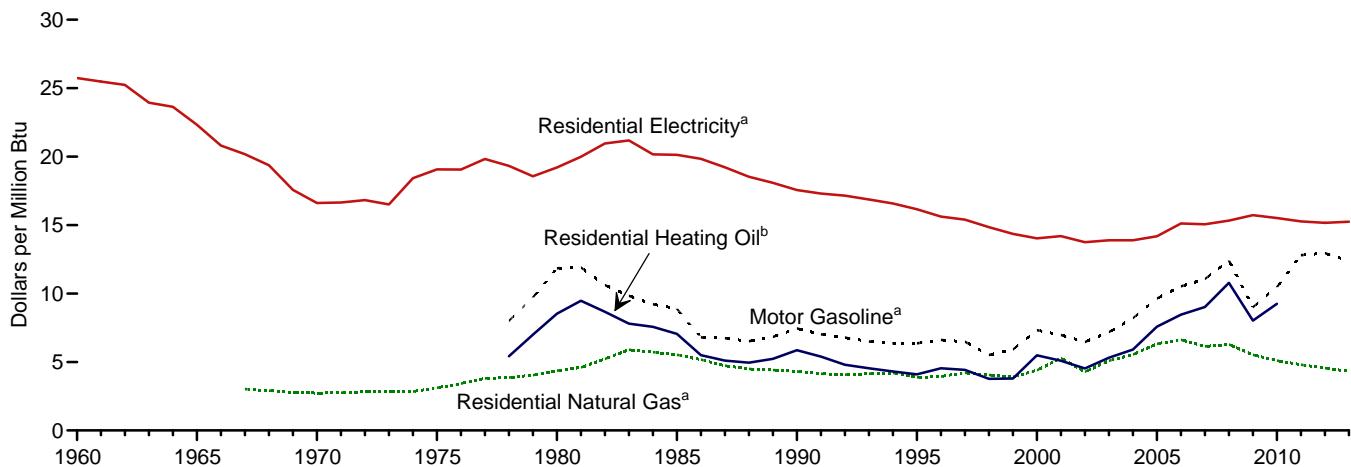
components due to independent rounding. • The U.S. import statistics reflect both government and nongovernment imports of merchandise from foreign countries into the U.S. customs territory, which comprises the 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands.

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.

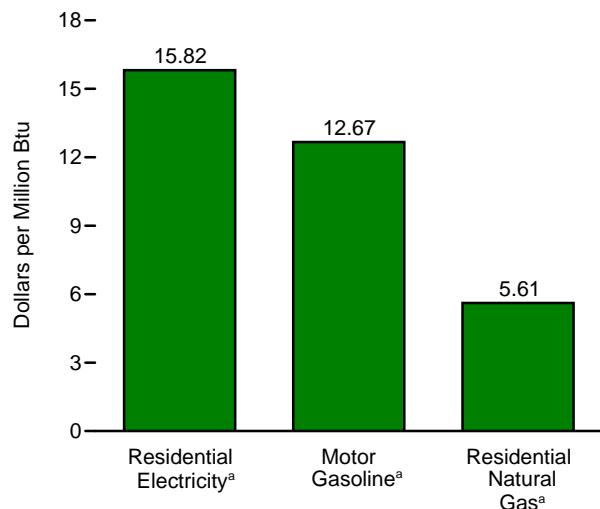
Sources: See end of section.

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

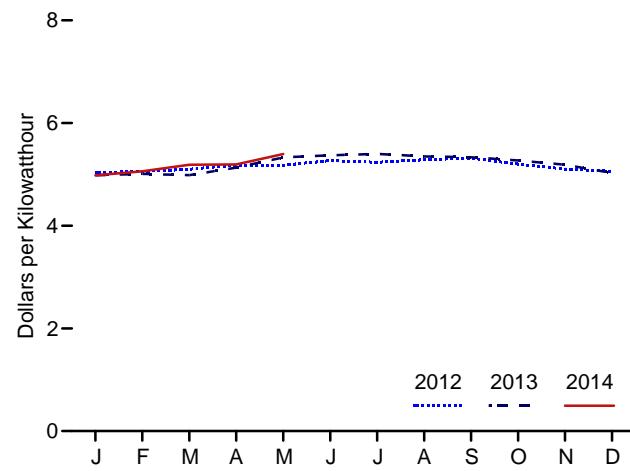
Costs, 1960–2013



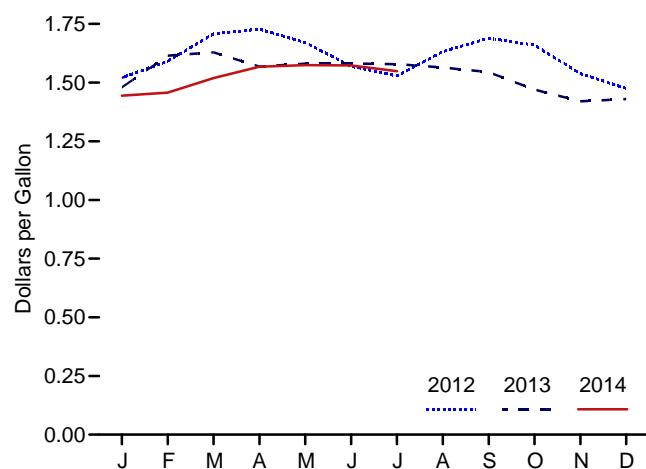
Costs, May 2014



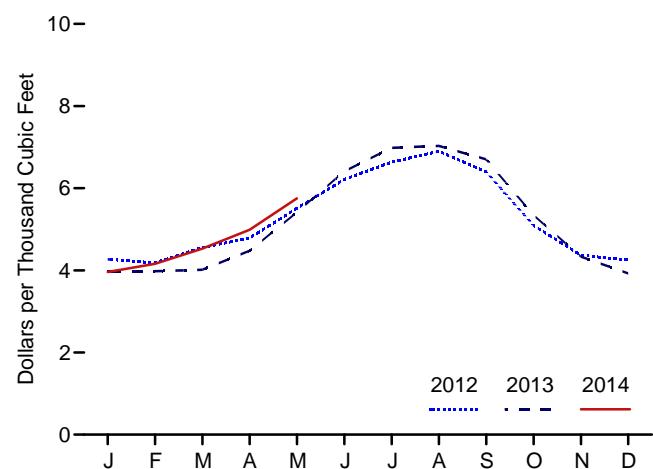
Residential Electricity,<sup>a</sup> Monthly



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



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



<sup>a</sup> Includes taxes.

<sup>b</sup> Excludes taxes.

Note: See "Real Dollars" in Glossary.

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

Source: Table 1.6.

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

	Consumer Price Index, All Urban Consumers <sup>a</sup>	Motor Gasoline <sup>b</sup>		Residential Heating Oil <sup>c</sup>		Residential Natural Gas <sup>b</sup>		Residential Electricity <sup>b</sup>	
		Index 1982–1984=100	Dollars per Gallon	Dollars per Million Btu	Dollars per Gallon	Dollars per Million Btu	Dollars per Thousand Cubic Feet	Dollars per Million Btu	Cents per Kilowatthour
1960 Average .....	29.6	NA	NA	NA	NA	NA	NA	8.8	25.74
1965 Average .....	31.5	NA	NA	NA	NA	NA	NA	7.6	22.33
1970 Average .....	38.8	NA	NA	NA	NA	2.81	2.72	5.7	16.62
1975 Average .....	53.8	NA	NA	NA	NA	3.18	3.12	6.5	19.07
1980 Average .....	82.4	1.482	11.85	1.182	8.52	4.47	4.36	6.6	19.21
1985 Average .....	107.6	1.112	8.89	0.979	7.06	5.69	5.52	6.87	20.13
1990 Average .....	130.7	0.931	7.44	0.813	5.86	4.44	4.31	5.99	17.56
1995 Average .....	152.4	0.791	6.37	0.569	4.10	3.98	3.87	5.51	16.15
2000 Average .....	172.2	0.908	7.32	0.761	5.49	4.51	4.39	4.79	14.02
2001 Average .....	177.1	0.864	6.97	0.706	5.09	5.44	5.28	4.84	14.20
2002 Average .....	179.9	0.801	6.46	0.628	4.52	4.39	4.28	4.69	13.75
2003 Average .....	184.0	0.890	7.18	0.736	5.31	5.23	5.09	4.74	13.89
2004 Average .....	188.9	1.018	8.20	0.819	5.91	5.69	5.55	4.74	13.89
2005 Average .....	195.3	1.197	9.64	1.051	7.58	6.50	6.33	4.84	14.18
2006 Average .....	201.6	1.307	10.52	1.173	8.46	6.81	6.63	5.16	15.12
2007 Average .....	207.342	1.374	11.06	1.250	9.01	6.31	6.14	5.14	15.05
2008 Average .....	215.303	1.541	12.40	1.495	10.78	6.45	6.28	5.23	15.33
2009 Average .....	214.537	1.119	9.01	1.112	8.02	5.66	5.52	5.37	15.72
2010 Average .....	218.056	1.301	10.47	1.283	9.25	5.22	5.11	5.29	15.51
2011 Average .....	224.939	1.590	12.80	NA	NA	4.90	4.80	5.21	15.27
2012 January .....	226.665	1.521	12.24	NA	NA	4.27	4.16	5.03	14.75
February .....	227.663	1.591	12.80	NA	NA	4.18	4.08	5.06	14.82
March .....	229.392	1.708	13.75	NA	NA	4.56	4.44	5.10	14.95
April .....	230.085	1.728	13.91	NA	NA	4.79	4.67	5.18	15.18
May .....	229.815	1.670	13.44	NA	NA	5.51	5.37	5.18	15.18
June .....	229.478	1.570	12.63	NA	NA	6.21	6.06	5.27	15.44
July .....	229.104	1.529	12.30	NA	NA	6.64	6.47	5.24	15.35
August .....	230.379	1.632	13.13	NA	NA	6.90	6.73	5.28	15.48
September .....	231.407	1.689	13.59	NA	NA	6.40	6.24	5.32	15.58
October .....	231.317	1.660	13.36	NA	NA	5.09	4.97	5.20	15.24
November .....	230.221	1.539	12.38	NA	NA	4.37	4.26	5.10	14.96
December .....	229.601	1.475	11.87	NA	NA	4.25	4.14	5.06	14.83
Average .....	229.594	1.609	12.95	NA	NA	4.67	4.55	5.17	15.17
2013 January .....	230.280	1.480	11.91	NA	NA	3.98	3.88	4.98	14.60
February .....	232.166	1.614	12.99	NA	NA	3.98	3.88	5.01	14.68
March .....	232.773	1.629	13.11	NA	NA	4.01	3.91	4.98	14.61
April .....	232.531	1.568	12.62	NA	NA	4.48	4.37	5.13	15.04
May .....	232.945	1.581	12.72	NA	NA	5.41	5.28	5.33	15.63
June .....	233.504	1.582	12.73	NA	NA	6.41	6.25	5.37	15.74
July .....	233.596	1.578	12.70	NA	NA	6.98	6.81	5.40	15.82
August .....	233.877	1.564	12.59	NA	NA	7.03	6.86	5.35	15.68
September .....	234.149	1.544	12.43	NA	NA	6.70	6.54	5.33	15.63
October .....	233.546	1.470	11.83	NA	NA	5.34	5.21	5.27	15.45
November .....	233.069	1.420	11.43	NA	NA	4.33	4.23	5.19	15.20
December .....	233.049	1.430	11.51	NA	NA	3.93	3.83	5.03	14.74
Average .....	232.957	1.538	12.38	NA	NA	4.43	4.33	5.20	15.25
2014 January .....	233.916	1.444	11.62	NA	NA	3.96	3.86	4.98	14.60
February .....	234.781	1.458	11.73	NA	NA	4.16	4.06	5.06	14.83
March .....	236.293	1.519	12.23	NA	NA	4.53	4.42	5.19	15.21
April .....	237.072	1.568	12.62	NA	NA	4.99	4.87	5.19	15.22
May .....	237.900	1.574	12.67	NA	NA	R 5.75	R 5.61	R 5.40	R 15.82
June .....	238.343	1.573	12.66	NA	NA	NA	NA	NA	NA
July .....	238.250	1.549	12.46	NA	NA	NA	NA	NA	NA

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

<sup>b</sup> Includes taxes.

<sup>c</sup> Excludes taxes.

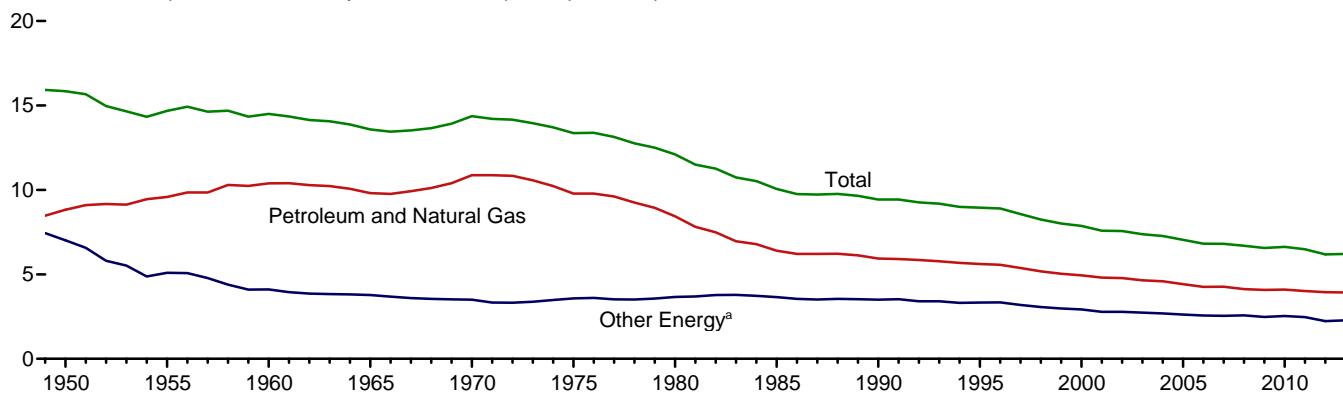
R=Revised. NA=Not available.

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

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

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

**Figure 1.7 Primary Energy Consumption per Real Dollar of Gross Domestic Product, 1949–2013**  
 (Thousand Btu per Chained (2009) Dollar)



Note: See "Real Dollars" in Glossary.

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

Source: Table 1.7.

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

	Energy Consumption			Gross Domestic Product (GDP) Billion Chained (2009) Dollars	Energy Consumption per Real Dollar of GDP		
	Petroleum and Natural Gas	Other Energy <sup>a</sup>	Total		Petroleum and Natural Gas	Other Energy <sup>a</sup>	Total
	Quadrillion Btu				Thousand Btu per Chained (2009) Dollar		
1950 .....	19,284	15,332	34,616	R 2,184.0	R 8.83	R 7.02	R 15.85
1955 .....	26,253	13,955	40,208	R 2,739.0	R 9.58	R 5.09	R 14.68
1960 .....	32,305	12,782	45,086	R 3,108.7	R 10.39	R 4.11	R 14.50
1965 .....	39,014	15,001	54,015	R 3,976.7	R 9.81	R 3.77	R 13.58
1970 .....	51,315	16,523	67,838	R 4,722.0	R 10.87	3.50	R 14.37
1975 .....	52,680	19,284	71,965	R 5,385.4	R 9.78	3.58	R 13.36
1980 .....	54,440	23,627	78,067	R 6,450.4	R 8.44	R 3.66	R 12.10
1985 .....	48,628	27,764	76,392	R 7,593.8	R 6.40	3.66	R 10.06
1990 .....	53,155	31,330	84,485	R 8,955.0	5.94	3.50	R 9.43
1995 .....	57,110	33,920	91,029	R 10,174.8	R 5.61	R 3.33	R 8.95
2000 .....	62,086	36,729	98,814	R 12,559.7	4.94	2.92	R 7.87
2001 .....	60,958	35,210	96,168	R 12,682.2	4.81	2.78	7.58
2002 .....	61,734	35,911	97,645	R 12,908.8	4.78	2.78	7.56
2003 .....	61,642	36,301	97,943	R 13,271.1	R 4.64	2.74	7.38
2004 .....	63,215	36,946	100,161	R 13,773.5	4.59	2.68	7.27
2005 .....	62,953	37,328	100,282	R 14,234.2	4.42	2.62	R 7.05
2006 .....	62,194	37,435	99,629	R 14,613.8	4.26	2.56	6.82
2007 .....	63,437	37,881	101,317	R 14,873.7	R 4.27	2.55	6.81
2008 .....	61,123	38,169	99,292	R 14,830.4	4.12	2.57	R 6.70
2009 .....	58,819	35,777	94,596	R 14,418.7	4.08	2.48	6.56
2010 .....	60,584	37,432	98,016	R 14,783.8	4.10	2.53	6.63
2011 .....	60,322	37,139	97,461	R 15,020.6	R 4.02	2.47	R 6.49
2012 .....	60,661	34,343	95,004	R 15,369.2	R 3.95	R 2.23	R 6.18
2013 .....	61,729	35,804	97,534	R 15,710.3	R 3.93	R 2.28	R 6.21

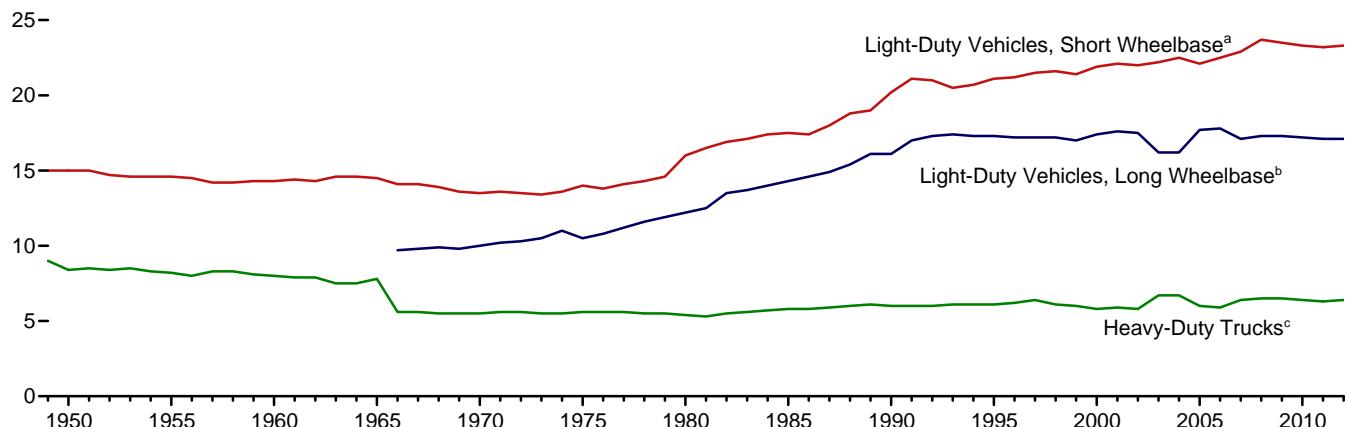
<sup>a</sup> Coal, coal coke net imports, nuclear electric power, renewable energy, and electricity net imports.

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

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.

Sources: • **Energy Consumption:** Table 1.3. • **Gross Domestic Product:** U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts (July 30, 2014), Table 1.1.6.

**Figure 1.8 Motor Vehicle Fuel Economy, 1949–2012**  
(Miles per Gallon)



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

Source: Table 1.8.

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

	Light-Duty Vehicles, Short Wheelbase <sup>a</sup>			Light-Duty Vehicles, Long Wheelbase <sup>b</sup>			Heavy-Duty Trucks <sup>c</sup>			All Motor Vehicles <sup>d</sup>		
	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy
	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon
1950 .....	9,060	603	15.0	(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 .....	<sup>a</sup> 10,710	<sup>a</sup> 468	<sup>a</sup> 22.9	<sup>b</sup> 14,970	<sup>b</sup> 877	<sup>b</sup> 17.1	<sup>c</sup> 28,290	<sup>c</sup> 4,398	6.4	11,915	693	17.2
2008 .....	10,290	435	23.7	15,256	880	17.3	28,573	4,387	6.5	11,631	667	17.4
2009 .....	10,391	442	23.5	15,252	882	17.3	26,274	4,037	6.5	11,631	661	17.6
2010 .....	10,650	456	23.3	15,474	901	17.2	26,604	4,180	6.4	11,866	681	17.4
2011 .....	11,150	481	23.2	12,007	702	17.1	26,054	4,128	6.3	11,652	665	17.5
2012 <sup>p</sup> .....	11,265	483	23.3	11,882	694	17.1	25,172	3,960	6.4	11,705	664	17.6

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

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

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

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

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

P=Preliminary.

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

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

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

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

Census Divisions	July				Percent Change	
	Normal <sup>a</sup>	2013	2014		Normal to 2014	2013 to 2014
<b>New England</b> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont .....	11	7	7	NM	NM	
<b>Middle Atlantic</b> New Jersey, New York, Pennsylvania .....	6	5	9	NM	NM	
<b>East North Central</b> Illinois, Indiana, Michigan, Ohio, Wisconsin .....	9	31	44	NM	NM	
<b>West North Central</b> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota .....	15	21	33	NM	NM	
<b>South Atlantic</b> Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia .....	0	0	0	NM	NM	
<b>East South Central</b> Alabama, Kentucky, Mississippi, Tennessee .....	0	1	6	NM	NM	
<b>West South Central</b> Arkansas, Louisiana, Oklahoma, Texas .....	0	0	2	NM	NM	
<b>Mountain</b> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming .....	19	1	2	NM	NM	
<b>Pacific<sup>b</sup></b> California, Oregon, Washington .....	24	3	4	NM	NM	
<b>U.S. Average<sup>b</sup></b> .....	9	8	12	NM	NM	

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

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

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

Notes: Degree-days are relative measurements of outdoor air temperature used as an index for heating and cooling energy requirements. 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	July					Cumulative January through July				
	Normal <sup>a</sup>	2013	2014	Percent Change		Normal <sup>a</sup>	2013	2014	Percent Change	
				Normal to 2014	2013 to 2014				Normal to 2014	2013 to 2014
<b>New England</b> Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont .....	180	310	202	12	-35	249	441	280	12	-37
<b>Middle Atlantic</b> New Jersey, New York, Pennsylvania .....	247	346	246	(s)	-29	387	549	398	3	-28
<b>East North Central</b> Illinois, Indiana, Michigan, Ohio, Wisconsin .....	245	247	157	-36	-36	443	461	386	-13	-16
<b>West North Central</b> Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota .....	308	281	218	-29	-22	574	545	510	-11	-6
<b>South Atlantic</b> Delaware, Florida, Georgia, Maryland and the District of Columbia, North Carolina, South Carolina, Virginia, West Virginia .....	425	427	413	-3	-3	1,104	1,163	1,188	8	2
<b>East South Central</b> Alabama, Kentucky, Mississippi, Tennessee .....	412	355	328	-20	-8	900	885	879	-2	-1
<b>West South Central</b> Arkansas, Louisiana, Oklahoma, Texas .....	545	523	499	-8	-5	1,403	1,442	1,367	-3	-5
<b>Mountain</b> Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming .....	341	406	404	18	(s)	715	880	820	15	-7
<b>Pacific<sup>b</sup></b> California, Oregon, Washington .....	188	268	287	53	7	344	453	487	42	8
<b>U.S. Average<sup>b</sup></b> .....	<b>321</b>	<b>351</b>	<b>308</b>	<b>-4</b>	<b>-12</b>	<b>696</b>	<b>770</b>	<b>723</b>	<b>4</b>	<b>-6</b>

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

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

(s)=Less than 0.5 percent and greater than -0.5 percent. 100 or ratio is incalculable).

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

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

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

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

# Energy Overview

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

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

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

## Table 1.5 Sources

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

### Petroleum Exports

1974–1987: “U.S. Exports,” FT-410, December issues.  
1988 and 1989: “Report on U.S. Merchandise Trade,” Final Revisions.  
1990–1992: “U.S. Merchandise Trade,” Final Report.  
1993–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.  
2010: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.  
2011–2013: “U.S. International Trade in Goods and Services,” 2013 Annual Revisions.  
2014: “U.S. International Trade in Goods and Services,” FT-900, monthly.

### Petroleum Imports

1974–1987: “U.S. Merchandise Trade,” FT-900, December issues, 1975–1988.  
1988 and 1989: “Report on U.S. Merchandise Trade,” Final Revisions.  
1990–1993: “U.S. Merchandise Trade,” Final Report.  
1994–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.  
2010: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.  
2011–2013: “U.S. International Trade in Goods and Services,” 2013 Annual Revisions.  
2014: “U.S. International Trade in Goods and Services,” FT-900, monthly.

### Energy Exports and Imports

1974–1987: U.S. merchandise trade press releases and database printouts for adjustments.  
1988: January–July, monthly FT-900 supplement, 1989 issues. August–December, monthly FT-900, 1989 issues.  
1989: Monthly FT-900, 1990 issues.  
1990–1992: “U.S. Merchandise Trade,” Final Report.  
1993–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.  
2010: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.  
2011–2013: “U.S. International Trade in Goods and Services,” 2013 Annual Revisions.  
2014: “U.S. International Trade in Goods and Services,” FT-900, monthly.

### Petroleum, Energy, and Non-Energy Balances

Calculated by the U.S. Energy Information Administration.

### Total Merchandise

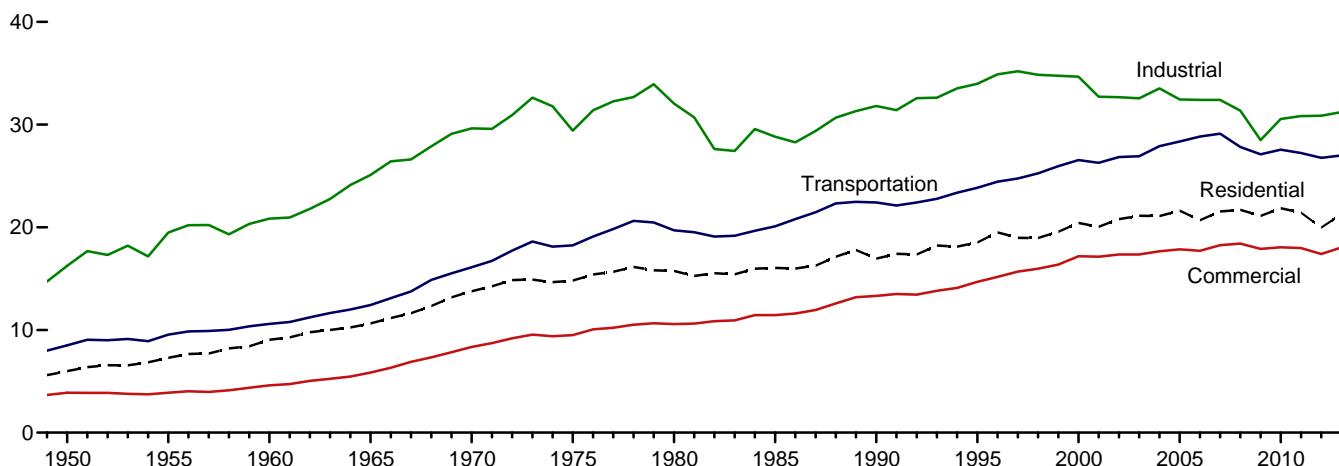
1974–1987: U.S. merchandise trade press releases and database printouts for adjustments.  
1988: “Report on U.S. Merchandise Trade, 1988 Final Revisions,” August 18, 1989.  
1989: “Report on U.S. Merchandise Trade, 1989 Revisions,” July 10, 1990.  
1990: “U.S. Merchandise Trade, 1990 Final Report,” May 10, 1991, and “U.S. Merchandise Trade, December 1992,” February 18, 1993, page 3.  
1991: “U.S. Merchandise Trade, 1992 Final Report,” May 12, 1993.  
1992–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.  
2010: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.  
2011–2013: “U.S. International Trade in Goods and Services,” 2013 Annual Revisions.  
2014: “U.S. International Trade in Goods and Services,” FT-900, monthly.

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

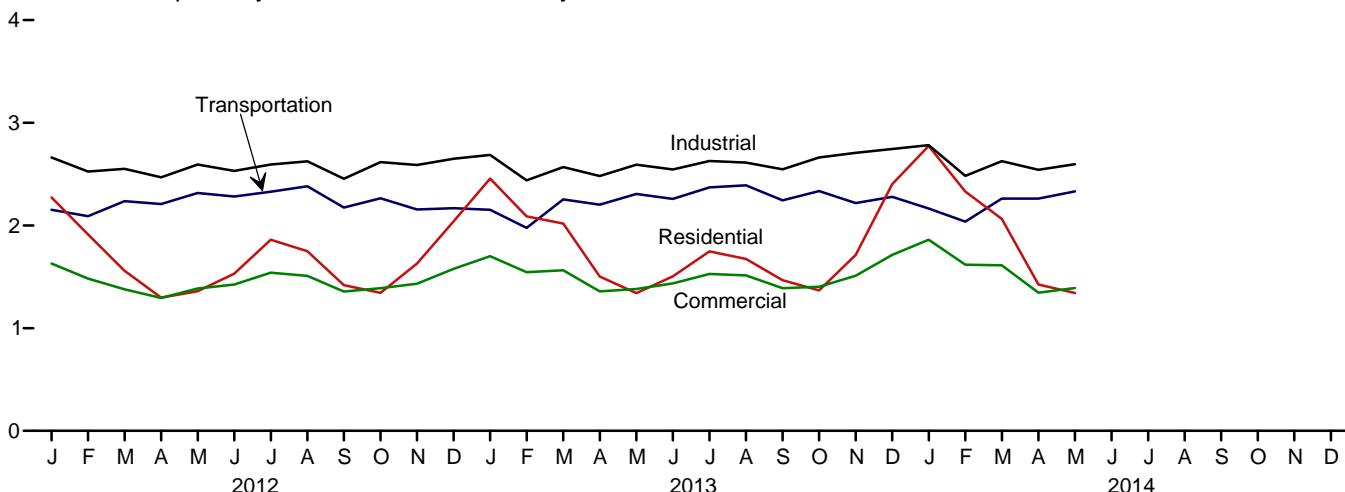
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**Figure 2.1 Energy Consumption by Sector**  
(Quadrillion Btu)

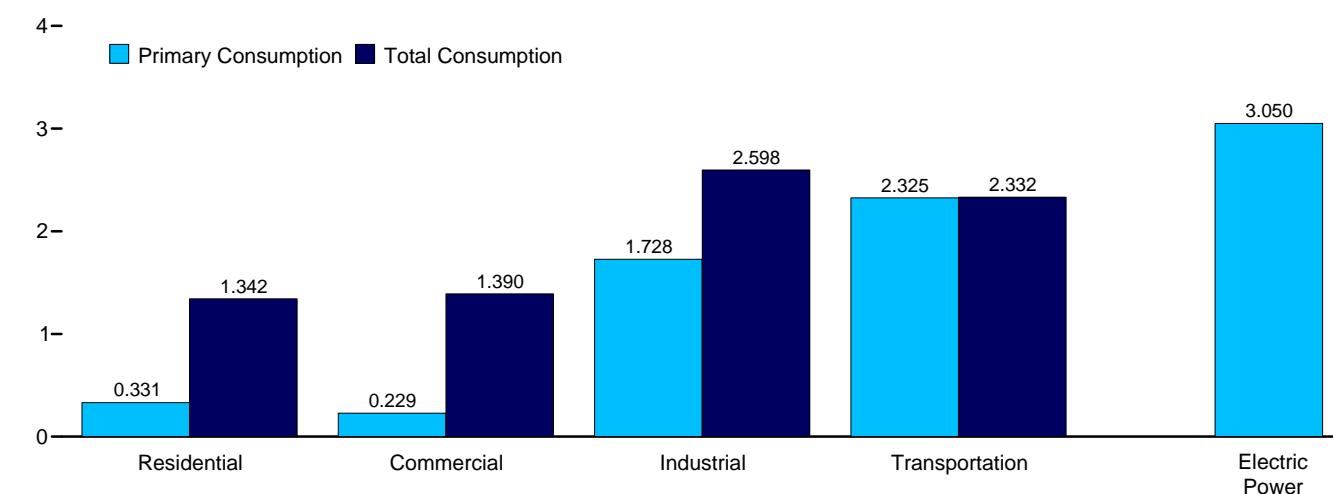
Total Consumption by End-Use Sector, 1949–2013



Total Consumption by End-Use Sector, Monthly



By Sector, May 2014



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

**Table 2.1 Energy Consumption by Sector**  
(Trillion Btu)

	End-Use Sectors								Electric Power Sector <sup>c,d</sup>	Balancing Item <sup>g</sup>	Primary Total <sup>h</sup>		
	Residential		Commercial <sup>a</sup>		Industrial <sup>b</sup>		Transportation						
	Primary <sup>e</sup>	Total <sup>f</sup>	Primary <sup>e</sup>	Total <sup>f</sup>	Primary <sup>e</sup>	Total <sup>f</sup>	Primary <sup>e</sup>	Total <sup>f</sup>	Primary <sup>e</sup>				
1950 Total .....	4,829	5,989	2,834	3,893	13,890	16,241	8,383	8,492	4,679	(s)	34,616		
1955 Total .....	5,608	7,278	2,561	3,895	16,103	19,485	9,474	9,550	6,461	(s)	40,208		
1960 Total .....	6,651	9,039	2,723	4,609	16,996	20,842	10,560	10,596	8,158	(s)	45,086		
1965 Total .....	7,279	10,639	3,177	5,845	20,148	25,098	12,399	12,432	11,012	(s)	54,015		
1970 Total .....	8,322	13,766	4,237	8,346	22,964	29,628	16,062	16,098	16,253	(s)	67,838		
1975 Total .....	7,990	14,813	4,059	9,492	21,434	29,413	18,210	18,245	20,270	1	71,965		
1980 Total .....	7,439	15,753	4,105	10,578	22,595	32,039	19,659	19,697	24,269	-1	78,067		
1985 Total .....	7,148	16,041	3,732	11,451	19,443	28,816	20,041	20,088	26,032	-4	76,392		
1990 Total .....	6,557	16,945	3,896	13,320	21,180	31,810	22,366	22,420	d 30,495	-9	84,485		
1995 Total .....	6,936	18,519	4,101	14,690	22,719	33,971	23,791	23,846	33,479	3	91,029		
2000 Total .....	7,159	20,425	4,278	17,175	22,824	34,664	26,489	26,548	38,062	2	98,814		
2001 Total .....	6,868	20,042	4,084	17,137	21,794	32,720	26,213	26,275	37,215	-6	96,168		
2002 Total .....	6,912	20,791	4,132	17,345	21,799	32,662	26,781	26,842	38,016	5	97,645		
2003 Total .....	7,238	21,125	4,298	17,346	21,536	32,555	26,845	26,919	38,028	-1	97,943		
2004 Total .....	6,993	21,092	4,232	17,659	22,412	33,519	27,817	27,895	38,712	-6	100,161		
2005 Total .....	6,909	21,626	4,051	17,857	21,411	32,446	28,272	28,353	39,638	(s)	100,282		
2006 Total .....	6,168	20,688	3,747	17,710	21,536	32,401	28,751	28,830	39,428	(s)	99,629		
2007 Total .....	6,608	21,542	3,922	18,256	21,379	32,404	29,029	29,116	40,380	-1	101,317		
2008 Total .....	6,916	21,695	4,098	18,405	20,553	31,362	27,747	27,829	39,978	1	99,292		
2009 Total .....	6,666	21,111	4,052	17,890	18,776	28,488	27,025	27,108	38,076	(s)	94,596		
2010 Total .....	6,594	21,853	4,016	18,056	20,296	30,543	27,477	27,558	39,627	7	98,016		
2011 Total .....	6,500	21,411	4,055	17,973	20,444	30,833	27,155	27,236	39,301	8	97,461		
2012 January .....	974	2,273	544	1,630	1,845	2,662	2,147	2,153	3,209	-1	8,718		
February .....	820	1,913	470	1,483	1,732	2,525	2,083	2,090	2,905	-2	8,008		
March .....	548	1,560	335	1,379	1,724	2,552	2,231	2,237	2,888	-5	7,723		
April .....	402	1,297	268	1,293	1,646	2,469	2,203	2,209	2,749	-4	7,263		
May .....	288	1,360	208	1,386	1,694	2,594	2,311	2,317	3,156	-2	7,655		
June .....	243	1,531	189	1,426	1,655	2,531	2,276	2,283	3,408	3	7,773		
July .....	229	1,862	182	1,540	1,672	2,593	2,322	2,329	3,919	7	8,330		
August .....	236	1,749	198	1,509	1,724	2,625	2,375	2,382	3,731	4	8,269		
September .....	238	1,419	198	1,356	1,640	2,455	2,168	2,174	3,160	2	7,406		
October .....	365	1,343	271	1,389	1,778	2,618	2,259	2,265	2,941	(s)	7,614		
November .....	619	1,630	375	1,433	1,768	2,589	2,150	2,156	2,896	(s)	7,808		
December .....	822	2,041	467	1,578	1,813	2,649	2,162	2,169	3,173	(s)	8,436		
Total .....	5,783	19,971	3,705	17,403	20,690	30,865	26,688	26,763	38,136	2	95,004		
2013 January .....	1,093	2,457	586	1,701	1,876	2,687	2,146	2,153	3,297	(s)	8,998		
February .....	949	2,089	528	1,545	1,687	2,439	1,970	1,976	2,915	-1	8,048		
March .....	858	2,019	485	1,564	1,757	2,568	2,248	2,255	3,057	-1	8,405		
April .....	527	1,502	319	1,357	1,687	2,482	2,197	2,203	2,815	-3	7,541		
May .....	332	1,341	225	1,382	1,720	2,592	2,300	2,307	3,044	-3	7,619		
June .....	252	1,504	185	1,436	1,680	2,546	2,252	2,259	3,375	2	7,746		
July .....	242	1,748	187	1,527	1,749	2,628	2,363	2,370	3,731	5	8,278		
August .....	244	1,674	192	1,514	1,733	2,613	2,385	2,391	3,639	3	8,195		
September .....	255	1,468	198	1,390	1,743	2,548	2,238	2,244	3,215	(s)	7,650		
October .....	363	1,367	261	1,403	1,843	2,662	2,329	2,335	2,972	-2	R 7,766		
November .....	676	1,713	412	1,510	1,885	2,708	2,213	2,219	2,964	-2	8,148		
December .....	1,038	2,402	556	1,713	1,934	2,744	2,271	2,278	3,340	2	9,140		
Total .....	6,826	21,283	4,134	18,043	21,296	31,218	26,912	26,990	38,365	(s)	97,534		
2014 January .....	1,234	2,774	661	1,862	1,967	2,783	2,158	2,166	3,564	5	9,590		
February .....	1,030	2,330	575	1,618	1,755	2,483	2,030	2,037	3,078	3	8,471		
March .....	875	2,063	499	1,611	1,814	2,626	2,255	2,261	3,119	1	8,563		
April .....	484	1,425	R 301	1,346	R 1,750	R 2,542	2,255	R 2,261	2,786	-1	R 7,573		
May .....	331	1,342	229	1,390	1,728	2,598	2,325	2,332	3,050	-1	7,661		
5-Month Total .....	3,955	9,934	2,265	7,827	9,012	13,032	11,022	11,057	15,596	7	41,858		
2013 5-Month Total .....	3,758	9,407	2,143	7,549	8,727	12,768	10,861	10,894	15,129	-7	40,611		
2012 5-Month Total .....	3,032	8,403	1,825	7,171	8,641	12,801	10,974	11,006	14,908	-14	39,367		

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

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

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

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

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

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

<sup>g</sup> A balancing item. The sum of primary consumption in the five energy-use

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

<sup>h</sup> Primary energy consumption total. See Table 1.3.

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

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

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

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

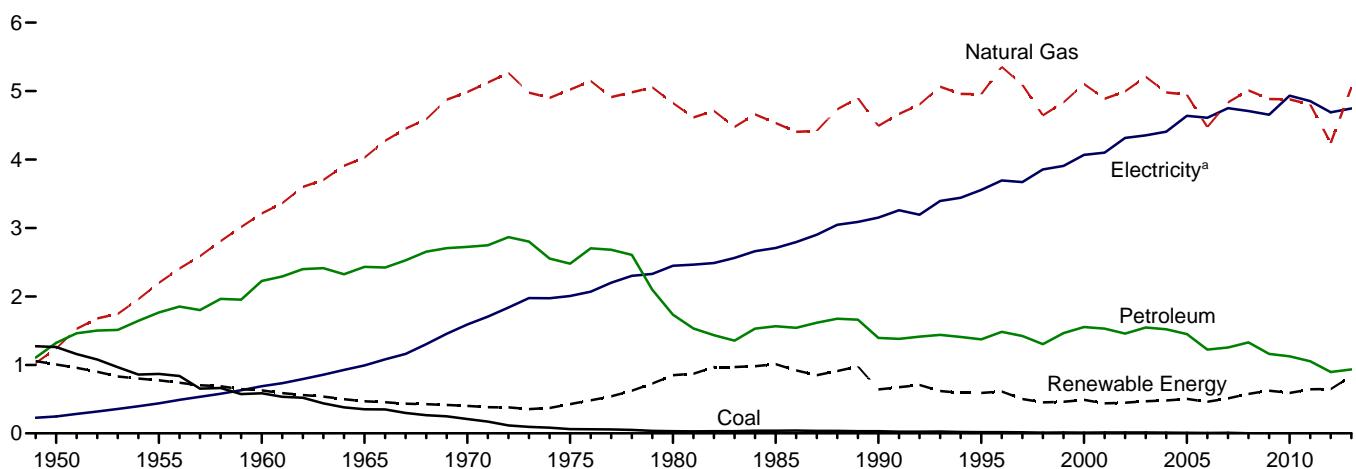
• Geographic coverage is the 50 states and the District of Columbia.

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

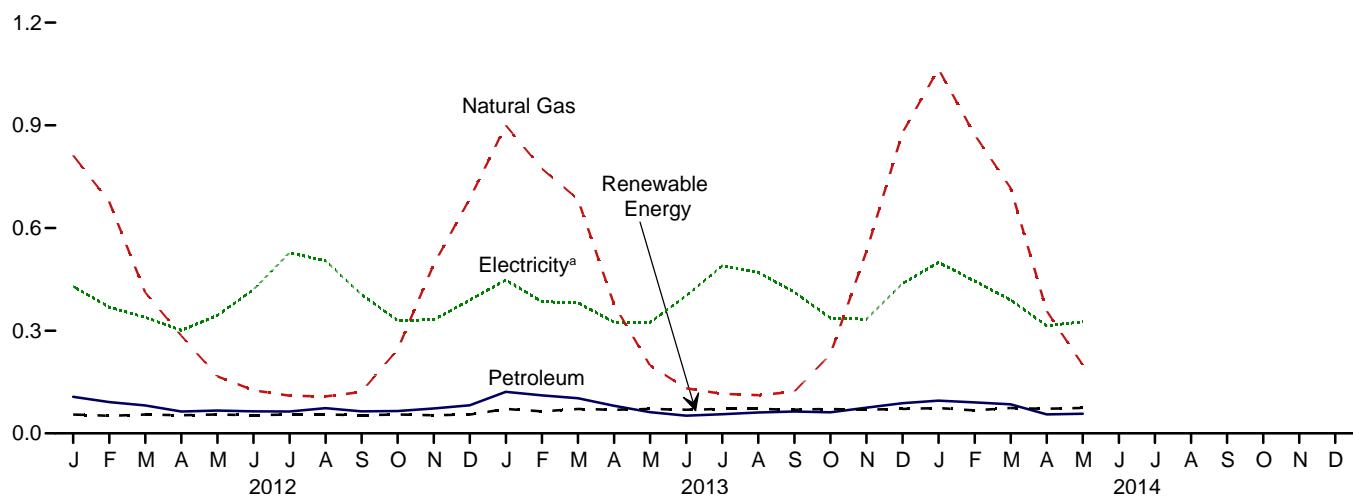
Sources: Tables 1.3 and 2.2–2.6.

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

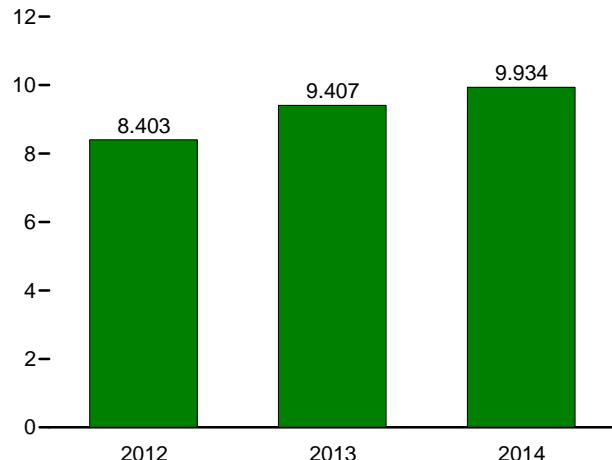
By Major Source, 1949–2013



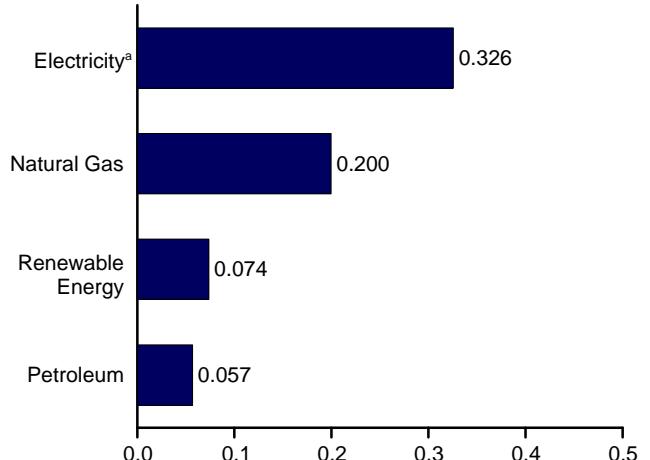
By Major Source, Monthly



Total, January–May



By Major Source, May 2014



<sup>a</sup> Electricity retail sales.

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

Source: Table 2.2.

**Table 2.2 Residential Sector Energy Consumption**  
(Trillion Btu)

	Primary Consumption <sup>a</sup>								Total Primary	Electricity Retail Sales <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total				
	Fossil Fuels				Renewable Energy <sup>b</sup>											
	Coal	Natural Gas <sup>c</sup>	Petroleum	Total	Geo-thermal	Solar/PV	Bio-mass	Total								
1950 Total .....	1,261	1,240	1,322	3,824	NA	NA	1,006	1,006	4,829	246	913	5,989				
1955 Total .....	867	2,198	1,767	4,833	NA	NA	775	775	5,608	438	1,232	7,278				
1960 Total .....	585	3,212	2,227	6,024	NA	NA	627	627	6,651	687	1,701	9,039				
1965 Total .....	352	4,028	2,432	6,811	NA	NA	468	468	7,279	993	2,367	10,639				
1970 Total .....	209	4,987	2,725	7,922	NA	NA	401	401	8,322	1,591	3,852	13,766				
1975 Total .....	63	5,023	2,479	7,564	NA	NA	425	425	7,990	2,007	4,817	14,813				
1980 Total .....	31	4,825	1,734	6,589	NA	NA	850	850	7,439	2,448	5,866	15,753				
1985 Total .....	39	4,534	1,565	6,138	NA	NA	1,010	1,010	7,148	2,709	6,184	16,041				
1990 Total .....	31	4,491	1,394	5,916	6	56	580	641	6,557	3,153	7,235	16,945				
1995 Total .....	17	4,954	1,374	6,345	7	64	520	591	6,936	3,557	8,026	18,519				
2000 Total .....	11	5,105	1,554	6,670	9	61	420	489	7,159	4,069	9,197	20,425				
2001 Total .....	12	4,889	1,529	6,430	9	59	370	438	6,868	4,100	9,074	20,042				
2002 Total .....	12	4,995	1,457	6,464	10	57	380	448	6,912	4,317	9,562	20,791				
2003 Total .....	12	5,209	1,547	6,768	13	57	400	470	7,238	4,353	9,534	21,125				
2004 Total .....	11	4,981	1,520	6,513	14	57	410	481	6,993	4,408	9,691	21,092				
2005 Total .....	8	4,946	1,451	6,406	16	58	430	504	6,909	4,638	10,079	21,626				
2006 Total .....	6	4,476	1,224	5,706	18	63	380	462	6,168	4,611	9,909	20,688				
2007 Total .....	8	4,835	1,254	6,097	22	70	420	512	6,608	4,750	10,183	21,542				
2008 Total .....	NA	5,010	1,330	6,340	26	80	470	577	6,916	4,708	10,070	21,695				
2009 Total .....	NA	4,883	1,161	6,044	33	89	500	622	6,666	4,656	9,789	21,111				
2010 Total .....	NA	4,878	1,125	6,003	37	114	440	591	6,594	4,933	10,326	21,853				
2011 Total .....	NA	4,805	1,052	5,857	40	153	450	643	6,500	4,855	10,057	21,411				
2012 January .....	NA	812	107	919	3	16	36	55	974	430	870	2,273				
February .....	NA	677	92	769	3	15	33	51	820	368	725	1,913				
March .....	NA	412	81	493	3	16	36	55	548	339	672	1,560				
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	229	527	1,106	1,862				
August .....	NA	108	74	181	3	16	36	55	236	505	1,008	1,749				
September .....	NA	121	64	185	3	15	34	53	238	405	775	1,419				
October .....	NA	245	65	311	3	16	36	55	365	330	648	1,343				
November .....	NA	493	73	566	3	15	34	53	619	331	680	1,630				
December .....	NA	685	82	767	3	16	36	55	822	390	829	2,041				
Total .....	NA	4,242	896	5,137	40	186	420	646	5,783	4,690	9,498	19,971				
2013 January .....	NA	900	121	1,021	3	19	49	71	1,093	448	916	2,457				
February .....	NA	774	111	885	3	17	44	64	949	385	755	2,089				
March .....	NA	684	103	787	3	19	49	71	858	381	780	2,019				
April .....	NA	377	81	458	3	18	48	69	527	325	650	1,502				
May .....	NA	198	62	260	3	19	49	71	332	324	685	1,341				
June .....	NA	132	52	184	3	18	48	69	252	402	850	1,504				
July .....	NA	116	56	171	3	19	49	71	242	489	1,016	1,748				
August .....	NA	111	61	172	3	19	49	71	244	470	960	1,674				
September .....	NA	122	64	186	3	18	48	69	255	413	800	1,468				
October .....	NA	230	61	292	3	19	49	71	363	337	668	1,367				
November .....	NA	532	75	607	3	18	48	69	676	334	704	1,713				
December .....	NA	878	88	966	3	19	49	71	1,038	438	927	2,402				
Total .....	NA	5,053	935	5,988	40	219	580	839	6,826	4,746	9,710	21,283				
2014 January .....	NA	1,065	95	1,160	3	21	49	74	1,234	500	1,040	2,774				
February .....	NA	873	91	963	3	19	44	67	1,030	445	854	2,330				
March .....	NA	717	85	801	3	21	49	74	875	390	798	2,063				
April .....	NA	R 357	R 55	412	3	21	48	72	484	315	627	1,425				
May .....	NA	200	57	257	3	21	49	74	331	326	685	1,342				
5-Month Total ....	NA	3,212	383	3,595	16	104	240	361	3,955	1,975	4,004	9,934				
2013 5-Month Total ....	NA	2,933	478	3,411	16	91	240	347	3,758	1,864	3,786	9,407				
2012 5-Month Total ....	NA	2,354	410	2,764	16	77	174	268	3,032	1,782	3,589	8,403				

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

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

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

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

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

section.

R=Revised. NA=Not available.

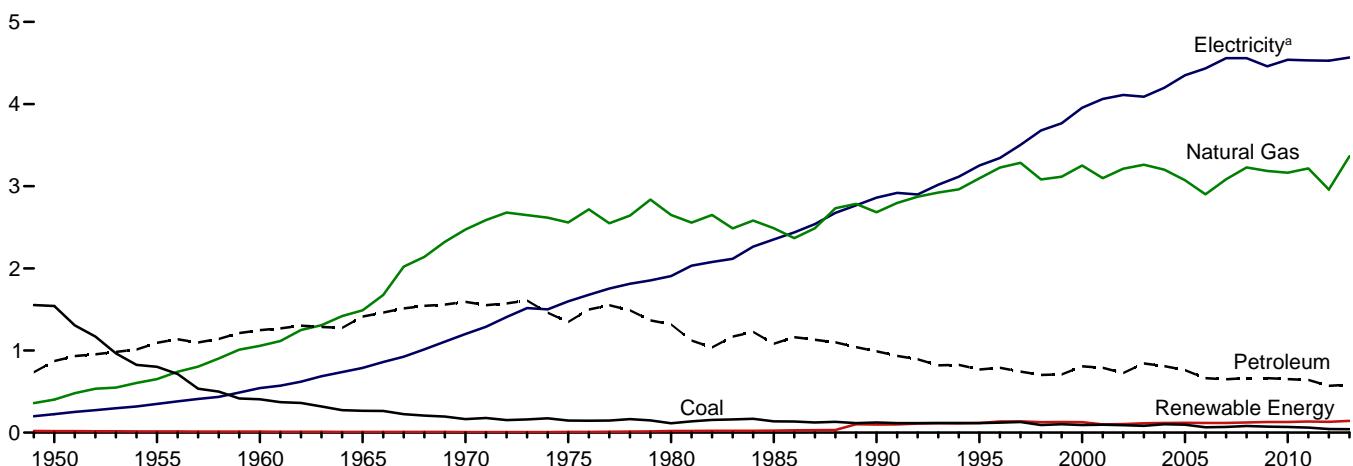
Notes: • Data are estimates, except for electricity retail sales. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

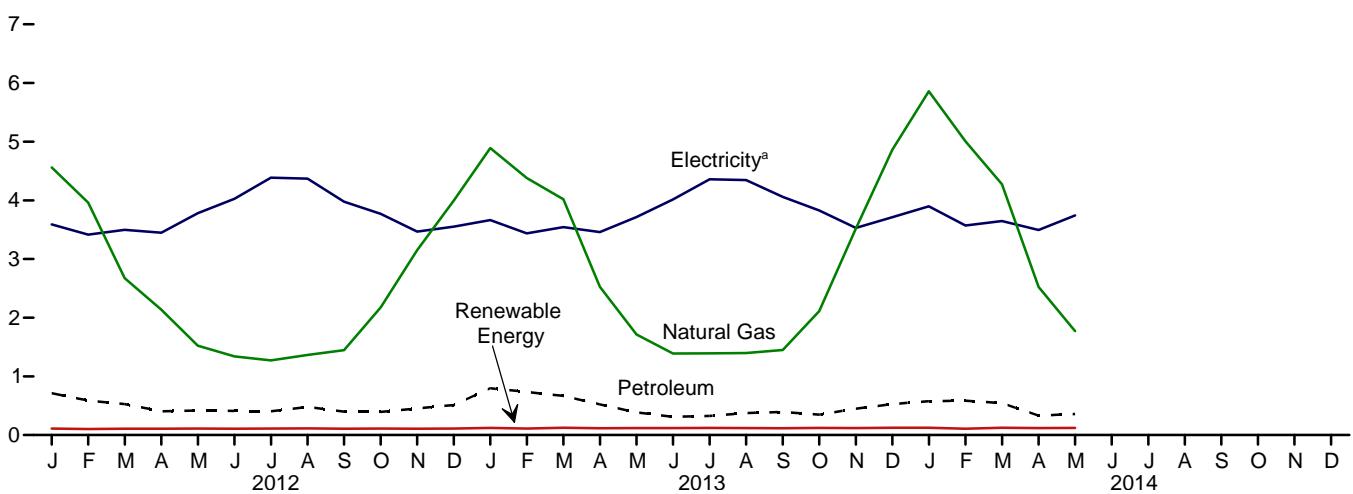
Sources: Tables 2.6, 3.8a, 4.3, 6.2, 7.6, 10.2a, A4, A5, and A6.

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

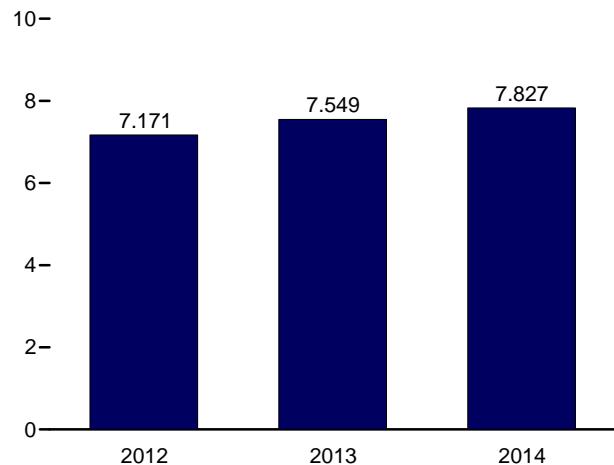
By Major Source, 1949–2013



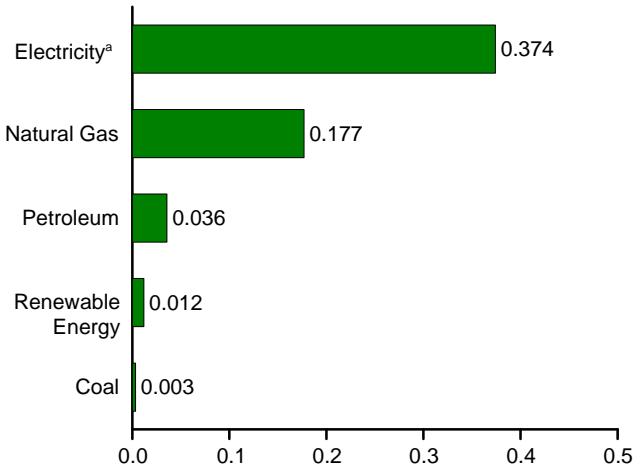
By Major Source, Monthly



Total, January–May



By Major Source, May 2014



<sup>a</sup> Electricity retail sales.

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

Source: Table 2.3.

**Table 2.3 Commercial Sector Energy Consumption**  
(Trillion Btu)

	Primary Consumption <sup>a</sup>										Total Primary	Electricity Retail Sales <sup>f</sup>	Electrical System Energy Losses <sup>g</sup>	Total				
	Fossil Fuels				Renewable Energy <sup>b</sup>													
	Coal	Natural Gas <sup>c</sup>	Petroleum <sup>d</sup>	Total	Hydro-electric Power <sup>e</sup>	Geo-thermal	Solar/PV	Wind	Bio-mass	Total								
1950 Total .....	1,542	401	872	2,815	NA	NA	NA	NA	19	19	2,834	225	834	3,893				
1955 Total .....	801	651	1,095	2,547	NA	NA	NA	NA	15	15	2,561	350	984	3,895				
1960 Total .....	407	1,056	1,248	2,711	NA	NA	NA	NA	12	12	2,723	543	1,344	4,609				
1965 Total .....	265	1,490	1,413	3,168	NA	NA	NA	NA	9	9	3,177	789	1,880	5,845				
1970 Total .....	165	2,473	1,592	4,229	NA	NA	NA	NA	8	8	4,237	1,201	2,908	8,346				
1975 Total .....	147	2,558	1,346	4,051	NA	NA	NA	NA	8	8	4,059	1,598	3,835	9,492				
1980 Total .....	115	2,651	1,318	4,084	NA	NA	NA	NA	21	21	4,105	1,906	4,567	10,578				
1985 Total .....	137	2,488	1,083	3,708	NA	NA	NA	NA	24	24	3,732	2,351	5,368	11,451				
1990 Total .....	124	2,682	991	3,798	1	3	—	—	94	98	3,896	2,860	6,564	13,320				
1995 Total .....	117	3,096	769	3,982	1	5	—	—	113	118	4,101	3,252	7,338	14,690				
2000 Total .....	92	3,252	807	4,150	1	8	—	—	119	128	4,278	3,956	8,942	17,175				
2001 Total .....	97	3,097	790	3,984	1	8	—	—	92	101	4,084	4,062	8,990	17,137				
2002 Total .....	90	3,212	726	4,028	(s)	9	—	—	95	104	4,132	4,110	9,104	17,345				
2003 Total .....	82	3,261	842	4,185	1	11	—	—	101	113	4,298	4,090	8,958	17,346				
2004 Total .....	103	3,201	809	4,113	1	12	—	—	105	118	4,232	4,198	9,229	17,659				
2005 Total .....	97	3,073	761	3,932	1	14	—	—	105	120	4,051	4,351	9,455	17,857				
2006 Total .....	65	2,902	663	3,629	1	14	—	—	103	118	3,747	4,435	9,529	17,710				
2007 Total .....	70	3,085	649	3,805	1	14	—	—	103	118	3,922	4,560	9,774	18,256				
2008 Total .....	81	3,228	664	3,973	1	15	(s)	—	109	125	4,098	4,558	9,749	18,405				
2009 Total .....	73	3,187	663	3,923	1	17	(s)	(s)	112	129	4,052	4,460	9,378	17,890				
2010 Total .....	70	3,165	651	3,886	1	19	(s)	(s)	111	130	4,016	4,539	9,501	18,056				
2011 Total .....	62	3,216	641	3,919	(s)	20	1	(s)	115	136	4,055	4,531	9,388	17,973				
2012 January .....	5	456	71	533	(s)	2	(s)	(s)	9	11	544	359	727	1,630				
February .....	5	396	59	459	(s)	2	(s)	(s)	9	10	470	341	672	1,483				
March .....	4	267	53	325	(s)	2	(s)	(s)	9	11	335	350	694	1,379				
April .....	3	214	41	257	(s)	2	(s)	(s)	9	11	268	345	681	1,293				
May .....	3	152	42	197	(s)	2	(s)	(s)	9	11	208	378	799	1,386				
June .....	3	134	41	178	(s)	2	(s)	(s)	9	11	189	403	834	1,426				
July .....	3	127	41	171	(s)	2	(s)	(s)	9	11	182	439	919	1,540				
August .....	3	136	48	187	(s)	2	(s)	(s)	9	11	198	437	873	1,509				
September .....	3	145	40	187	(s)	2	(s)	(s)	9	11	198	398	760	1,356				
October .....	3	217	39	260	(s)	2	(s)	(s)	9	11	271	377	741	1,389				
November .....	4	315	45	364	(s)	2	(s)	(s)	9	11	375	347	711	1,433				
December .....	5	400	51	455	(s)	2	(s)	(s)	9	11	467	355	756	1,578				
Total .....	44	2,960	571	3,574	(s)	20	1	1	109	131	3,705	4,528	9,170	17,403				
2013 January .....	5	489	80	574	(s)	2	(s)	(s)	10	12	586	366	749	1,701				
February .....	5	438	74	516	(s)	2	(s)	(s)	9	11	528	344	674	1,545				
March .....	5	402	67	473	(s)	2	(s)	(s)	10	12	485	354	724	1,564				
April .....	3	253	52	308	(s)	2	(s)	(s)	10	12	319	346	692	1,357				
May .....	3	171	39	213	(s)	2	(s)	(s)	10	12	225	372	785	1,382				
June .....	3	139	31	173	(s)	2	(s)	(s)	10	12	185	401	850	1,436				
July .....	3	139	33	174	(s)	2	(s)	(s)	10	12	187	436	905	1,527				
August .....	3	140	37	180	(s)	2	(s)	(s)	10	12	192	435	888	1,514				
September .....	2	145	39	187	(s)	2	(s)	(s)	10	12	198	406	786	1,390				
October .....	3	211	35	249	(s)	2	(s)	(s)	10	12	261	383	759	1,403				
November .....	4	352	45	401	(s)	2	(s)	(s)	10	12	412	353	745	1,510				
December .....	4	486	53	543	(s)	2	(s)	(s)	10	12	556	371	786	1,713				
Total .....	41	3,365	584	3,991	(s)	20	3	1	119	143	4,134	4,567	9,342	18,043				
2014 January .....	5	586	58	649	(s)	2	(s)	(s)	10	12	661	390	811	1,862				
February .....	5	501	59	564	(s)	2	(s)	(s)	9	11	575	357	685	1,618				
March .....	5	427	54	487	(s)	2	(s)	(s)	10	12	499	365	747	1,611				
April .....	3	R 252	R 33	R 289	(s)	2	(s)	(s)	10	12	R 301	349	696	1,346				
May .....	3	177	36	216	(s)	2	(s)	(s)	10	12	229	374	787	1,390				
5-Month Total ....	22	1,943	240	2,205	(s)	8	1	(s)	49	59	2,265	1,835	3,727	7,827				
2013 5-Month Total ....	20	1,753	311	2,084	(s)	8	1	(s)	50	59	2,143	1,782	3,624	7,549				
2012 5-Month Total ....	20	1,486	265	1,771	(s)	8	(s)	(s)	45	54	1,825	1,773	3,573	7,171				

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

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

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

<sup>d</sup> Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

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

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

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

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

Notes:

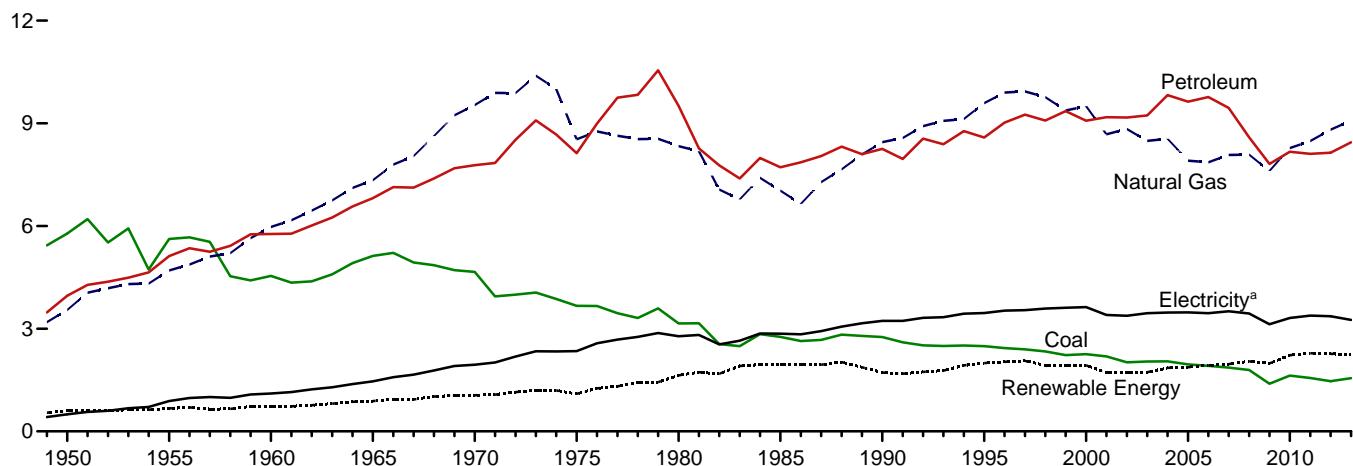
- Data are estimates, except for coal totals beginning in 2008; hydroelectric power; solar/PV; wind; and electricity retail sales beginning in 1979.
- The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants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

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

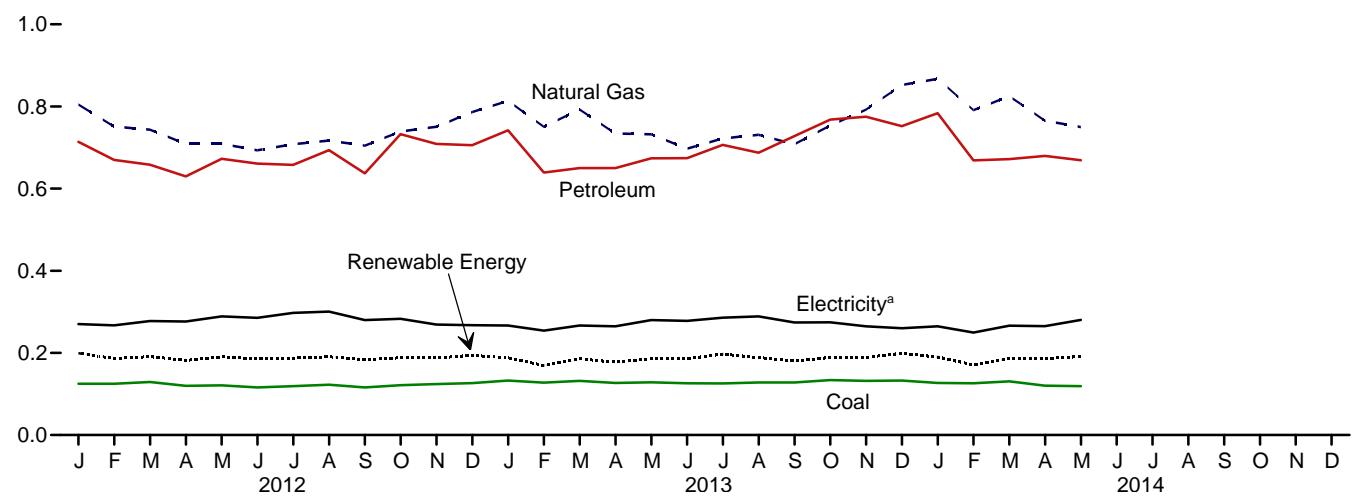
Sources: Tables 2.6, 3.8a, 4.3, 6.2, 7.6, 10.2a, A4, A5, and A6.

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

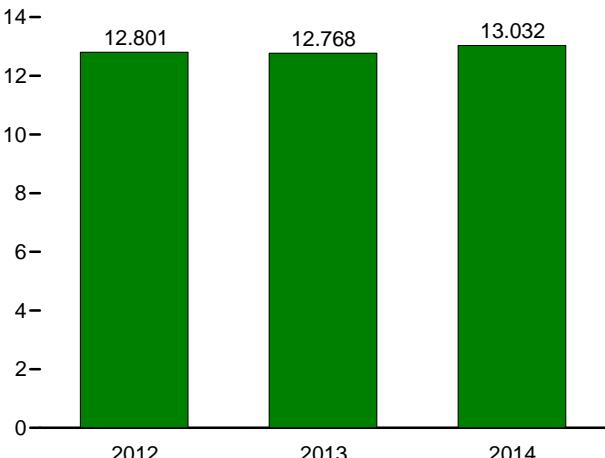
By Major Source, 1949–2013



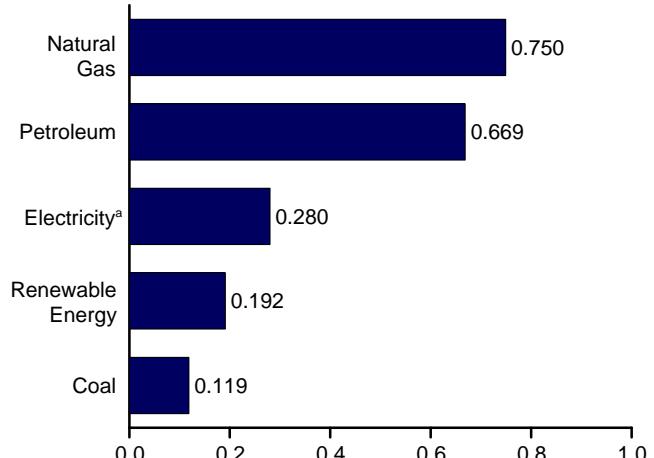
By Major Source, Monthly



Total, January–May



By Major Source, May 2014



<sup>a</sup> 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 <sup>a</sup>										Electricity Retail Sales <sup>g</sup>	Electrical System Energy Losses <sup>h</sup>	Total <sup>e</sup>			
	Fossil Fuels				Renewable Energy <sup>b</sup>											
	Coal	Natural Gas <sup>c</sup>	Petroleum <sup>d</sup>	Total <sup>e</sup>	Hydro-electric Power <sup>f</sup>	Geo-thermal	Solar/PV	Wind	Bio-mass	Total						
1950 Total .....	5,781	3,546	3,960	13,288	69	NA	NA	NA	532	602	13,890	500	1,852	16,241		
1955 Total .....	5,620	4,701	5,123	15,434	38	NA	NA	NA	631	669	16,103	887	2,495	19,485		
1960 Total .....	4,543	5,973	5,766	16,277	39	NA	NA	NA	680	719	16,996	1,107	2,739	20,842		
1965 Total .....	5,127	7,339	6,813	19,260	33	NA	NA	NA	855	888	20,148	1,463	3,487	25,098		
1970 Total .....	4,656	9,536	7,776	21,911	34	NA	NA	NA	1,019	1,053	22,964	1,948	4,716	29,628		
1975 Total .....	3,667	8,532	8,127	20,339	32	NA	NA	NA	1,063	1,096	21,434	2,346	5,632	29,413		
1980 Total .....	3,155	8,333	9,509	20,962	33	NA	NA	NA	1,600	1,633	22,595	2,781	6,664	32,039		
1985 Total .....	2,760	7,032	7,714	17,492	33	NA	NA	NA	1,918	1,951	19,443	2,855	6,518	28,816		
1990 Total .....	2,756	8,451	8,251	19,463	31	2	—	—	1,684	1,717	21,180	3,226	7,404	31,810		
1995 Total .....	2,488	9,592	8,586	20,727	55	3	—	—	1,934	1,992	22,719	3,455	7,796	33,971		
2000 Total .....	2,256	9,500	9,075	20,896	42	4	—	—	1,881	1,928	22,824	3,631	8,208	34,664		
2001 Total .....	2,192	8,676	9,178	20,075	33	5	—	—	1,681	1,719	21,794	3,400	7,526	32,720		
2002 Total .....	2,019	8,832	9,168	20,079	39	5	—	—	1,676	1,720	21,799	3,379	7,484	32,662		
2003 Total .....	2,041	8,488	9,230	19,811	43	3	—	—	1,679	1,725	21,536	3,454	7,565	32,555		
2004 Total .....	2,047	8,550	9,825	20,559	33	4	—	—	1,817	1,853	22,412	3,473	7,635	33,519		
2005 Total .....	1,954	7,907	9,633	19,538	32	4	—	—	1,837	1,873	21,411	3,477	7,557	32,446		
2006 Total .....	1,914	7,861	9,770	19,606	29	4	—	—	1,897	1,930	21,536	3,451	7,414	32,401		
2007 Total .....	1,865	8,074	9,451	19,414	16	5	—	—	1,944	1,965	21,379	3,507	7,518	32,404		
2008 Total .....	1,793	8,083	8,588	18,506	17	5	—	—	2,026	2,047	20,553	3,444	7,365	31,362		
2009 Total .....	1,392	7,609	7,814	16,791	18	4	—	—	1,963	1,985	18,776	3,130	6,582	28,488		
2010 Total .....	1,631	8,278	8,171	18,075	16	4	(S)	—	2,201	2,221	20,296	3,313	6,934	30,543		
2011 Total .....	1,561	8,481	8,108	18,161	17	4	(S)	(S)	2,261	2,283	20,444	3,382	7,007	30,833		
2012 January .....	125	805	714	1,646	3	(S)	(S)	(S)	196	199	1,845	270	547	2,662		
February .....	125	751	670	1,546	2	(S)	(S)	(S)	184	186	1,732	267	525	2,525		
March .....	129	743	658	1,533	2	(S)	(S)	(S)	188	191	1,724	277	550	2,552		
April .....	120	709	630	1,464	2	(S)	(S)	(S)	180	182	1,646	276	546	2,469		
May .....	121	709	672	1,503	2	(S)	(S)	(S)	188	191	1,694	289	611	2,594		
June .....	116	693	661	1,470	2	(S)	(S)	(S)	183	185	1,655	285	591	2,531		
July .....	119	708	658	1,485	1	(S)	(S)	(S)	186	187	1,672	298	624	2,593		
August .....	122	717	694	1,533	1	(S)	(S)	(S)	189	191	1,724	301	600	2,625		
September .....	116	705	637	1,456	2	(S)	(S)	(S)	181	183	1,640	280	535	2,455		
October .....	121	739	733	1,590	2	(S)	(S)	(S)	186	188	1,778	283	556	2,618		
November .....	124	750	709	1,580	2	(S)	(S)	(S)	185	188	1,768	269	552	2,589		
December .....	127	786	706	1,619	2	(S)	(S)	(S)	192	194	1,813	267	569	2,649		
Total .....	1,465	8,816	8,140	18,425	22	4	(S)	(S)	2,238	2,265	20,690	3,363	6,811	30,865		
2013 January .....	133	814	742	1,688	3	(S)	(S)	(S)	184	188	1,876	267	545	2,687		
February .....	128	750	639	1,518	3	(S)	(S)	(S)	166	169	1,687	254	498	2,439		
March .....	132	793	650	1,572	3	(S)	(S)	(S)	182	186	1,757	266	545	2,568		
April .....	127	734	650	1,509	2	(S)	(S)	(S)	175	177	1,687	265	530	2,482		
May .....	128	732	674	1,534	3	(S)	(S)	(S)	182	186	1,720	280	592	2,592		
June .....	126	697	674	1,494	3	(S)	(S)	(S)	183	186	1,680	278	588	2,546		
July .....	126	722	707	1,552	3	(S)	(S)	(S)	193	197	1,749	286	593	2,628		
August .....	128	731	687	1,545	2	(S)	(S)	(S)	186	189	1,733	289	590	2,613		
September .....	128	708	728	1,563	2	(S)	(S)	(S)	178	180	1,743	274	530	2,548		
October .....	134	754	768	1,655	2	(S)	(S)	(S)	186	189	1,843	275	545	2,662		
November .....	132	792	775	1,696	2	(S)	(S)	(S)	187	189	1,885	265	558	2,708		
December .....	133	852	752	1,735	3	(S)	(S)	(S)	196	199	1,934	260	550	2,744		
Total .....	1,553	9,080	8,446	19,062	32	4	(S)	(S)	2,198	2,235	21,296	3,258	6,664	31,218		
2014 January .....	127	867	784	1,777	3	(S)	(S)	(S)	186	190	1,967	265	551	2,783		
February .....	126	791	669	1,584	2	(S)	(S)	(S)	168	171	1,755	250	479	2,483		
March .....	131	825	672	1,627	2	(S)	(S)	(S)	184	187	1,814	266	546	2,626		
April .....	120	R 765	R 680	R 1,564	2	(S)	(S)	(S)	184	186	R 1,750	265	528	R 2,542		
May .....	119	750	669	1,536	2	(S)	(S)	(S)	189	192	1,728	280	590	2,598		
5-Month Total ....	623	3,998	3,473	8,088	11	2	(S)	(S)	912	925	9,012	1,326	2,693	13,032		
2013 5-Month Total ....	647	3,823	3,355	7,821	15	2	(S)	(S)	890	906	8,727	1,332	2,709	12,768		
2012 5-Month Total ....	620	3,717	3,344	7,692	11	2	(S)	(S)	936	949	8,641	1,380	2,780	12,801		

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

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

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

<sup>d</sup> Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

<sup>e</sup> Includes coal coke net imports, which are not separately displayed. See Tables 1.4a and 1.4b.

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

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

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

section.

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

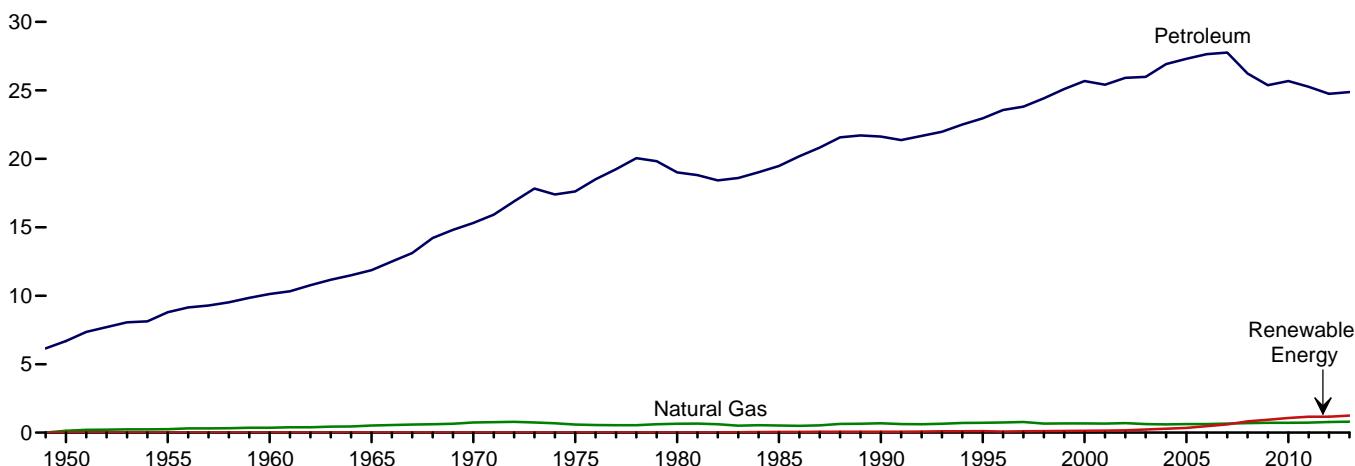
Notes: • Data are estimates, except for coal totals; hydroelectric power in 1949–1978 and 1989 forward; solar/PV; wind; and electricity retail sales. • The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note 2, "Classification of Power 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.

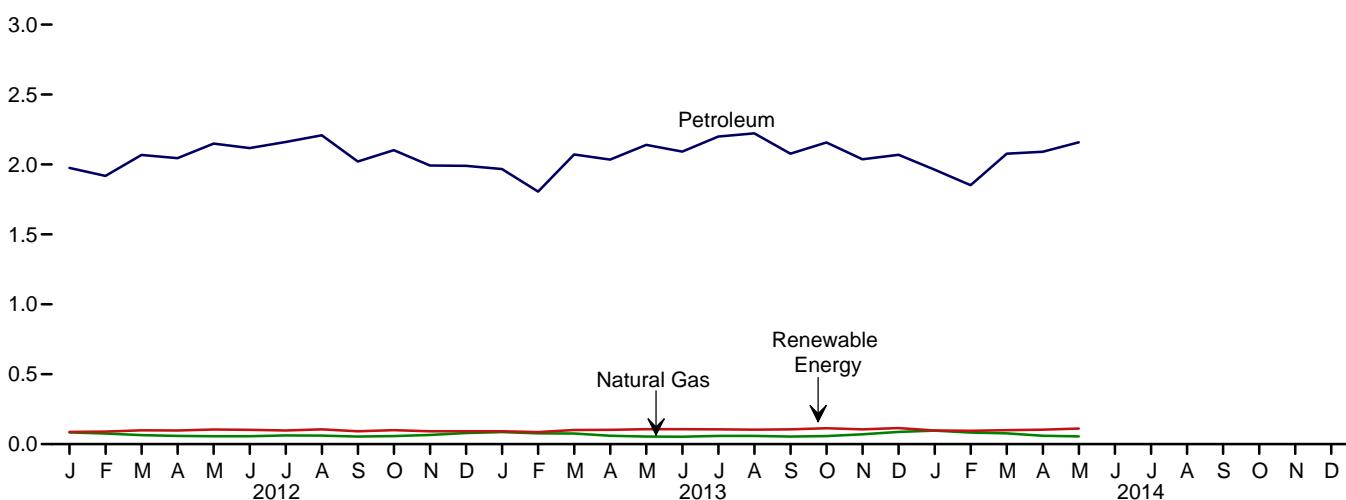
Sources: Tables 1.4a, 1.4b, 2.6, 3.8b, 4.3, 6.2, 7.6, 10.2b, A4, A5, and A6.

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

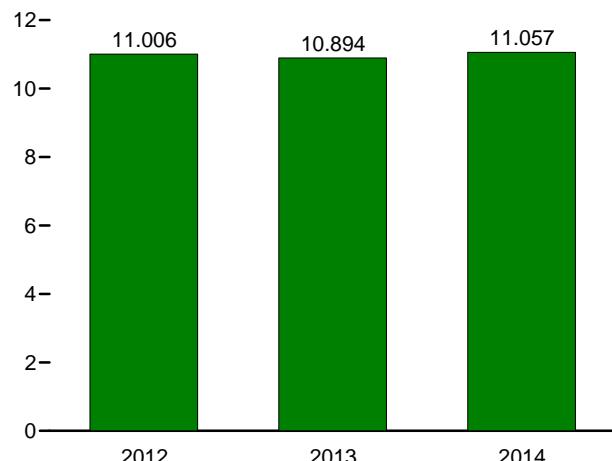
By Major Source, 1949–2013



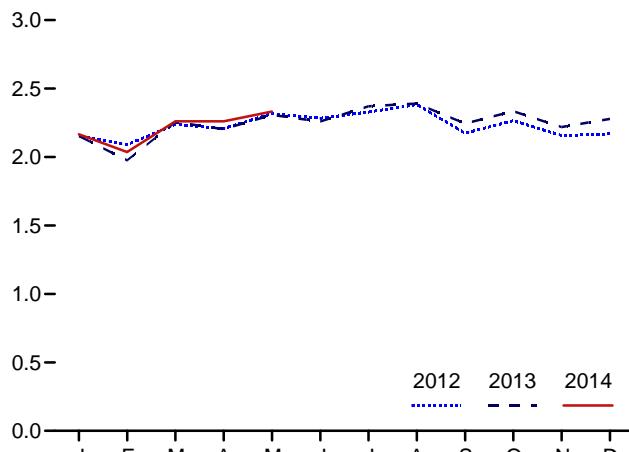
By Major Source, Monthly



Total, January–May



Total, Monthly



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

**Table 2.5 Transportation Sector Energy Consumption**  
(Trillion Btu)

	Primary Consumption <sup>a</sup>					Total Primary	Electricity Retail Sales <sup>e</sup>	Electrical System Energy Losses <sup>f</sup>	Total
	Fossil Fuels			Renewable Energy <sup>b</sup>	Biomass				
	Coal	Natural Gas <sup>c</sup>	Petroleum <sup>d</sup>	Total	Biomass				
1950 Total .....	1,564	130	6,690	8,383	NA	8,383	23	86	8,492
1955 Total .....	421	254	8,799	9,474	NA	9,474	20	56	9,550
1960 Total .....	75	359	10,125	10,560	NA	10,560	10	26	10,596
1965 Total .....	16	517	11,866	12,399	NA	12,399	10	24	12,432
1970 Total .....	7	745	15,310	16,062	NA	16,062	11	26	16,098
1975 Total .....	1	595	17,615	18,210	NA	18,210	10	24	18,245
1980 Total .....	( 9 )	650	19,009	19,659	NA	19,659	11	27	19,697
1985 Total .....	( 9 )	519	19,472	19,992	50	20,041	14	32	20,088
1990 Total .....	( 9 )	680	21,626	22,306	60	22,366	16	37	22,420
1995 Total .....	( 9 )	724	22,955	23,679	112	23,791	17	38	23,846
2000 Total .....	( 9 )	672	25,682	26,354	135	26,489	18	42	26,548
2001 Total .....	( 9 )	658	25,412	26,070	142	26,213	20	43	26,275
2002 Total .....	( 9 )	699	25,913	26,612	170	26,781	19	42	26,842
2003 Total .....	( 9 )	627	25,987	26,615	230	26,845	23	51	26,919
2004 Total .....	( 9 )	602	26,925	27,527	290	27,817	25	54	27,895
2005 Total .....	( 9 )	624	27,309	27,933	339	28,272	26	56	28,353
2006 Total .....	( 9 )	625	27,651	28,276	475	28,751	25	54	28,830
2007 Total .....	( 9 )	663	27,763	28,427	602	29,029	28	60	29,116
2008 Total .....	( 9 )	692	26,230	26,922	825	27,747	26	56	27,829
2009 Total .....	( 9 )	715	25,375	26,090	935	27,025	27	56	27,108
2010 Total .....	( 9 )	719	25,683	26,402	1,075	27,477	26	55	27,558
2011 Total .....	( 9 )	734	25,264	25,997	1,158	27,155	26	54	27,236
 2012 January .....	( 9 )	84	1,975	2,059	87	2,147	2	4	2,153
February .....	( 9 )	76	1,918	1,994	89	2,083	2	4	2,090
March .....	( 9 )	64	2,068	2,132	99	2,231	2	4	2,237
April .....	( 9 )	59	2,046	2,105	98	2,203	2	4	2,209
May .....	( 9 )	57	2,150	2,206	104	2,311	2	4	2,317
June .....	( 9 )	57	2,118	2,174	102	2,276	2	4	2,283
July .....	( 9 )	63	2,161	2,224	98	2,322	2	5	2,329
August .....	( 9 )	61	2,209	2,270	106	2,375	2	4	2,382
September .....	( 9 )	55	2,022	2,076	92	2,168	2	4	2,174
October .....	( 9 )	57	2,102	2,159	100	2,259	2	4	2,265
November .....	( 9 )	66	1,993	2,059	92	2,150	2	4	2,156
December .....	( 9 )	80	1,991	2,071	92	2,162	2	4	2,169
Total .....	( 9 )	777	24,751	25,528	1,159	26,688	25	51	26,763
 2013 January .....	( 9 )	87	1,967	2,054	92	2,146	2	5	2,153
February .....	( 9 )	77	1,806	1,883	87	1,970	2	4	1,976
March .....	( 9 )	76	2,071	2,147	101	2,248	2	4	2,255
April .....	( 9 )	60	2,035	2,095	102	2,197	2	4	2,203
May .....	( 9 )	54	2,140	2,194	107	2,300	2	4	2,307
June .....	( 9 )	53	2,093	2,146	106	2,252	2	5	2,259
July .....	( 9 )	59	2,199	2,258	105	2,363	2	5	2,370
August .....	( 9 )	59	2,222	2,281	103	2,385	2	4	2,391
September .....	( 9 )	54	2,078	2,132	106	2,238	2	4	2,244
October .....	( 9 )	57	2,158	2,215	114	2,329	2	4	2,335
November .....	( 9 )	70	2,037	2,107	106	2,213	2	4	2,219
December .....	( 9 )	88	2,069	2,157	114	2,271	2	5	2,278
Total .....	( 9 )	795	24,873	25,668	1,244	26,912	26	53	26,990
 2014 January .....	( 9 )	97	1,963	2,060	98	2,158	2	5	2,166
February .....	( 9 )	83	1,851	1,934	95	2,030	2	5	2,037
March .....	( 9 )	78	2,077	2,155	100	2,255	2	5	2,261
April .....	( 9 )	60	2,151	104	2,255	2	4	<sup>R</sup> 2,261	
May .....	( 9 )	56	2,158	2,214	111	2,325	2	5	2,332
5-Month Total ....	( 9 )	373	10,141	10,514	508	11,022	12	23	11,057
 2013 5-Month Total ....	( 9 )	354	10,018	10,372	489	10,861	11	22	10,894
2012 5-Month Total ....	( 9 )	340	10,157	10,496	478	10,974	10	21	11,006

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

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

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

<sup>d</sup> Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

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

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

section.

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

R=Revised. NA=Not available.

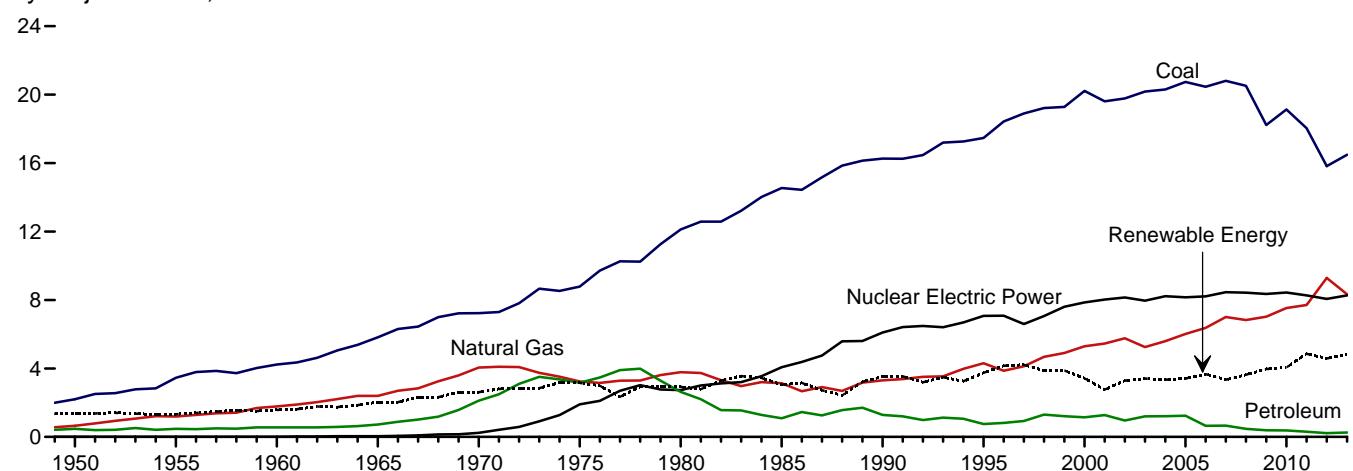
Notes: • Data are estimates, except for coal totals through 1977; and electricity retail sales beginning in 1979. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the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

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

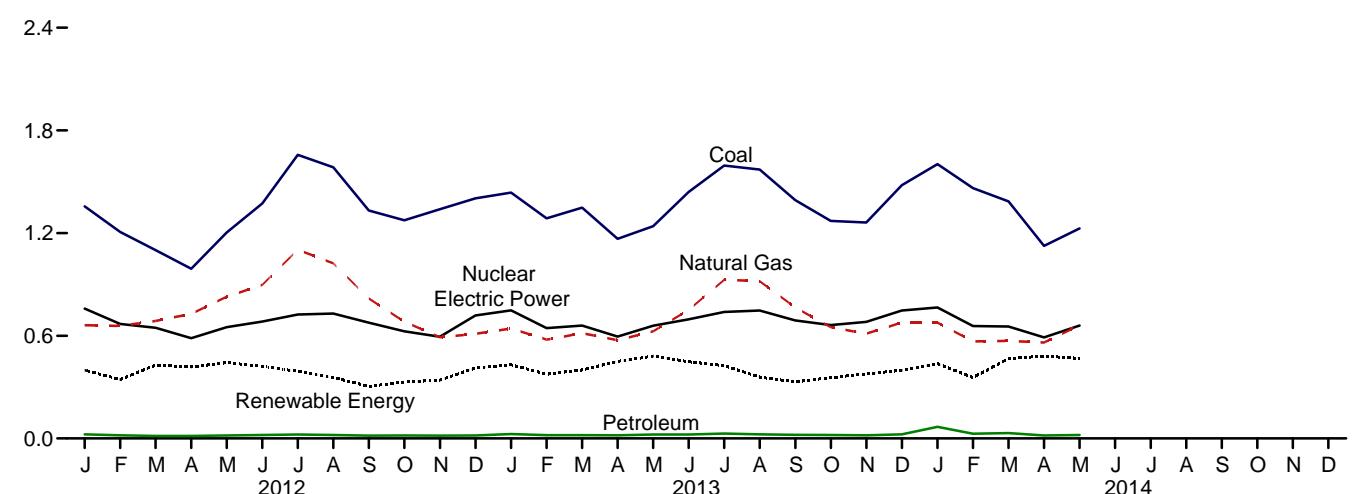
Sources: Tables 2.6, 3.8c, 4.3, 6.2, 7.6, 10.2b, A4, A5, and A6.

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

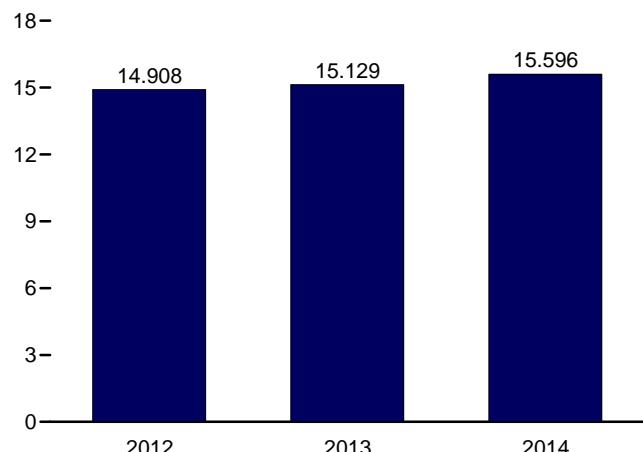
By Major Source, 1949–2013



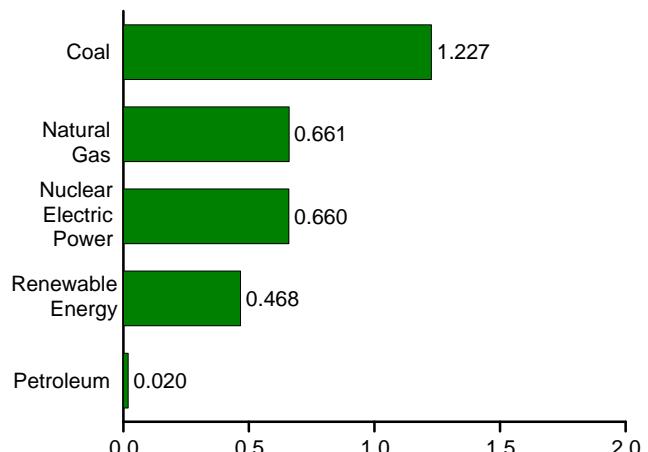
By Major Source, Monthly



Total, January–May



By Major Source, May 2014



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

**Table 2.6 Electric Power Sector Energy Consumption**  
(Trillion Btu)

	Primary Consumption <sup>a</sup>											Elec- tricity Net Imports <sup>e</sup>	Total Primary
	Fossil Fuels				Nuclear Electric Power	Renewable Energy <sup>b</sup>							
	Coal	Natural Gas <sup>c</sup>	Petro- leum	Total		Hydro- electric Power <sup>d</sup>	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 <sup>f</sup> .....	16,261	3,309	1,289	20,859	6,104	3,014	161	4	29	317	3,524	8	30,495
1995 Total .....	17,466	4,302	755	22,523	7,075	3,149	138	5	33	422	3,747	134	33,479
2000 Total .....	20,220	5,293	1,144	26,658	7,862	2,768	144	5	57	453	3,427	115	38,062
2001 Total .....	19,614	5,458	1,277	26,348	8,029	2,209	142	6	70	337	2,763	75	37,215
2002 Total .....	19,783	5,767	961	26,511	8,145	2,650	147	6	105	380	3,288	72	38,016
2003 Total .....	20,185	5,246	1,205	26,636	7,960	2,749	146	5	113	397	3,411	22	38,028
2004 Total .....	20,305	5,595	1,212	27,112	8,223	2,655	148	6	142	388	3,339	39	38,712
2005 Total .....	20,737	6,015	1,235	27,986	8,161	2,670	147	6	178	406	3,406	85	39,638
2006 Total .....	20,462	6,375	648	27,485	8,215	2,839	145	5	264	412	3,665	63	39,428
2007 Total .....	20,808	7,005	657	28,470	8,459	2,430	145	6	341	423	3,345	107	40,380
2008 Total .....	20,513	6,829	468	27,810	8,426	2,494	146	9	546	435	3,630	112	39,978
2009 Total .....	18,225	7,022	390	25,638	8,355	2,650	146	9	721	441	3,967	116	38,076
2010 Total .....	19,133	7,528	378	27,039	8,434	2,521	148	12	923	459	4,064	89	39,627
2011 Total .....	18,035	7,712	303	26,050	8,269	3,085	149	17	1,167	437	4,855	127	39,301
2012 January .....	1,356	662	24	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	15	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	3,408
July .....	1,658	1,102	23	2,783	724	251	13	5	84	40	392	19	3,919
August .....	1,585	1,023	20	2,627	729	218	12	4	81	40	355	19	3,731
September .....	1,331	818	17	2,166	676	166	12	4	84	38	304	14	3,160
October .....	1,275	682	17	1,973	626	155	13	4	120	38	330	12	2,941
November .....	1,340	591	17	1,948	594	176	13	3	111	38	341	13	2,896
December .....	1,403	611	18	2,031	719	217	13	3	138	40	412	11	3,173
Total .....	15,821	9,287	219	25,327	8,062	2,606	148	40	1,339	453	4,586	161	38,136
2013 January .....	1,437	643	26	2,105	748	236	14	3	139	38	430	14	3,297
February .....	1,286	578	19	1,883	644	192	12	4	132	34	375	13	2,915
March .....	1,349	615	19	1,982	660	194	14	6	149	39	401	14	3,057
April .....	1,167	574	18	1,759	595	233	13	7	164	33	450	12	2,815
May .....	1,240	626	23	1,889	659	269	13	8	155	38	481	16	3,044
June .....	1,440	751	22	2,213	696	257	13	9	131	39	449	17	3,375
July .....	1,594	927	28	2,549	739	256	13	8	106	41	425	18	3,731
August .....	1,571	918	24	2,513	748	204	13	9	91	41	359	19	3,639
September .....	1,393	766	21	2,180	690	159	13	9	111	39	331	15	3,215
October .....	1,271	650	20	1,941	662	163	14	9	130	39	355	13	2,972
November .....	1,262	612	18	1,892	681	167	12	7	151	40	377	15	2,964
December .....	1,480	677	24	2,181	747	200	14	7	134	44	398	13	3,340
Total .....	16,489	8,337	262	25,088	8,268	2,529	157	85	1,595	465	4,831	179	38,365
2014 January .....	1,603	677	68	2,348	766	202	13	7	171	43	437	13	3,564
February .....	1,463	567	27	2,057	656	163	12	8	133	39	355	9	3,078
March .....	1,386	570	32	1,987	654	229	13	13	169	44	467	11	3,119
April .....	1,126	561	17	1,703	591	237	13	15	178	38	481	10	2,786
May .....	1,227	661	20	1,909	660	250	13	17	148	40	468	14	3,050
5-Month Total .....	6,805	3,036	164	10,004	3,326	1,081	64	60	799	204	2,209	56	15,596
2013 5-Month Total .....	6,478	3,036	104	9,618	3,306	1,123	65	28	739	182	2,137	68	15,129
2012 5-Month Total .....	5,858	3,562	88	9,507	3,310	1,171	60	11	608	181	2,032	58	14,908

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

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

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

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

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

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

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

Notes: • Data are for fuels consumed to produce electricity and useful thermal

output. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 2, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

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

## Energy Consumption by Sector

**Note 1. Electrical System Energy Losses.** Electrical system energy losses are calculated as the difference between total primary consumption by the electric power sector (see Table 2.6) and the total energy content of electricity retail sales (see Tables 7.6 and A6). Most of these losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. Part of the energy input-to-output losses is a result of imputing fossil energy equivalent inputs for hydroelectric, geothermal, solar thermal, photovoltaic, and wind energy sources. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called "line losses"), and unaccounted-for electricity. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales. Overall, about two thirds of total energy input is lost in conversion. Currently, of electricity generated, approximately 5 percent is lost in plant use and 7 percent is lost in transmission and distribution.

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

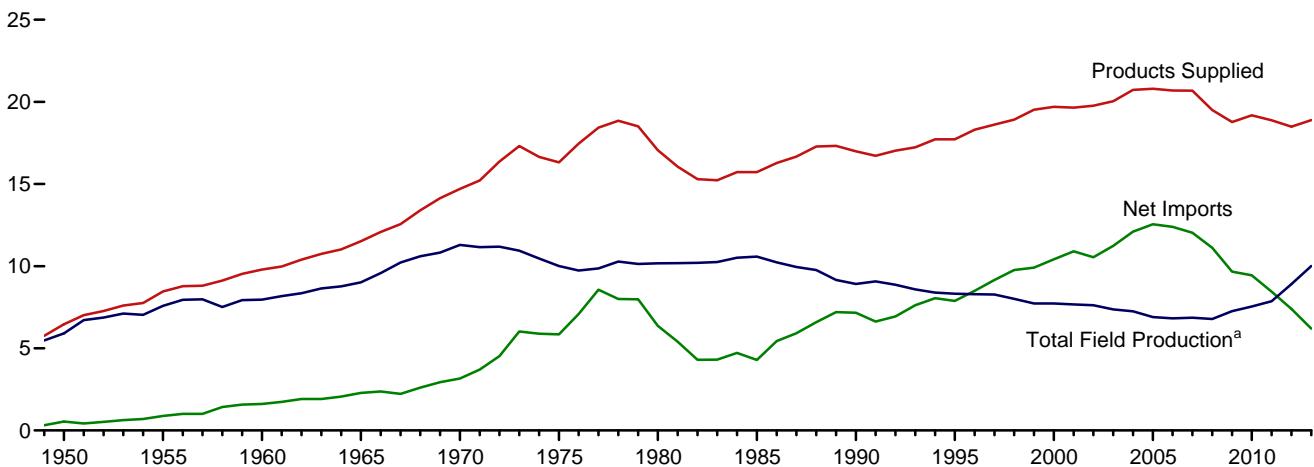
(MER) are developed from a group of energy-related surveys, typically called "supply surveys," conducted by the U.S. Energy Information Administration (EIA). Supply surveys are directed to suppliers and marketers of specific energy sources. They measure the quantities of specific energy sources produced,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

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

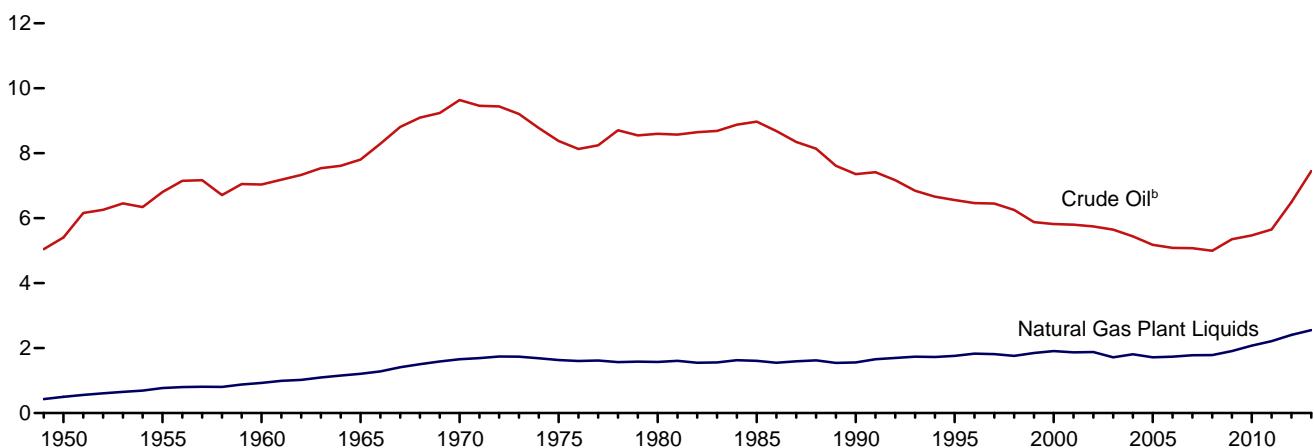
### **3. Petroleum**

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

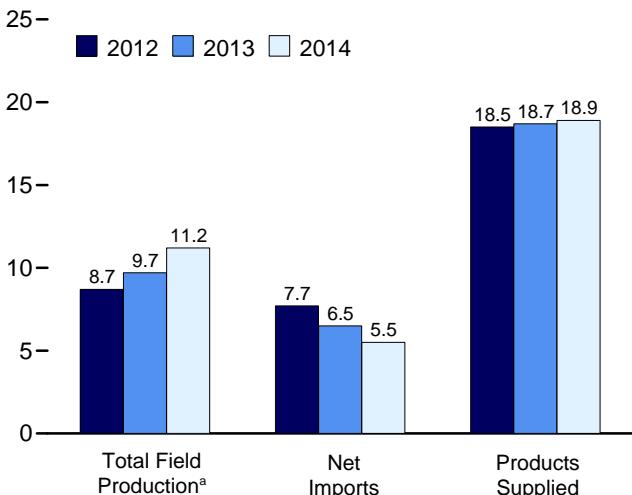
Overview, 1949–2013



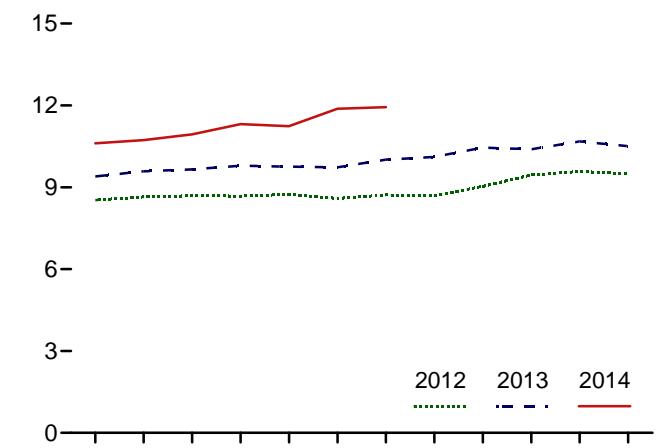
Crude Oil and Natural Gas Plant Liquids Field Production, 1949–2013



Overview, January–July



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



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

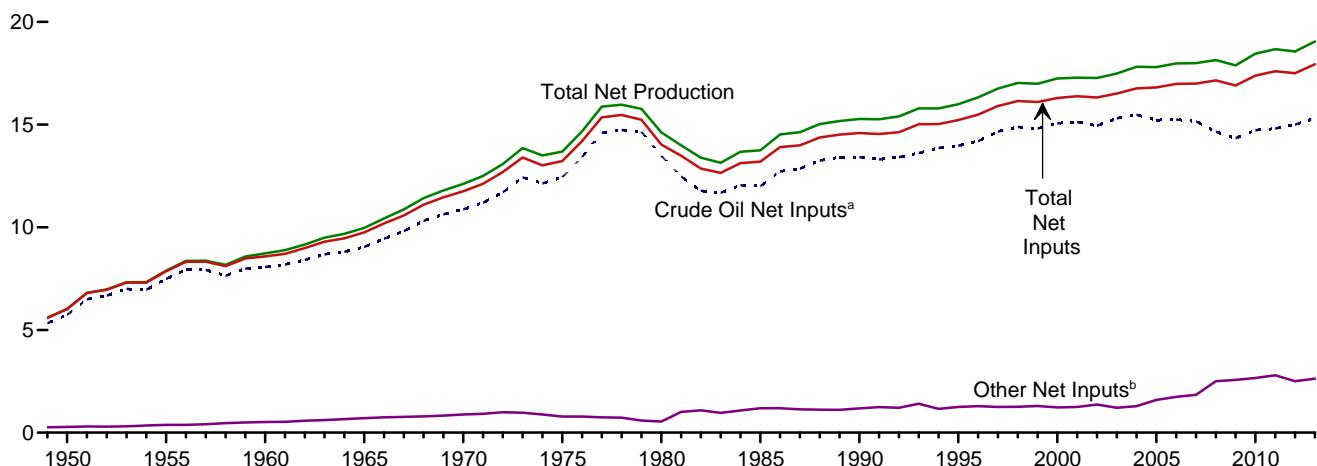
<sup>b</sup> Includes lease condensate.

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

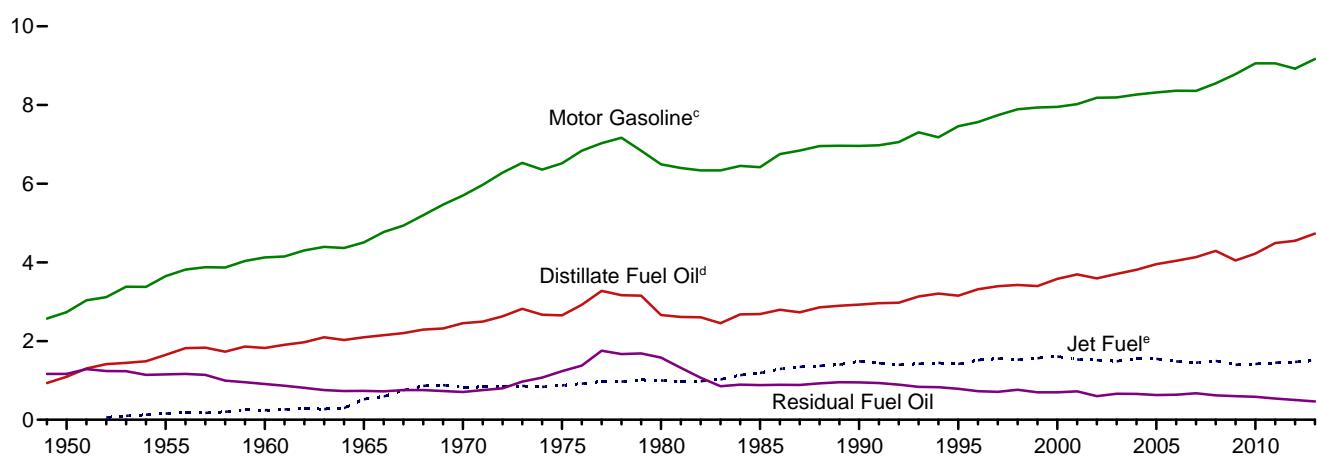


**Figure 3.2 Refinery and Blender Net Inputs and Net Production**  
(Million Barrels per Day)

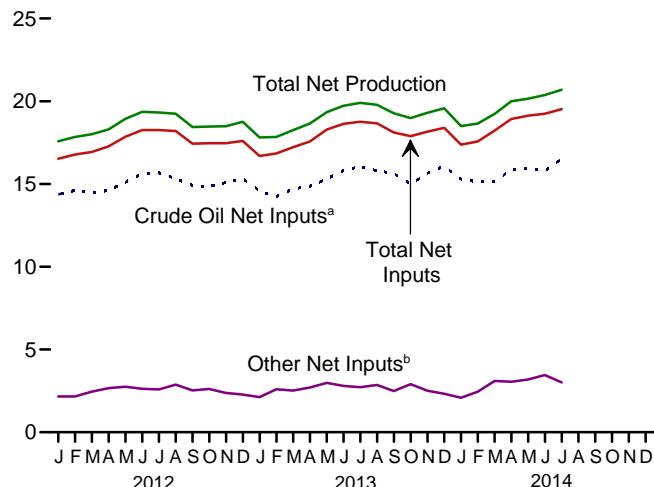
Net Inputs and Net Production, 1949–2013



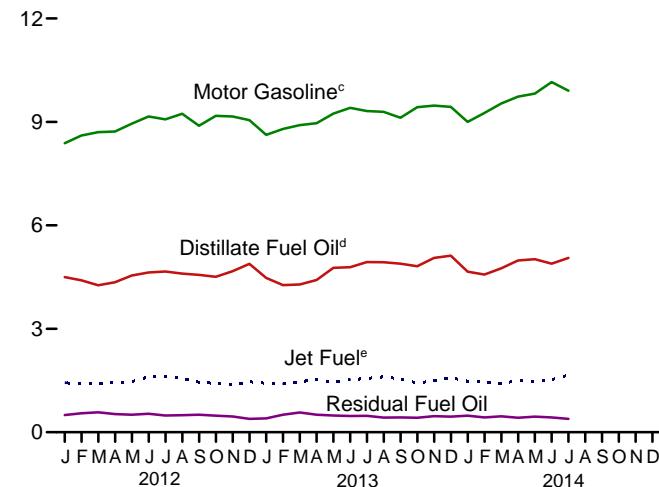
Net Production, Selected Products, 1949–2013



Net Inputs and Net Production, Monthly



Net Production, Selected Products, Monthly



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

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

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

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

sel) blended into distillate fuel oil.

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

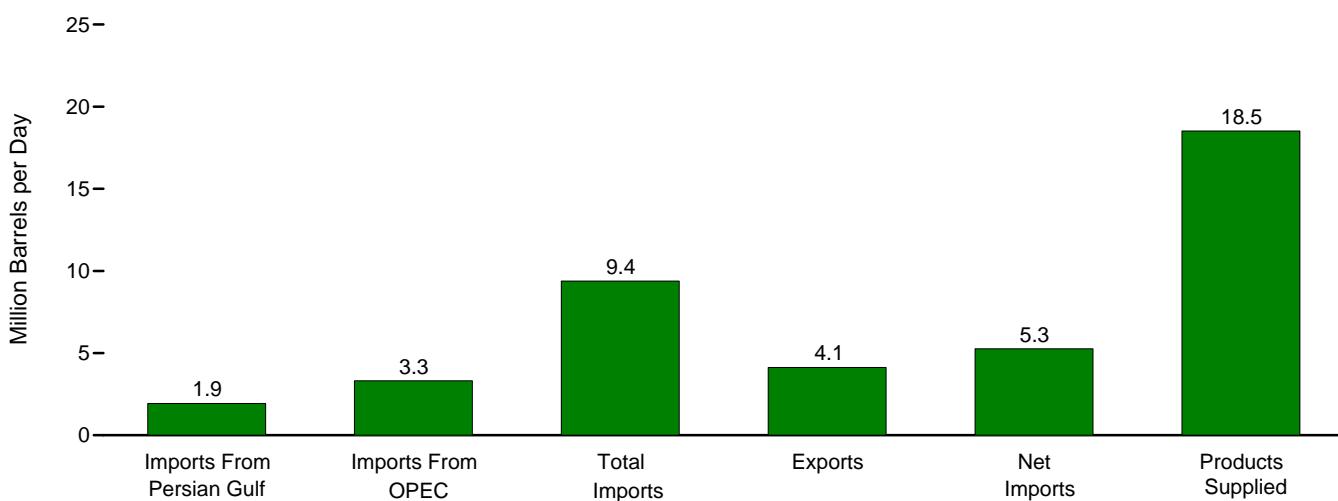
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.

Source: Table 3.2.

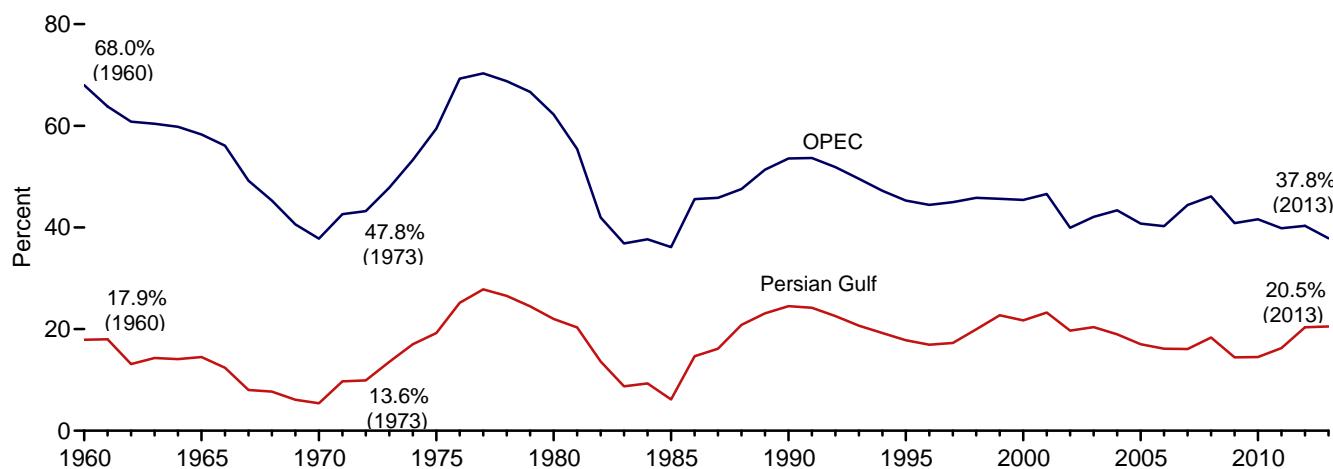


### Figure 3.3a Petroleum Trade: Overview

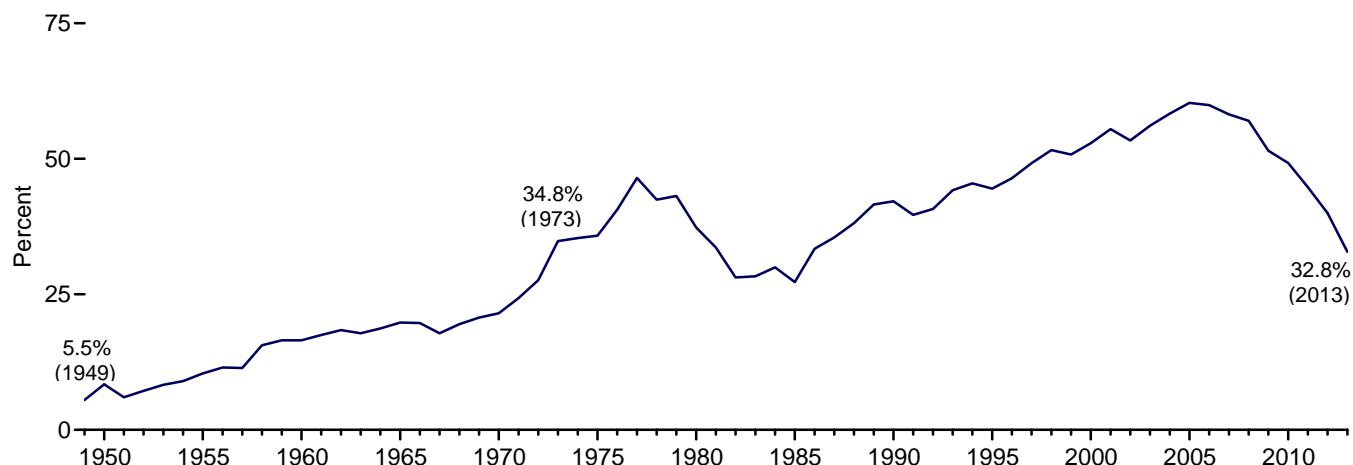
Overview, May 2014



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



Net Imports as Share of Products Supplied, 1949–2013



Note: OPEC=Organization of the Petroleum Exporting Countries.

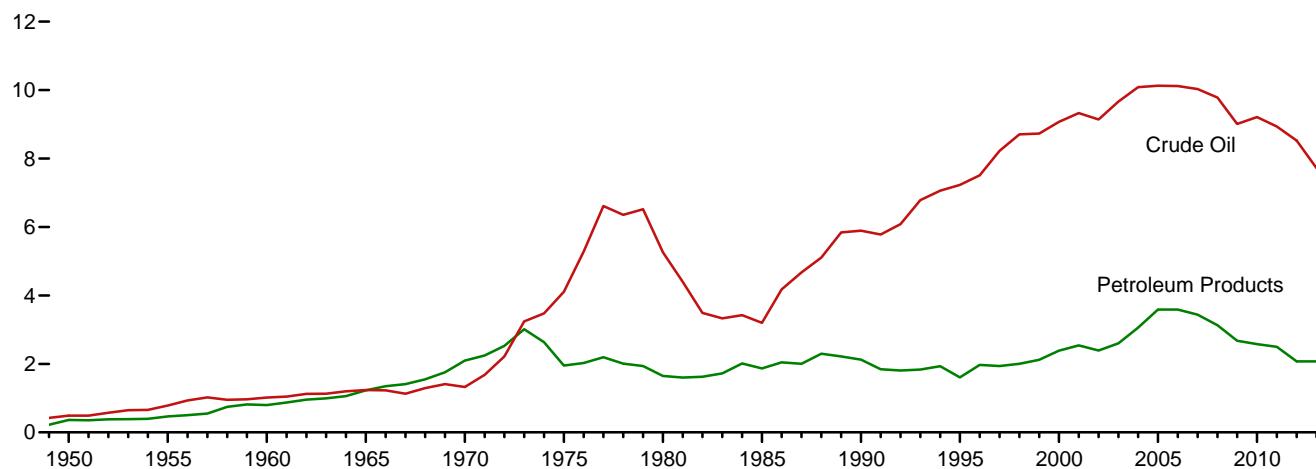
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.

Source: Table 3.3a.

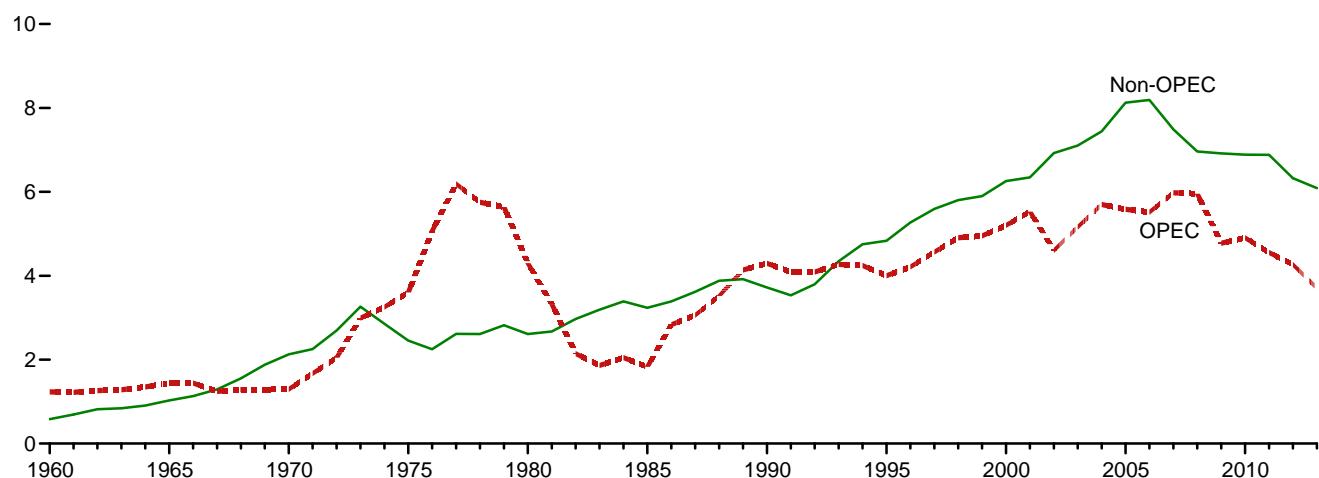


**Figure 3.3b Petroleum Trade: Imports**  
(Million Barrels per Day)

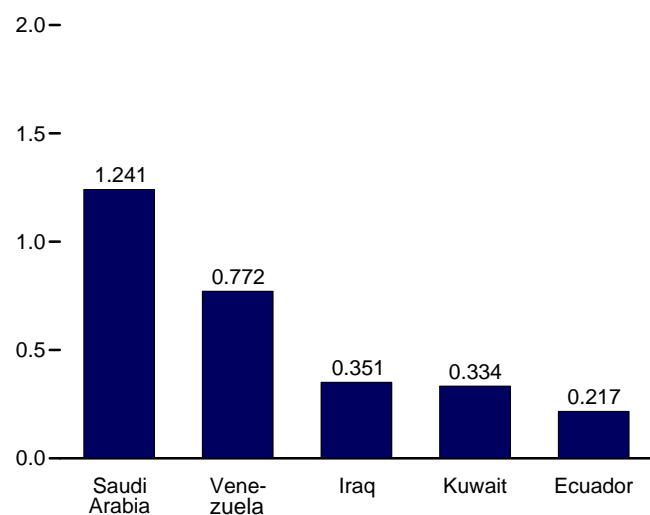
Overview, 1949–2013



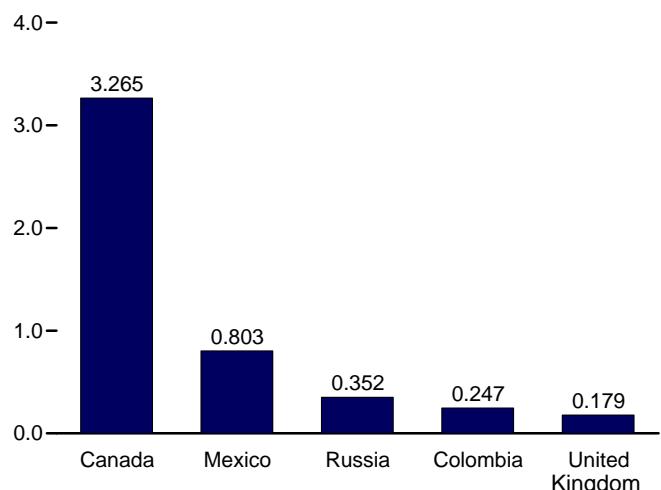
OPEC and Non-OPEC, 1960–2013



From Selected OPEC Countries, May 2014



From Selected Non-OPEC Countries, May 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 3.3c Petroleum Trade: Imports From OPEC Countries**  
(Thousand Barrels per Day)

	Algeria <sup>a</sup>	Angola <sup>b</sup>	Ecuador <sup>c</sup>	Iraq	Kuwait <sup>d</sup>	Libya <sup>e</sup>	Nigeria <sup>f</sup>	Saudi Arabia <sup>d</sup>	Venezuela	Other <sup>g</sup>	Total OPEC
1960 Average .....	( <sup>a</sup> )	( <sup>b</sup> )	( <sup>c</sup> )	22	182	( <sup>e</sup> )	( <sup>f</sup> )	84	911	34	1,233
1965 Average .....	( <sup>a</sup> )	( <sup>b</sup> )	( <sup>c</sup> )	16	74	42	( <sup>f</sup> )	158	994	155	1,439
1970 Average .....	8	( <sup>b</sup> )	( <sup>c</sup> )	0	48	47	( <sup>f</sup> )	30	989	172	1,294
1975 Average .....	282	( <sup>b</sup> )	57	2	16	232	762	715	702	832	3,601
1980 Average .....	488	( <sup>b</sup> )	27	28	27	554	857	1,261	481	577	4,300
1985 Average .....	187	( <sup>b</sup> )	67	46	21	4	293	168	605	439	1,830
1990 Average .....	280	( <sup>b</sup> )	49	518	86	0	800	1,339	1,025	199	4,296
1995 Average .....	234	( <sup>b</sup> )	( <sup>c</sup> )	0	218	0	627	1,344	1,480	98	4,002
2000 Average .....	225	( <sup>b</sup> )	( <sup>c</sup> )	620	272	0	896	1,572	1,546	72	5,203
2001 Average .....	278	( <sup>b</sup> )	( <sup>c</sup> )	795	250	0	885	1,662	1,553	105	5,528
2002 Average .....	264	( <sup>b</sup> )	( <sup>c</sup> )	459	228	0	621	1,552	1,398	83	4,605
2003 Average .....	382	( <sup>b</sup> )	( <sup>c</sup> )	481	220	0	867	1,774	1,376	61	5,162
2004 Average .....	452	( <sup>b</sup> )	( <sup>c</sup> )	656	250	20	1,140	1,558	1,554	70	5,701
2005 Average .....	478	( <sup>b</sup> )	( <sup>c</sup> )	531	243	56	1,166	1,537	1,529	47	5,587
2006 Average .....	657	( <sup>b</sup> )	( <sup>c</sup> )	553	185	87	1,114	1,463	1,419	38	5,517
2007 Average .....	670	508	( <sup>c</sup> )	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 .....	194	223	240	419	389	20	479	979	898	10	3,850
February .....	17	198	174	529	255	20	255	1,032	601	14	3,094
March .....	74	98	218	426	367	74	403	1,284	763	8	3,713
April .....	160	167	322	455	238	76	405	1,109	847	—	3,780
May .....	168	328	178	321	361	125	395	1,440	720	10	4,045
June .....	88	271	202	228	217	119	366	1,431	887	16	3,825
July .....	112	242	198	299	309	150	240	1,318	924	—	3,793
August .....	105	376	349	397	420	67	167	1,332	678	10	3,900
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	1,557	796	—	3,529
December .....	110	136	155	332	332	(s)	99	1,520	847	39	3,570
Average .....	115	217	232	341	328	59	281	1,328	797	10	3,707
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
5-Month Average .....	82	124	191	300	372	—	114	1,442	777	10	3,413
2013 5-Month Average .....	124	203	227	428	324	64	390	1,172	768	8	3,708
2012 5-Month Average .....	282	259	183	422	335	46	427	1,469	886	11	4,320

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

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

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

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

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

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

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

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

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

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

Sources: • 1960–1972: Bureau of Mines, *Minerals Yearbook*, annual reports. • 1973–1975: Bureau of Mines, *Mineral Industry Surveys*, *Petroleum Statement*, Annual, annual reports. • 1976–1980: U.S. Energy Information Administration (EIA), *Energy Data Reports*, *Petroleum Statement*, Annual, annual reports. • 1981–2012: EIA, *Petroleum Supply Annual*, annual reports. • 2013 and 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	Netherlands	Norway	Russia <sup>a</sup>	United Kingdom	U.S. Virgin Islands	Other	Total Non-OPEC
1960 Average .....	1	120	42	16	NA	NA	0	(s)	NA	NA	581
1965 Average .....	0	323	51	48	1	0	0	(s)	0	606	1,029
1970 Average .....	2	766	46	42	39	0	3	11	189	1,027	2,126
1975 Average .....	5	846	9	71	19	17	14	14	406	1,052	2,454
1980 Average .....	3	455	4	533	2	144	1	176	388	903	2,609
1985 Average .....	61	770	23	816	58	32	8	310	247	913	3,237
1990 Average .....	49	934	182	755	55	102	45	189	282	1,128	3,721
1995 Average .....	8	1,332	219	1,068	15	273	25	383	278	1,233	4,833
2000 Average .....	51	1,807	342	1,373	30	343	72	366	291	1,581	6,257
2001 Average .....	82	1,828	296	1,440	43	341	90	324	268	1,631	6,343
2002 Average .....	116	1,971	260	1,547	66	393	210	478	236	1,649	6,925
2003 Average .....	108	2,072	195	1,623	87	270	254	440	288	1,766	7,103
2004 Average .....	104	2,138	176	1,665	101	244	298	380	330	2,008	7,444
2005 Average .....	156	2,181	196	1,662	151	233	410	396	328	2,413	8,127
2006 Average .....	193	2,353	155	1,705	174	196	369	272	328	2,446	8,190
2007 Average .....	200	2,455	155	1,532	128	142	414	277	346	1,839	7,489
2008 Average .....	258	2,493	200	1,302	168	102	465	236	320	1,416	6,961
2009 Average .....	309	2,479	276	1,210	140	108	563	245	277	1,307	6,915
2010 Average .....	272	2,535	365	1,284	108	89	612	256	253	1,112	6,887
2011 Average .....	253	2,729	433	1,206	100	113	624	159	186	1,077	6,881
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	187	1	764	6,304
April .....	237	2,987	472	1,002	84	51	388	145	12	831	6,208
May .....	212	2,966	430	1,012	111	94	547	138	2	875	6,387
June .....	297	3,070	515	915	151	82	655	194	(s)	891	6,769
July .....	270	2,921	413	1,024	138	47	491	131	1	971	6,407
August .....	289	2,954	409	1,016	97	94	368	197	—	1,071	6,495
September .....	152	2,759	357	1,096	75	63	562	111	—	1,029	6,203
October .....	90	2,642	376	1,062	69	67	552	117	3	882	5,860
November .....	123	2,870	459	1,065	72	80	445	126	—	712	5,953
December .....	85	3,153	387	1,026	52	35	523	144	—	682	6,088
Average .....	226	2,946	433	1,035	99	75	477	149	12	874	6,327
2013 January .....	106	3,433	351	1,068	120	48	327	116	—	624	6,193
February .....	79	3,416	366	978	120	10	454	95	—	623	6,141
March .....	123	3,004	479	677	121	69	454	111	—	705	5,743
April .....	96	3,163	465	973	80	40	579	131	—	769	6,296
May .....	193	2,842	389	885	88	26	552	170	—	862	6,007
June .....	182	2,864	356	846	74	80	513	198	—	853	5,965
July .....	179	3,008	588	930	69	68	453	192	—	965	6,450
August .....	226	3,076	375	912	85	36	572	163	—	852	6,297
September .....	242	3,072	314	839	58	56	458	149	—	871	6,059
October .....	88	3,213	384	878	83	114	555	160	—	706	6,181
November .....	127	3,104	302	1,014	85	52	326	124	—	645	5,779
December .....	103	3,324	293	1,030	90	52	265	146	—	629	5,932
Average .....	146	3,125	389	919	89	54	459	147	—	759	6,087
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
5-Month Average .....	122	3,259	331	864	107	61	349	139	—	681	5,913
2013 5-Month Average .....	120	3,167	410	915	106	39	473	125	—	718	6,073
2012 5-Month Average .....	283	2,998	457	1,042	107	88	426	153	28	848	6,431

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

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

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

states and the District of Columbia.

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

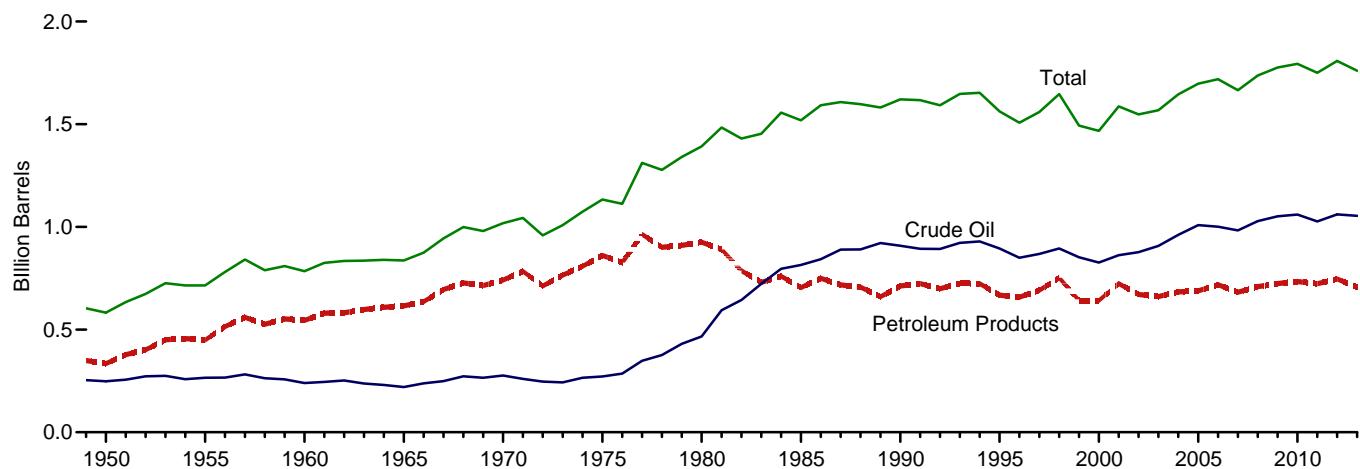
Sources: • 1960–1972: Bureau of Mines, *Minerals Yearbook*, annual reports.

• 1973–1975: Bureau of Mines, *Mineral Industry Surveys, Petroleum Statement, Annual*, annual reports. • 1976–1980: U.S. Energy Information Administration (EIA), *Energy Data Reports, Petroleum Statement, Annual*, annual reports.

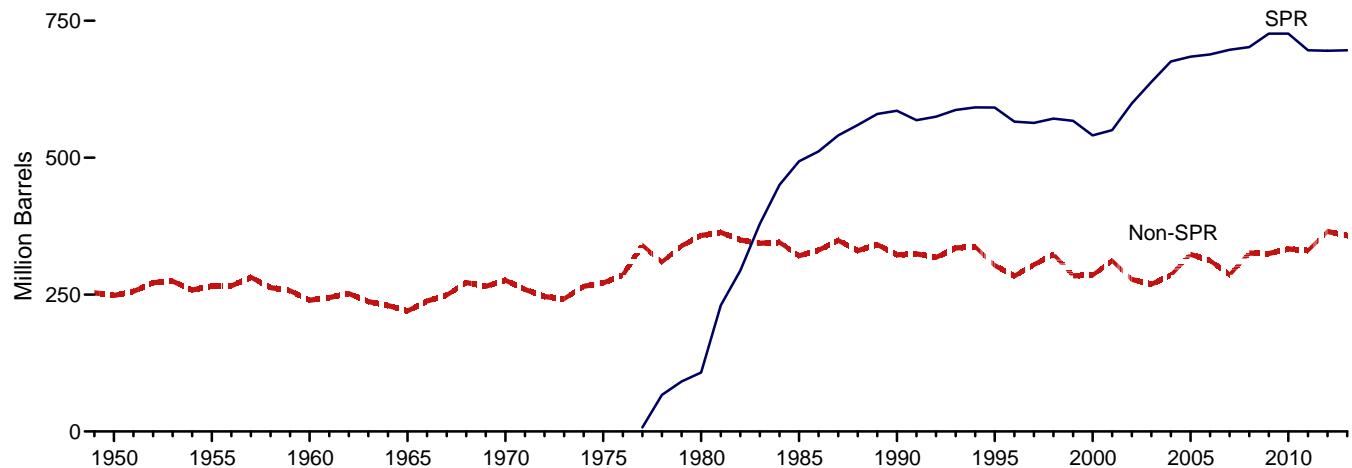
• 1981–2012: EIA, *Petroleum Supply Annual*, annual reports. • 2013 and 2014: EIA, *Petroleum Supply Monthly*, monthly reports.

**Figure 3.4 Petroleum Stocks**

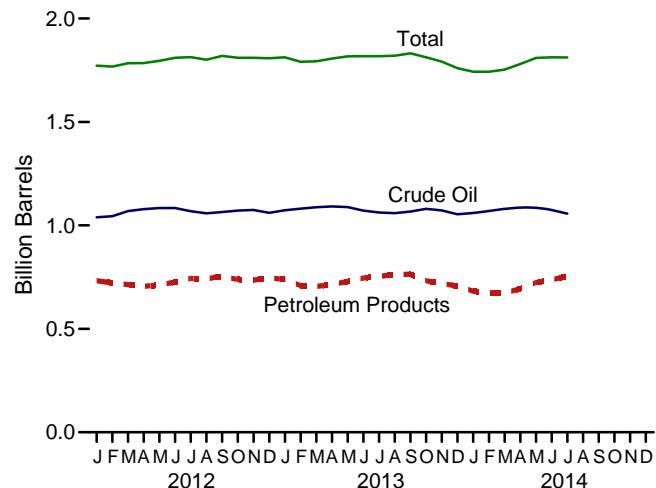
Overview, 1949–2013



SPR and Non-SPR Crude Oil Stocks, 1949–2013



Overview, Monthly

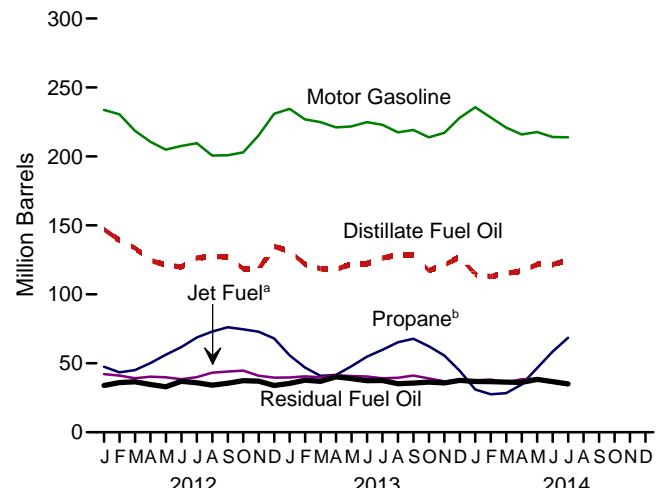


<sup>a</sup> Includes kerosene-type jet fuel only.

<sup>b</sup> Includes propylene.

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

Selected Products, Monthly



period.

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

Source: Table 3.4.

**Table 3.4 Petroleum Stocks**  
(Million Barrels)

	Crude Oil <sup>a</sup>			Distillate Fuel Oil <sup>f</sup>	Jet Fuel <sup>g</sup>	LPG <sup>b</sup>		Motor Gasoline <sup>i</sup>	Residual Fuel Oil	Other <sup>j</sup>	Total
	SPR <sup>c</sup>	Non-SPR <sup>d,e</sup>	Total <sup>e</sup>			Propane <sup>h</sup>	Total				
1950 Year .....	--	248	248	72	( 9 )	NA	2	116	41	104	583
1955 Year .....	--	266	266	111	3	NA	7	165	39	123	715
1960 Year .....	--	240	240	138	7	NA	23	195	45	137	785
1965 Year .....	--	220	220	155	19	NA	30	175	56	181	836
1970 Year .....	--	276	276	195	28	NA	67	209	54	188	1,018
1975 Year .....	--	271	271	209	30	82	125	235	74	188	1,133
1980 Year .....	108	358	466	205	42	65	120	261	92	205	1,392
1985 Year .....	493	321	814	144	40	39	74	223	50	174	1,519
1990 Year .....	586	323	908	132	52	49	98	220	49	162	1,621
1995 Year .....	592	303	895	130	40	43	93	202	37	165	1,563
2000 Year .....	541	286	826	118	45	41	83	196	36	164	1,468
2001 Year .....	550	312	862	145	42	66	121	210	41	166	1,586
2002 Year .....	599	278	877	134	39	53	106	209	31	152	1,548
2003 Year .....	638	269	907	137	39	50	94	207	38	147	1,568
2004 Year .....	676	286	961	126	40	55	104	218	42	153	1,645
2005 Year .....	685	324	1,008	136	42	57	109	208	37	157	1,698
2006 Year .....	689	312	1,001	144	39	62	113	212	42	169	1,720
2007 Year .....	697	286	983	134	39	52	96	218	39	156	1,665
2008 Year .....	702	326	1,028	146	38	55	113	214	36	162	1,737
2009 Year .....	727	325	1,052	166	43	50	102	223	37	153	1,776
2010 Year .....	727	333	1,060	164	43	49	108	219	41	158	1,794
2011 Year .....	696	331	1,027	149	41	55	112	223	34	164	1,750
2012 January .....	696	343	1,039	147	42	48	101	234	34	175	1,773
February .....	696	348	1,044	139	41	43	96	231	36	180	1,767
March .....	696	373	1,069	134	39	45	103	219	37	184	1,783
April .....	696	383	1,079	125	40	50	116	211	35	179	1,784
May .....	696	388	1,084	121	40	56	133	205	33	180	1,796
June .....	696	388	1,084	120	38	62	147	208	37	177	1,810
July .....	696	373	1,069	126	40	69	160	210	36	173	1,813
August .....	696	362	1,058	127	43	73	170	201	34	166	1,801
September .....	695	370	1,065	127	44	76	175	201	36	172	1,819
October .....	695	376	1,071	119	45	75	168	203	37	167	1,810
November .....	695	379	1,074	118	41	73	158	215	37	167	1,810
December .....	695	365	1,061	135	40	68	141	231	34	167	1,808
2013 January .....	696	378	1,073	131	40	56	121	234	35	177	1,812
February .....	696	385	1,081	122	41	47	108	227	38	175	1,791
March .....	696	392	1,088	119	40	41	103	225	37	182	1,793
April .....	696	396	1,092	118	41	42	111	221	40	183	1,807
May .....	696	392	1,088	122	41	48	127	222	39	179	1,817
June .....	696	376	1,072	122	40	55	142	225	37	178	1,818
July .....	696	367	1,063	126	39	60	153	223	38	176	1,818
August .....	696	363	1,059	129	39	65	168	217	35	172	1,821
September .....	696	371	1,067	129	41	68	172	219	36	168	1,832
October .....	696	384	1,080	117	39	62	159	214	36	167	1,812
November .....	696	377	1,072	121	37	56	138	217	36	170	1,792
December .....	696	358	1,054	127	37	45	113	228	38	163	1,760
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	R 394	R 1,085	R 122	39	47	125	R 218	38	R 182	R 1,809
June .....	E 691	E 384	E 1,075	E 122	E 36	E 58	RF 145	E 214	E 37	RE 184	E 1,812
July .....	E 691	E 366	E 1,057	E 125	E 34	E 68	F 165	E 214	E 35	E 182	E 1,812

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

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

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

<sup>d</sup> All crude oil stocks other than those in "SPR."

<sup>e</sup> Beginning in 1981, includes stocks of Alaskan crude oil in transit.

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

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

<sup>h</sup> Includes propylene.

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

<sup>j</sup> Asphalt and road oil, aviation gasoline blending components, kerosene,

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

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

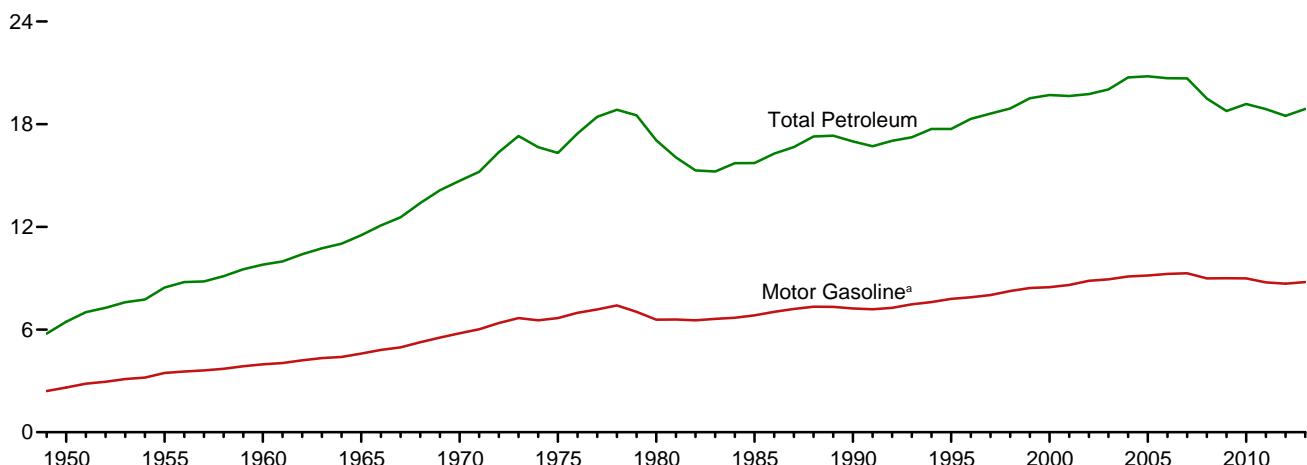
Notes: • Stocks are at end of period. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

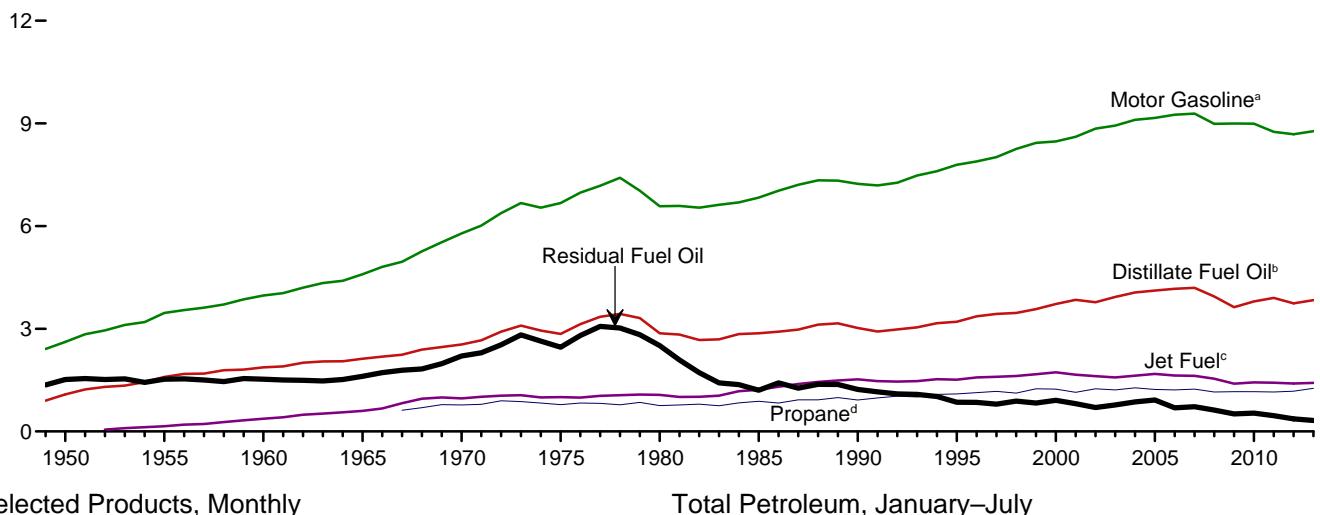
Sources: • **1949–1975:** Bureau of Mines, Mineral Industry Surveys, *Petroleum Statement, Annual*, annual reports. • **1976–1980:** U.S. Energy Information Administration (EIA), Energy Data Reports, *Petroleum Statement, Annual*, annual reports. • **1981–2012:** EIA, *Petroleum Supply Annual*, annual reports. • **2013 and 2014:** EIA, *Petroleum Supply Monthly*, monthly reports; and, for the current two months, *Weekly Petroleum Status Report* data system, Short-Term Integrated Forecasting System, and *Monthly Energy Review* data system calculations.

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

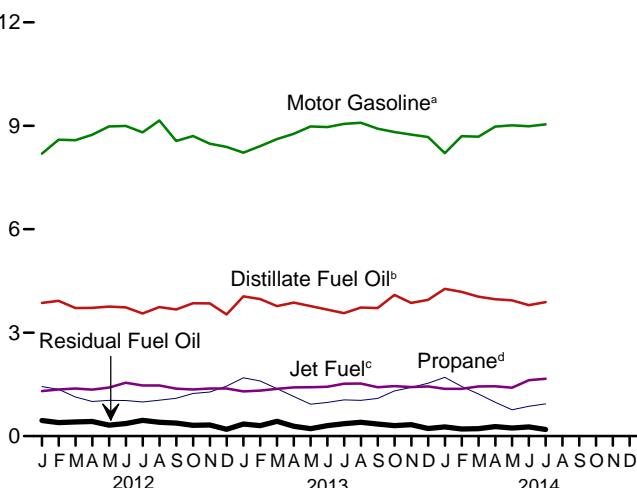
Total Petroleum and Motor Gasoline, 1949–2013



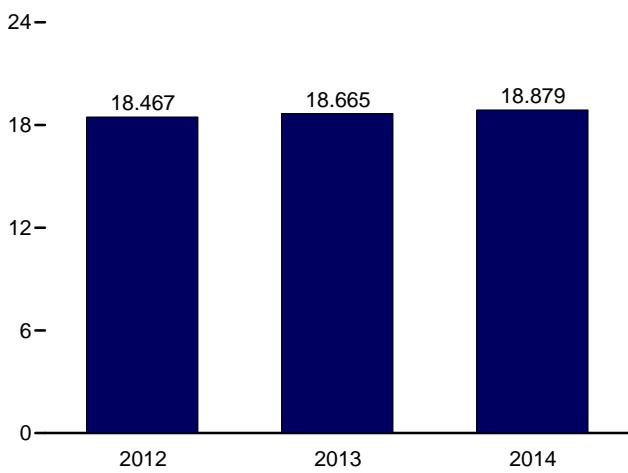
Selected Products, 1949–2013



Selected Products, Monthly



Total Petroleum, January–July



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

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

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

<sup>d</sup> Includes propylene.

Note: SPR=Strategic Petroleum Reserve.

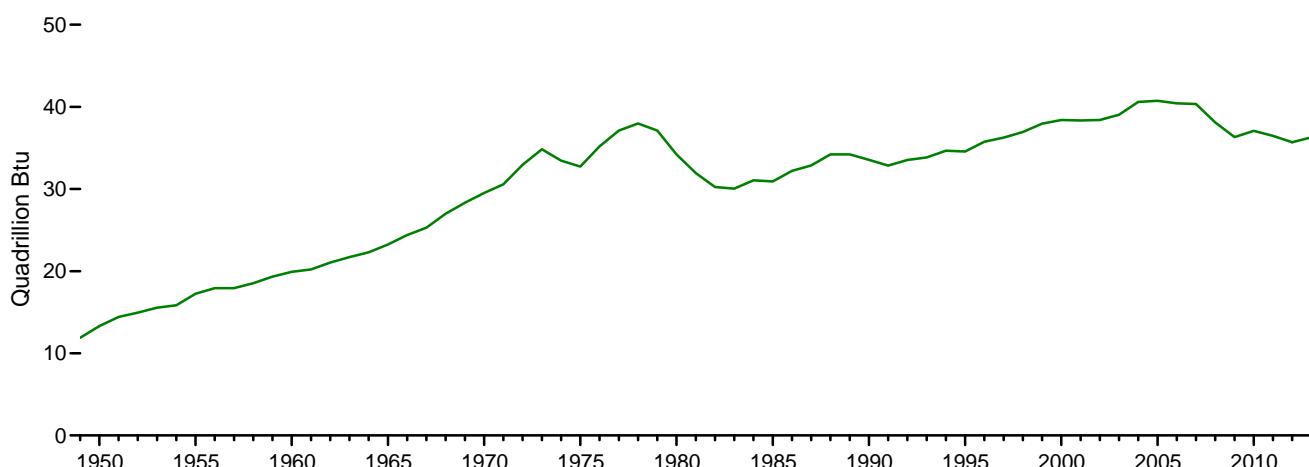
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.

Source: Table 3.5.

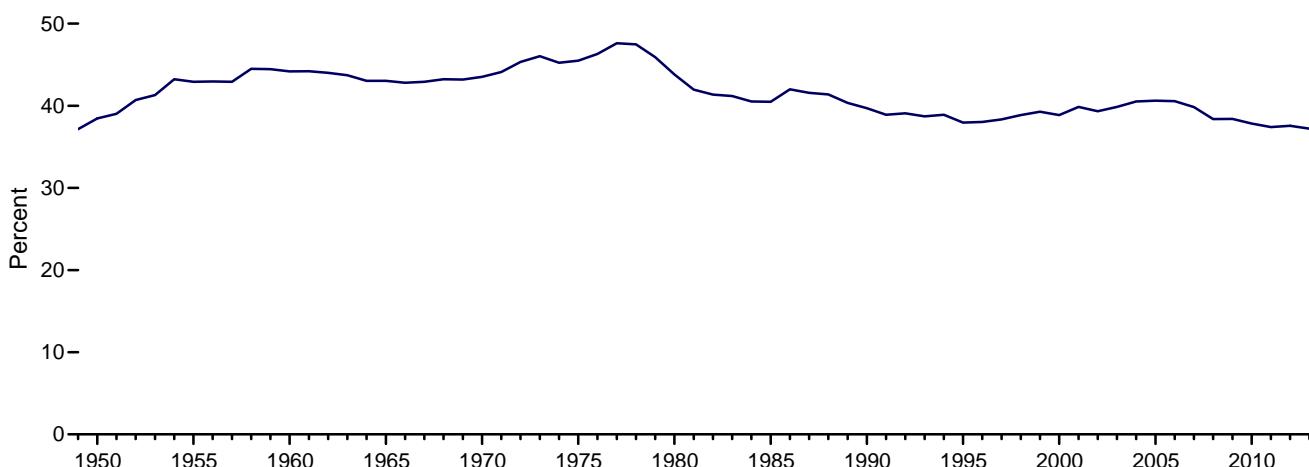


### Figure 3.6 Heat Content of Petroleum Products Supplied by Type

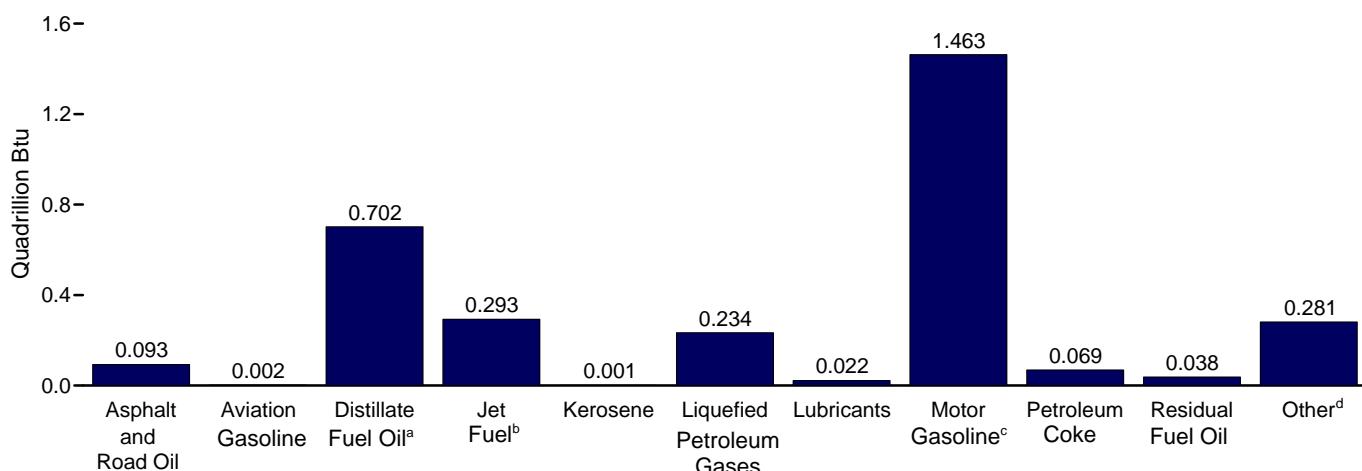
Total, 1949–2013



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



By Product, July 2014



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

<sup>d</sup> All petroleum products not separately displayed.  
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#petroleum>.

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

Sources: Tables 1.1 and 3.6.

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

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

	Asphalt and Road Oil	Aviation Gasoline	Distillate Fuel Oil <sup>b</sup>	Jet Fuel <sup>c</sup>	Kerosene	LPG <sup>a</sup>		Lubricants	Motor Gasoline <sup>e</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>f</sup>	Total
						Propane <sup>d</sup>	Total						
1950 Total .....	435	199	2,300	( c )	668	NA	343	236	5,015	90	3,482	546	13,315
1955 Total .....	615	354	3,385	301	662	NA	592	258	6,640	147	3,502	798	17,255
1960 Total .....	734	298	3,992	739	563	NA	912	259	7,631	328	3,517	947	19,919
1965 Total .....	890	222	4,519	1,215	553	NA	1,232	286	8,806	444	3,691	1,390	23,246
1970 Total .....	1,082	100	5,401	1,973	544	1,086	1,689	301	11,091	465	5,057	1,817	29,521
1975 Total .....	1,014	71	6,061	2,047	329	1,097	1,807	304	12,798	542	5,649	2,109	32,732
1980 Total .....	962	64	6,110	2,190	329	1,059	1,976	354	12,648	522	5,772	3,278	34,205
1985 Total .....	1,029	50	6,098	2,497	236	1,236	2,103	322	13,098	582	2,759	2,152	30,925
1990 Total .....	1,170	45	6,422	3,129	88	1,284	2,059	362	13,872	745	2,820	2,839	33,552
1995 Total .....	1,178	40	6,818	3,132	112	1,534	2,512	346	14,825	802	1,955	2,837	34,556
2000 Total .....	1,276	36	7,935	3,580	140	1,734	2,945	369	16,155	895	2,091	2,979	38,402
2001 Total .....	1,257	35	8,179	3,426	150	1,598	2,697	338	16,373	961	1,861	3,056	38,333
2002 Total .....	1,240	34	8,028	3,340	90	1,747	2,852	334	16,819	1,018	1,605	3,040	38,400
2003 Total .....	1,220	30	8,349	3,265	113	1,701	2,748	309	16,981	1,000	1,772	3,264	39,051
2004 Total .....	1,304	31	8,652	3,383	133	1,791	2,824	313	17,379	1,156	1,990	3,428	40,593
2005 Total .....	1,323	35	8,755	3,475	144	1,721	2,682	312	17,444	1,133	2,111	3,318	40,732
2006 Total .....	1,261	33	8,864	3,379	111	1,701	2,700	303	17,622	1,148	1,581	3,416	40,420
2007 Total .....	1,197	32	8,921	3,358	67	1,729	2,733	313	17,689	1,077	1,659	3,313	40,358
2008 Total .....	1,012	28	8,411	3,193	30	1,620	2,574	291	17,168	1,022	1,432	2,941	38,101
2009 Total .....	873	27	7,720	2,883	36	1,624	2,664	262	17,135	938	1,173	2,611	36,321
2010 Total .....	878	27	8,080	2,963	41	1,624	2,821	291	17,127	826	1,228	2,800	37,082
2011 Total .....	859	27	8,289	2,950	25	1,614	2,839	276	16,670	794	1,058	2,676	36,464
2012 January .....	41	2	697	230	1	171	274	23	1,325	75	88	221	2,978
February .....	42	2	663	222	4	151	252	24	1,301	53	72	208	2,843
March .....	48	2	671	243	1	135	245	21	1,388	59	80	208	2,967
April .....	65	2	650	230	(s)	116	222	23	1,369	62	80	184	2,886
May .....	79	3	678	248	1	123	228	23	1,453	72	62	200	3,046
June .....	91	2	652	263	(s)	119	214	20	1,408	70	69	212	3,000
July .....	95	3	642	258	(s)	118	223	20	1,425	64	89	219	3,040
August .....	102	2	676	258	(s)	124	233	21	1,481	77	78	217	3,145
September .....	89	2	642	234	1	126	227	19	1,340	68	71	176	2,869
October .....	77	2	696	238	1	147	258	21	1,408	58	61	236	3,054
November .....	56	2	672	235	1	147	255	22	1,328	68	61	226	2,926
December .....	41	1	637	243	(s)	173	282	17	1,357	68	38	252	2,937
Total .....	827	25	7,977	2,901	11	1,649	2,912	254	16,584	794	849	2,558	35,691
2013 January .....	46	2	732	228	2	201	308	24	1,330	69	68	218	3,025
February .....	39	1	648	210	1	171	277	21	1,229	47	53	204	2,732
March .....	49	2	681	241	3	164	278	24	1,394	57	84	195	3,006
April .....	59	2	676	241	1	132	240	20	1,372	53	54	217	2,934
May .....	61	2	681	249	(s)	110	223	24	1,453	67	42	236	3,039
June .....	82	2	641	243	(s)	113	214	26	1,404	73	57	233	2,975
July .....	93	3	644	267	(s)	125	244	22	1,465	67	71	249	3,125
August .....	95	2	673	268	(s)	123	235	22	1,470	78	79	213	3,136
September .....	93	2	649	241	1	126	233	23	1,396	71	66	257	3,032
October .....	78	2	739	255	1	156	276	22	1,427	61	59	227	3,147
November .....	51	2	675	242	1	162	289	18	1,369	78	62	264	3,052
December .....	37	1	714	253	3	183	309	21	1,403	57	43	250	3,090
Total .....	782	22	8,154	2,937	13	1,766	3,125	267	16,714	777	738	2,764	36,294
2014 January .....	36	2	771	241	3	203	325	20	1,328	81	52	206	3,065
February .....	38	1	682	218	1	155	260	20	1,271	50	37	210	2,787
March .....	45	2	731	253	(s)	145	261	26	1,405	42	42	210	3,017
April .....	56	2	694	246	(s)	113	228	21	1,406	59	52	214	2,978
May .....	R 72	2	R 711	R 247	R (s)	R 91	R 207	R 25	R 1,459	R 70	R 46	R 207	R 3,044
June .....	F 91	F 2	E 664	E 276	F 1	E 100	RF 215	F 22	E 1,407	F 69	E 50	RE 177	E 2,973
July .....	F 93	F 2	E 702	E 293	F 1	E 111	F 234	F 22	E 1,463	F 69	E 38	E 281	E 3,198
7-Month Total .....	E 432	E 13	E 4,954	E 1,774	E 7	E 918	E 1,729	E 155	E 9,738	E 440	E 317	E 1,504	E 21,062
2013 7-Month Total .....	428	14	4,704	1,678	7	1,016	1,783	161	9,647	433	429	1,553	20,837
2012 7-Month Total .....	462	16	4,653	1,693	9	932	1,659	153	9,670	456	540	1,452	20,762

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

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

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

<sup>d</sup> Includes propylene.

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

<sup>f</sup> Pentanes plus, petrochemical feedstocks, still gas (refinery gas), waxes, and miscellaneous products. Beginning in 1964, also includes special naphthas. Beginning in 1981, also includes negative barrels per day of distillate and residual fuel oil reclassified as unfinished oils, and other products (from both primary and secondary supply) reclassified as gasoline blending components.

Beginning in 1983, also includes crude oil burned as fuel. Beginning in 2005, also includes naphtha-type jet fuel.

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

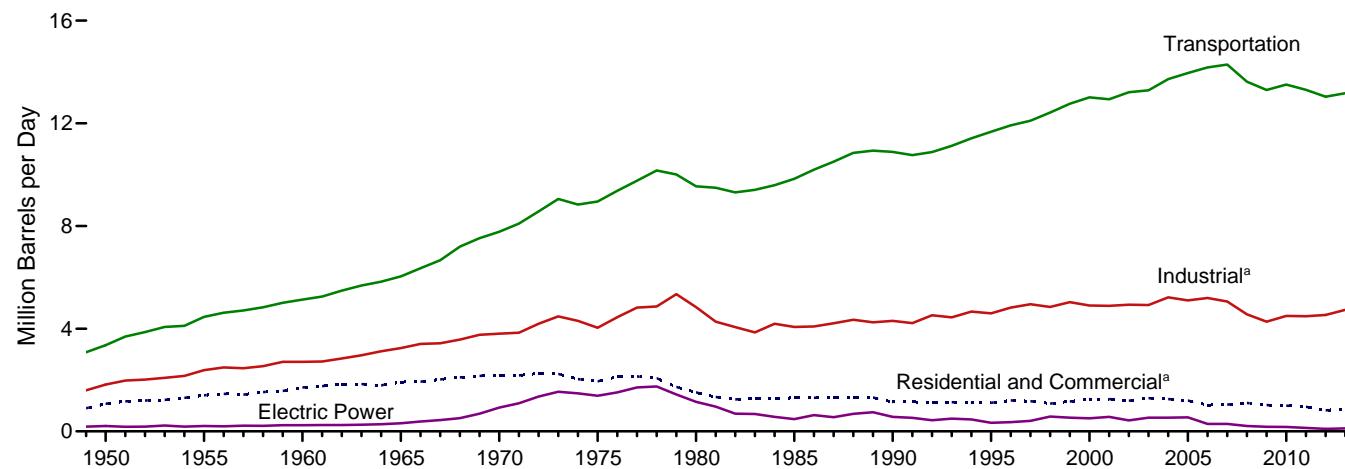
Notes: • Petroleum products supplied is an approximation of petroleum consumption and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section. • Totals may not equal sum of components due to independent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

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

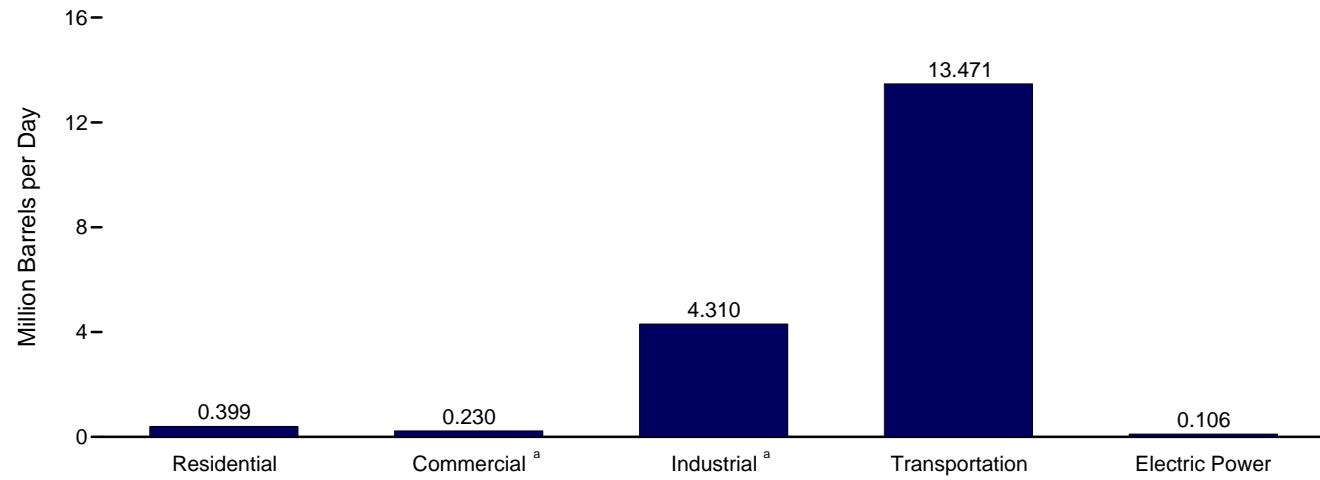
Sources: See end of section.

**Figure 3.7 Petroleum Consumption by Sector**

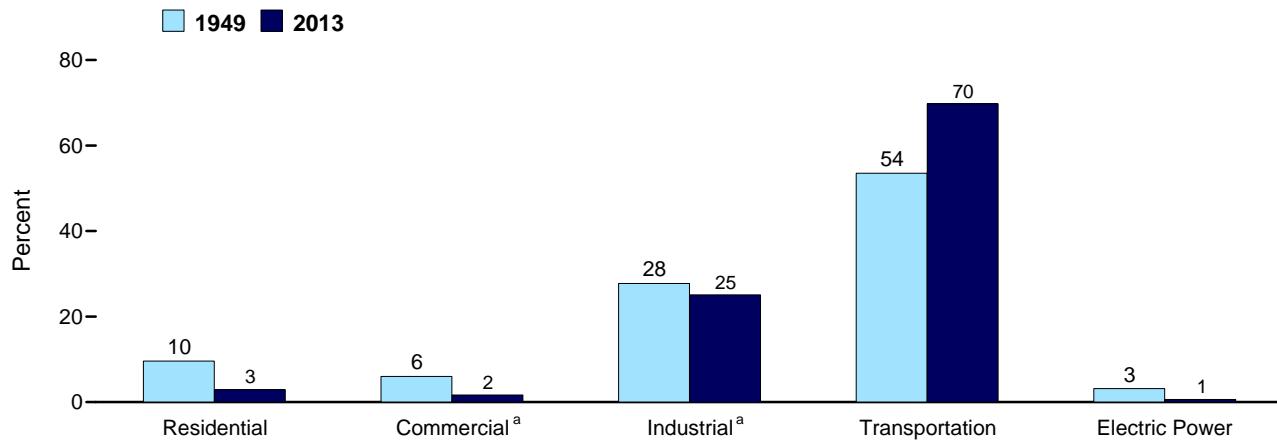
By Sector, 1949–2013



By Sector, May 2014



Sector Shares, 1949 and 2013



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

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

**Table 3.7a Petroleum Consumption: Residential and Commercial Sectors**

(Thousand Barrels per Day)

	Residential Sector				Commercial Sector <sup>a</sup>						
	Distillate Fuel Oil	Kero-sene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kero-sene	Liquefied Petroleum Gases	Motor Gasoline <sup>b</sup>	Petroleum 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	22	(s)	23	434
February .....	319	19	310	648	235	3	106	23	(s)	19	387
March .....	259	5	284	548	191	1	97	23	(s)	15	328
April .....	190	1	267	458	140	(s)	91	24	(s)	11	266
May .....	188	6	265	459	138	1	91	24	0	11	266
June .....	195	1	259	455	143	(s)	89	24	0	12	268
July .....	182	(s)	262	443	134	(s)	90	24	(s)	11	258
August .....	228	(s)	271	500	168	(s)	93	25	(s)	14	300
September .....	184	3	273	460	135	(s)	94	23	(s)	11	264
October .....	163	2	298	463	120	(s)	102	23	(s)	10	256
November .....	215	2	304	521	158	(s)	104	23	(s)	13	299
December .....	238	2	324	564	176	(s)	111	23	(s)	14	324
Average .....	228	4	286	518	168	1	98	23	(s)	14	304
2013 January .....	434	6	352	792	320	1	120	22	(s)	22	485
February .....	446	5	350	801	328	1	120	23	(s)	22	494
March .....	350	10	317	677	257	2	109	23	(s)	17	409
April .....	271	3	285	559	200	1	98	24	(s)	14	335
May .....	171	2	259	432	126	(s)	89	24	0	9	248
June .....	125	2	257	384	92	(s)	88	24	0	6	211
July .....	122	1	282	405	90	(s)	97	24	(s)	6	217
August .....	158	2	272	432	116	(s)	93	24	(s)	8	242
September .....	178	3	282	463	131	(s)	96	24	(s)	9	261
October .....	128	3	319	449	94	(s)	109	24	(s)	6	234
November .....	201	2	344	547	148	(s)	118	24	(s)	10	300
December .....	240	14	355	609	177	2	122	23	(s)	12	336
Average .....	234	4	306	544	172	1	105	24	(s)	12	313
2014 January .....	272	13	370	655	200	2	127	22	(s)	14	365
February .....	334	4	330	668	246	1	113	23	(s)	17	400
March .....	270	(s)	302	572	199	(s)	104	23	(s)	13	340
April .....	R 135	1	273	R 410	R 100	(s)	94	24	(s)	R 7	R 225
May .....	156	1	243	399	115	(s)	83	24	(s)	8	230
5-Month Average ....	232	4	303	539	171	1	104	23	(s)	12	311
2013 5-Month Average ....	333	5	312	650	245	1	107	23	(s)	17	393
2012 5-Month Average ....	267	7	288	562	197	1	99	23	(s)	16	336

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

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

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

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

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

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

Sources: See end of section.

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

	Industrial Sector <sup>a</sup>									Total
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>b</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>c</sup>	
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	122	338	38	1,253	4,777
February .....	220	808	5	1,994	71	128	250	33	1,238	4,747
March .....	234	631	1	1,825	57	128	288	35	1,160	4,358
April .....	327	619	(s)	1,715	64	130	317	36	1,067	4,275
May .....	383	598	1	1,705	63	134	351	27	1,128	4,389
June .....	455	513	(s)	1,665	55	134	347	28	1,219	4,417
July .....	464	393	(s)	1,683	55	131	304	36	1,228	4,293
August .....	497	454	(s)	1,746	56	136	368	33	1,221	4,510
September .....	445	552	1	1,757	55	127	332	31	1,010	4,310
October .....	374	699	1	1,917	58	129	272	27	1,331	4,808
November .....	282	722	1	1,954	62	126	338	27	1,309	4,821
December .....	201	524	(s)	2,084	47	125	327	15	1,408	4,731
Average .....	340	602	1	1,841	59	129	319	30	1,215	4,536
2013 January .....	223	751	2	2,262	65	122	315	28	1,220	4,989
February .....	212	619	1	2,251	64	125	229	25	1,259	4,787
March .....	237	533	3	2,042	65	128	255	35	1,095	4,393
April .....	295	592	1	1,836	56	130	245	23	1,259	4,437
May .....	294	592	(s)	1,666	67	134	293	18	1,327	4,391
June .....	410	516	(s)	1,656	72	133	333	25	1,362	4,508
July .....	451	427	(s)	1,816	61	135	289	28	1,376	4,584
August .....	464	486	(s)	1,753	61	135	345	33	1,191	4,467
September .....	466	548	1	1,812	64	133	327	28	1,502	4,881
October .....	378	862	1	2,050	60	131	266	25	1,257	5,030
November .....	257	714	1	2,212	51	130	385	27	1,538	5,316
December .....	179	758	4	2,284	58	129	246	17	1,383	5,058
Average .....	323	617	1	1,969	62	130	294	26	1,313	4,736
2014 January .....	177	992	3	2,384	55	122	365	18	1,143	5,260
February .....	205	863	1	2,126	60	129	238	16	1,301	4,940
March .....	218	782	(s)	1,944	71	129	162	16	1,168	4,490
April .....	282	R 810	(s)	1,757	59	134	281	23	1,225	R 4,571
May .....	350	717	(s)	1,561	68	134	316	19	1,145	4,310
5-Month Average ....	247	832	1	1,952	63	130	273	19	1,194	4,711
2013 5-Month Average ....	253	618	1	2,008	63	128	268	26	1,231	4,597
2012 5-Month Average ....	273	674	2	1,855	63	128	309	33	1,169	4,508

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

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

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

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

day.

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

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

Sources: See end of section.

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

	Transportation Sector							Electric Power Sector <sup>a</sup>				
	Aviation Gasoline	Distillate Fuel Oil <sup>b</sup>	Jet Fuel <sup>c</sup>	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>d</sup>	Residual Fuel Oil	Total	Distillate Fuel Oil <sup>e</sup>	Petroleum Coke	Residual Fuel Oil <sup>f</sup>	Total
1950 Average .....	108	226	(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	8,047	357	12,267	27	65	34	126
February .....	11	2,538	1,351	29	67	8,447	314	12,757	23	55	27	105
March .....	14	2,614	1,381	26	54	8,431	333	12,853	20	29	29	77
April .....	14	2,748	1,350	25	61	8,587	348	13,133	23	28	28	79
May .....	17	2,804	1,409	25	59	8,821	251	13,385	28	34	28	91
June .....	13	2,852	1,546	24	52	8,838	279	13,605	29	38	45	112
July .....	20	2,818	1,468	24	52	8,656	359	13,397	30	41	52	123
August .....	13	2,869	1,470	25	53	8,993	317	13,741	24	43	38	105
September .....	15	2,782	1,378	25	52	8,410	305	12,966	21	42	29	92
October .....	14	2,848	1,353	28	55	8,548	243	13,088	22	37	31	90
November .....	10	2,728	1,381	28	59	8,334	255	12,795	24	40	28	92
December .....	9	2,564	1,381	30	45	8,241	138	12,408	27	38	28	93
Average .....	14	2,719	1,398	27	56	8,530	291	13,034	25	41	33	99
2013 January .....	11	2,517	1,297	33	62	8,074	251	12,244	32	54	50	136
February .....	8	2,558	1,320	32	61	8,264	220	12,464	24	52	37	113
March .....	12	2,611	1,369	29	61	8,465	350	12,897	21	51	28	100
April .....	12	2,787	1,414	26	53	8,612	218	13,122	22	49	29	99
May .....	15	2,856	1,416	24	63	8,825	161	13,360	26	66	28	120
June .....	15	2,912	1,431	24	68	8,807	240	13,497	22	70	32	124
July .....	16	2,896	1,519	26	57	8,896	279	13,690	34	68	48	150
August .....	14	2,945	1,525	25	57	8,929	329	13,824	22	70	33	125
September .....	11	2,834	1,419	26	61	8,761	282	13,394	22	66	30	117
October .....	11	2,992	1,452	30	57	8,666	246	13,454	19	59	28	106
November .....	14	2,776	1,421	32	48	8,593	267	13,152	24	48	27	99
December .....	7	2,744	1,439	33	55	8,522	150	12,950	32	57	39	128
Average .....	12	2,787	1,419	28	59	8,620	250	13,175	25	59	34	118
2014 January .....	10	2,649	1,371	34	52	8,062	100	12,278	159	67	138	363
February .....	7	2,692	1,373	31	57	8,546	119	12,824	46	60	55	162
March .....	12	2,748	1,440	28	67	8,532	130	12,956	47	64	57	168
April .....	11	R 2,907	1,446	25	56	8,821	R 218	R 13,484	19	46	28	93
May .....	14	2,925	1,404	23	64	8,857	184	13,471	25	58	24	106
5-Month Average ....	11	2,785	1,407	28	59	8,562	150	13,003	60	59	61	179
2013 5-Month Average ....	12	2,667	1,364	29	60	8,450	240	12,822	25	54	35	114
2012 5-Month Average ....	14	2,632	1,360	27	60	8,466	321	12,879	24	42	29	95

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

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

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

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

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

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

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.

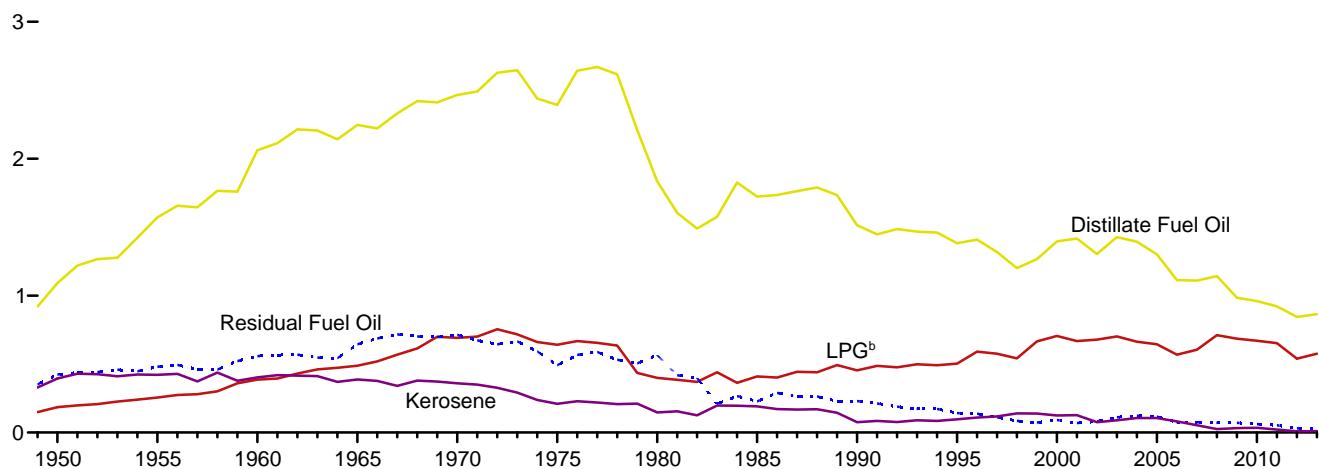
• Geographic coverage is the 50 states and the District of Columbia.

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.

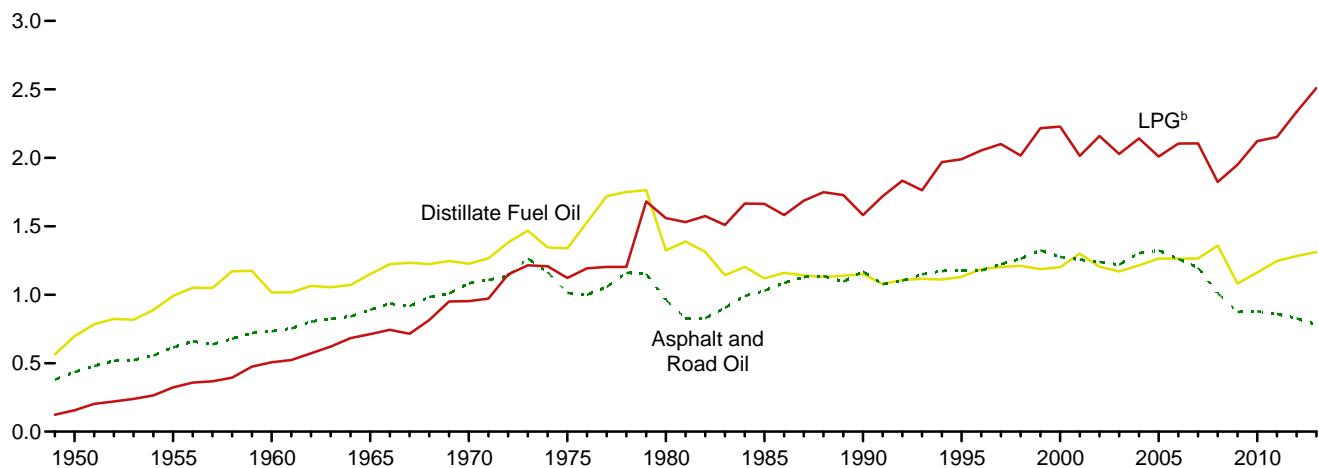
Sources: See end of section.

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

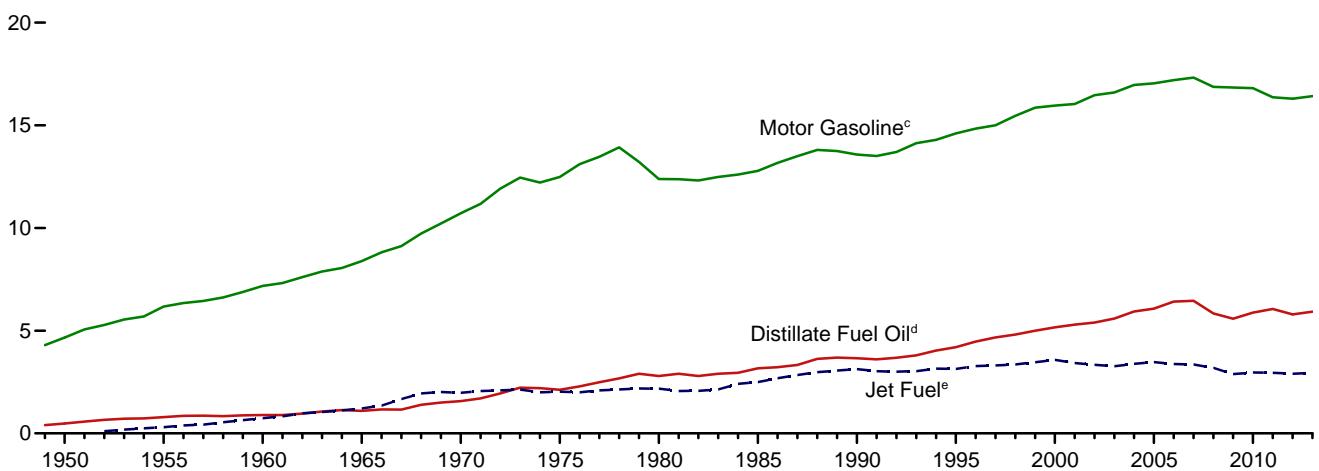
Residential and Commercial<sup>a</sup> Sectors, Selected Products



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



Transportation Sector, Selected Products



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

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

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

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

sel) blended into distillate fuel oil.

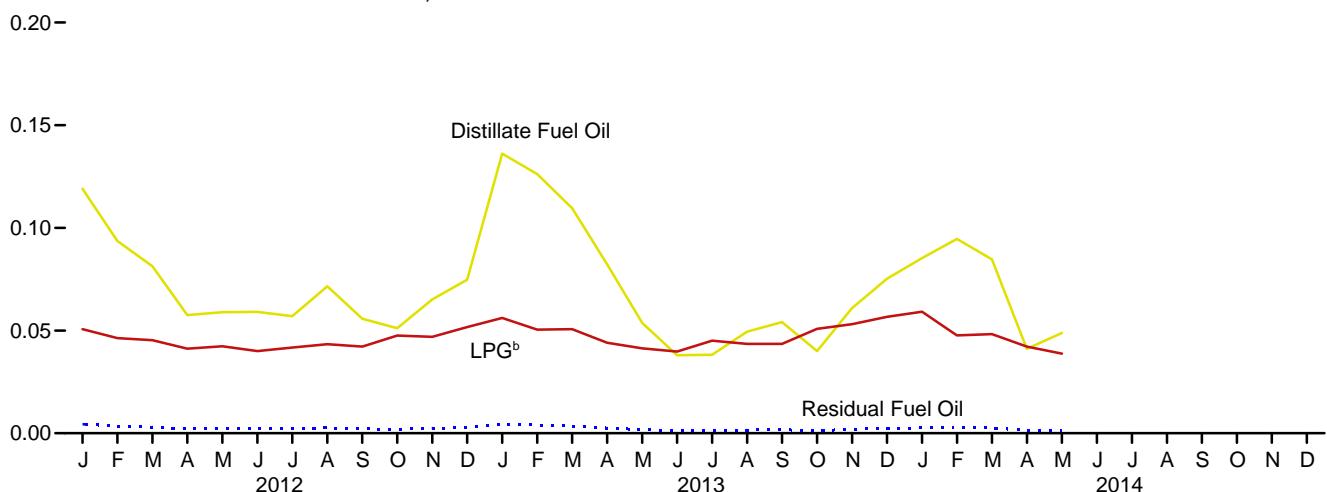
<sup>e</sup> Beginning in 2005, includes kerosene-type jet fuel only.

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

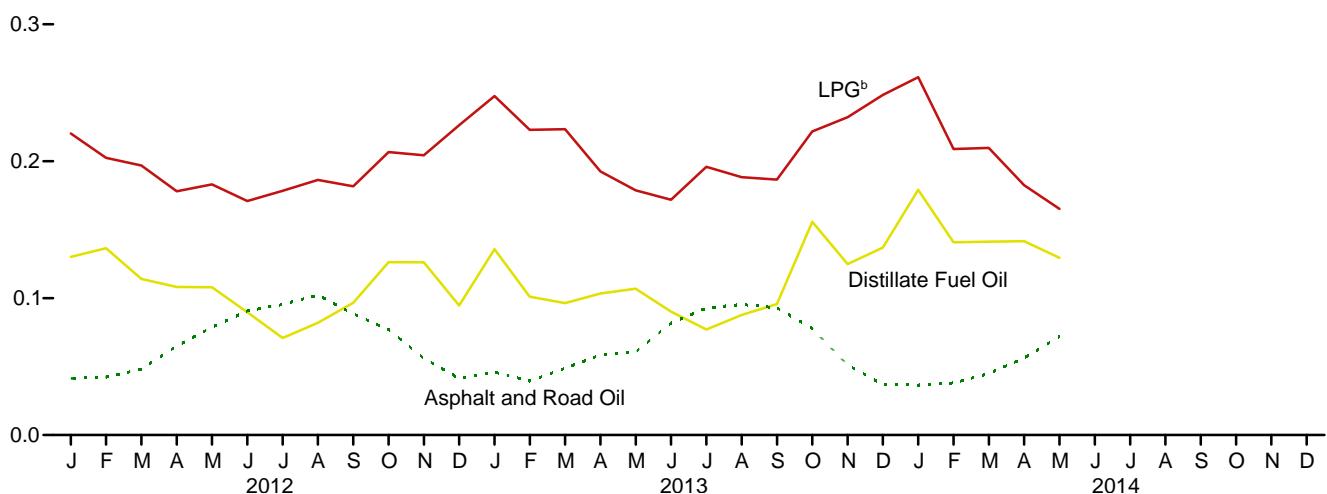
Sources: Tables 3.8a–3.8c.

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

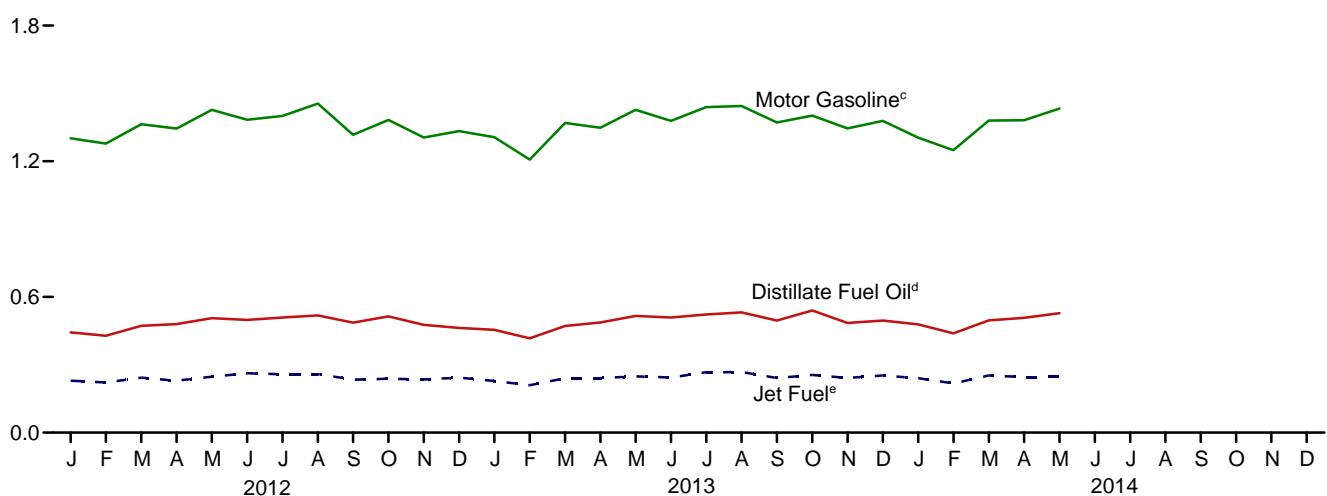
Residential and Commercial<sup>a</sup> Sectors, Selected Products



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



Transportation Sector, Selected Products



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

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

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

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

distillate fuel oil.

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

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

Sources: Tables 3.8a–3.8c.

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

	Residential Sector				Commercial Sector <sup>a</sup>						
	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Total	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Motor Gasoline <sup>b</sup>	Petroleum Coke	Residual Fuel Oil	Total
1950 Total .....	829	347	146	1,322	262	47	39	100	NA	424	872
1955 Total .....	1,194	371	202	1,767	377	51	54	133	NA	480	1,095
1960 Total .....	1,568	354	305	2,227	494	48	81	67	NA	559	1,248
1965 Total .....	1,713	334	385	2,432	534	54	103	77	NA	645	1,413
1970 Total .....	1,878	298	549	2,725	587	61	143	86	NA	714	1,592
1975 Total .....	1,807	161	512	2,479	587	49	129	89	NA	492	1,346
1980 Total .....	1,316	107	311	1,734	518	41	88	107	NA	565	1,318
1985 Total .....	1,092	159	314	1,565	631	33	95	96	NA	228	1,083
1990 Total .....	978	64	352	1,394	536	12	102	111	0	230	991
1995 Total .....	905	74	395	1,374	479	22	109	18	(s)	141	769
2000 Total .....	905	95	555	1,554	491	30	150	45	(s)	92	807
2001 Total .....	908	95	526	1,529	508	31	143	37	(s)	70	790
2002 Total .....	860	60	537	1,457	444	16	141	45	(s)	80	726
2003 Total .....	932	70	544	1,547	496	19	157	60	(s)	111	843
2004 Total .....	924	85	512	1,520	470	20	152	45	(s)	122	810
2005 Total .....	854	84	513	1,451	447	22	131	46	(s)	116	762
2006 Total .....	712	66	446	1,224	401	15	123	49	(s)	75	664
2007 Total .....	726	44	484	1,254	384	9	121	61	(s)	75	651
2008 Total .....	756	21	553	1,330	387	4	158	46	(s)	71	666
2009 Total .....	587	28	547	1,161	398	4	139	53	(s)	71	666
2010 Total .....	566	29	530	1,125	394	5	140	53	(s)	62	655
2011 Total .....	527	19	506	1,052	395	3	146	45	(s)	54	644
2012 January .....	69	1	38	107	50	(s)	13	4	(s)	4	72
February .....	54	3	34	92	40	(s)	12	4	(s)	3	59
March .....	47	1	34	81	34	(s)	12	4	(s)	3	53
April .....	33	(s)	31	64	24	(s)	11	4	(s)	2	41
May .....	34	1	32	66	25	(s)	11	4	0	2	42
June .....	34	(s)	30	64	25	(s)	10	4	0	2	41
July .....	33	(s)	31	64	24	(s)	11	4	(s)	2	41
August .....	41	(s)	32	74	30	(s)	11	4	(s)	3	48
September .....	32	1	31	64	24	(s)	11	4	(s)	2	40
October .....	29	(s)	35	65	22	(s)	12	4	(s)	2	40
November .....	38	(s)	35	73	28	(s)	12	4	(s)	2	46
December .....	43	(s)	39	82	32	(s)	13	4	(s)	3	51
Total .....	487	8	402	896	358	1	138	45	(s)	31	574
2013 January .....	78	1	42	121	58	(s)	14	4	(s)	4	80
February .....	73	1	38	111	54	(s)	13	3	(s)	4	74
March .....	63	2	38	103	46	(s)	13	4	(s)	3	67
April .....	47	1	33	81	35	(s)	11	4	(s)	3	52
May .....	31	(s)	31	62	23	(s)	11	4	0	2	39
June .....	22	(s)	30	52	16	(s)	10	4	0	1	31
July .....	22	(s)	34	56	16	(s)	12	4	(s)	1	33
August .....	28	(s)	32	61	21	(s)	11	4	(s)	2	38
September .....	31	(s)	32	64	23	(s)	11	4	(s)	2	40
October .....	23	(s)	38	61	17	(s)	13	4	(s)	1	35
November .....	35	(s)	40	75	26	(s)	14	4	(s)	2	45
December .....	43	2	42	88	32	(s)	14	4	(s)	2	53
Total .....	497	9	428	935	366	1	147	45	(s)	27	587
2014 January .....	49	2	44	95	36	(s)	15	4	(s)	3	58
February .....	55	1	35	91	40	(s)	12	3	(s)	3	59
March .....	49	(s)	36	85	36	(s)	12	4	(s)	3	55
April .....	(s)	31	17	(s)	11	4	(s)	1	33		
May .....	28	(s)	29	57	21	(s)	10	4	(s)	2	36
5-Month Total .....	204	3	176	383	150	1	60	19	(s)	11	241
2013 5-Month Total .....	293	5	181	478	215	1	62	18	(s)	16	312
2012 5-Month Total .....	236	6	168	410	174	1	58	18	(s)	15	266

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

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

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

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

and is synonymous with the term "petroleum consumption" in Tables 3.7a–3.8c. See Note 1, "Petroleum Products Supplied and Petroleum Consumption," at end of section.

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

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

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

Sources: See end of section.

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

	Industrial Sector <sup>a</sup>									Total
	Asphalt and Road Oil	Distillate Fuel Oil	Kerosene	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>b</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>c</sup>	
1950 Total .....	435	698	274	156	94	251	90	1,416	546	3,960
1955 Total .....	615	991	241	323	103	332	147	1,573	798	5,123
1960 Total .....	734	1,016	161	507	107	381	328	1,584	947	5,766
1965 Total .....	890	1,150	165	712	137	342	444	1,582	1,390	6,813
1970 Total .....	1,082	1,226	185	953	155	288	446	1,624	1,817	7,776
1975 Total .....	1,014	1,339	119	1,123	149	223	540	1,509	2,109	8,127
1980 Total .....	962	1,324	181	1,559	182	158	516	1,349	3,278	9,509
1985 Total .....	1,029	1,119	44	1,664	166	218	575	748	2,152	7,714
1990 Total .....	1,170	1,150	12	1,582	186	185	714	411	2,839	8,251
1995 Total .....	1,178	1,131	15	1,990	178	200	721	337	2,837	8,588
2000 Total .....	1,276	1,200	16	2,228	190	150	796	241	2,979	9,076
2001 Total .....	1,257	1,300	23	2,014	174	295	858	203	3,056	9,181
2002 Total .....	1,240	1,204	14	2,160	172	309	842	190	3,040	9,171
2003 Total .....	1,220	1,171	24	2,028	159	324	825	220	3,264	9,235
2004 Total .....	1,304	1,214	28	2,141	161	372	934	249	3,428	9,831
2005 Total .....	1,323	1,264	39	2,009	160	356	889	281	3,318	9,640
2006 Total .....	1,261	1,263	30	2,104	156	376	934	239	3,416	9,780
2007 Total .....	1,197	1,265	13	2,106	161	306	906	193	3,313	9,461
2008 Total .....	1,012	1,359	4	1,823	150	250	868	194	2,941	8,600
2009 Total .....	873	1,081	4	1,950	135	244	799	130	2,611	7,827
2010 Total .....	878	1,163	7	2,121	149	267	682	120	2,800	8,188
2011 Total .....	859	1,246	4	2,152	142	262	648	135	2,676	8,125
2012 January .....	41	130	(s)	220	12	20	63	7	221	715
February .....	42	136	1	203	13	19	44	6	208	671
March .....	48	114	(s)	197	11	21	54	7	208	659
April .....	65	108	(s)	178	12	20	57	7	184	631
May .....	79	108	(s)	183	12	22	66	5	200	674
June .....	91	90	(s)	171	10	21	63	5	212	662
July .....	95	71	(s)	178	10	21	57	7	219	659
August .....	102	82	(s)	186	11	22	69	6	217	695
September .....	89	97	(s)	182	10	20	60	6	176	638
October .....	77	126	(s)	207	11	21	51	5	236	734
November .....	56	126	(s)	204	11	20	61	5	226	710
December .....	41	95	(s)	226	9	20	61	3	252	707
Total .....	827	1,283	2	2,335	130	247	704	70	2,558	8,156
2013 January .....	46	136	(s)	248	12	20	59	5	218	743
February .....	39	101	(s)	223	11	18	39	4	204	640
March .....	49	96	(s)	223	12	21	48	7	195	651
April .....	59	103	(s)	193	10	20	44	4	217	651
May .....	61	107	(s)	179	13	22	55	3	236	675
June .....	82	90	(s)	172	13	21	60	5	233	675
July .....	93	77	(s)	196	11	22	54	6	249	708
August .....	95	88	(s)	188	11	22	64	6	213	689
September .....	93	96	(s)	187	12	21	59	5	257	729
October .....	78	156	(s)	222	11	21	50	5	227	770
November .....	51	125	(s)	232	9	20	70	5	264	777
December .....	37	137	1	248	11	21	46	3	250	754
Total .....	782	1,311	2	2,510	137	249	647	60	2,764	8,462
2014 January .....	36	179	1	261	10	20	68	3	206	785
February .....	38	141	(s)	209	10	19	40	3	210	670
March .....	45	141	(s)	210	13	21	30	3	210	673
April .....	56	R 142	(s)	183	11	21	51	4	214	R 681
May .....	72	129	(s)	165	13	22	59	4	207	670
5-Month Total .....	247	732	1	1,028	57	102	248	18	1,046	3,480
2013 5-Month Total .....	253	543	1	1,065	58	101	244	24	1,071	3,361
2012 5-Month Total .....	276	597	2	981	58	102	283	32	1,021	3,350

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

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

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

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

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

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

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

Sources: See end of section.

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

	Transportation Sector								Electric Power Sector <sup>a</sup>			
	Aviation Gasoline	Distillate Fuel Oil <sup>b</sup>	Jet Fuel <sup>c</sup>	Liquefied Petroleum Gases	Lubricants	Motor Gasoline <sup>d</sup>	Residual Fuel Oil	Total	Distillate Fuel Oil <sup>e</sup>	Petroleum Coke	Residual Fuel Oil <sup>f</sup>	Total
1950 Total .....	199	480	( <sup>c</sup> )	3	141	4,664	1,201	6,690	32	NA	440	472
1955 Total .....	354	791	301	13	155	6,175	1,009	8,799	32	NA	439	471
1960 Total .....	298	892	739	19	152	7,183	844	10,125	22	NA	530	553
1965 Total .....	222	1,093	1,215	32	149	8,386	770	11,866	29	NA	693	722
1970 Total .....	100	1,569	1,973	44	147	10,716	761	15,310	141	19	1,958	2,117
1975 Total .....	71	2,121	2,029	43	155	12,485	711	17,615	226	2	2,937	3,166
1980 Total .....	64	2,795	2,179	18	172	12,383	1,398	19,009	169	5	2,459	2,634
1985 Total .....	50	3,170	2,497	30	156	12,784	786	19,472	85	7	998	1,090
1990 Total .....	45	3,661	3,129	23	176	13,575	1,016	21,626	97	30	1,163	1,289
1995 Total .....	40	4,195	3,132	18	168	14,607	911	23,070	108	81	566	755
2000 Total .....	36	5,165	3,580	12	179	15,960	888	25,820	175	99	871	1,144
2001 Total .....	35	5,292	3,426	14	164	16,041	586	25,557	171	103	1,003	1,277
2002 Total .....	34	5,392	3,340	14	162	16,465	677	26,085	127	175	659	961
2003 Total .....	30	5,590	3,265	18	150	16,597	571	26,222	161	175	869	1,205
2004 Total .....	31	5,932	3,383	19	152	16,962	740	27,219	111	222	879	1,212
2005 Total .....	35	6,076	3,475	28	151	17,043	837	27,645	115	243	876	1,235
2006 Total .....	33	6,414	3,379	27	147	17,197	906	28,105	74	214	361	648
2007 Total .....	32	6,457	3,358	22	152	17,321	994	28,335	89	171	397	657
2008 Total .....	28	5,837	3,193	40	141	16,872	926	27,038	73	154	240	468
2009 Total .....	27	5,584	2,883	28	127	16,838	791	26,277	70	139	181	390
2010 Total .....	27	5,876	2,963	29	141	16,807	892	26,736	80	144	154	378
2011 Total .....	27	6,057	2,950	34	134	16,363	776	26,341	64	146	93	303
2012 January .....	2	443	230	3	11	1,302	70	2,061	5	12	7	24
February .....	2	429	222	3	12	1,278	57	2,003	4	10	5	18
March .....	2	472	243	3	10	1,364	65	2,159	4	5	6	15
April .....	2	480	230	3	11	1,344	66	2,136	4	5	5	14
May .....	3	506	248	3	11	1,427	49	2,247	5	6	6	17
June .....	2	498	263	3	10	1,384	53	2,212	5	7	9	20
July .....	3	509	258	3	10	1,400	70	2,253	5	8	10	23
August .....	2	518	258	3	10	1,455	62	2,308	4	8	7	20
September .....	2	486	234	3	9	1,317	57	2,109	4	8	6	17
October .....	2	514	238	3	10	1,383	47	2,198	4	7	6	17
November .....	2	477	235	3	11	1,305	48	2,080	4	7	5	17
December .....	1	463	243	4	8	1,333	27	2,079	5	7	6	18
Total .....	25	5,796	2,901	37	123	16,293	671	25,847	53	90	77	219
2013 January .....	2	454	228	4	12	1,306	49	2,055	6	10	10	26
February .....	1	417	210	3	10	1,208	39	1,888	4	9	6	19
March .....	2	471	241	4	11	1,369	68	2,167	4	9	6	19
April .....	2	487	241	3	10	1,348	41	2,132	4	9	6	18
May .....	2	516	249	3	12	1,428	31	2,241	5	12	5	23
June .....	2	509	243	3	12	1,379	45	2,194	4	13	6	22
July .....	3	523	267	3	11	1,439	54	2,300	6	13	9	28
August .....	2	532	268	3	11	1,445	64	2,325	4	13	6	24
September .....	2	495	241	3	11	1,372	53	2,177	4	12	6	21
October .....	2	540	255	4	11	1,402	48	2,261	3	11	5	20
November .....	2	485	242	4	9	1,345	50	2,137	4	9	5	18
December .....	1	495	253	4	10	1,379	29	2,172	6	11	8	24
Total .....	22	5,926	2,937	40	130	16,420	573	26,048	53	130	78	262
2014 January .....	2	478	241	4	10	1,304	19	2,059	29	12	27	68
February .....	1	439	218	3	10	1,249	21	1,941	7	10	10	27
March .....	2	496	253	3	13	1,380	25	2,173	8	12	11	32
April .....	2	R 508	246	3	10	1,381	41	R 2,191	3	8	5	17
May .....	2	528	247	3	12	1,433	36	2,261	4	11	5	20
5-Month Total .....	8	2,450	1,205	16	54	6,748	143	10,624	52	54	58	164
2013 5-Month Total .....	9	2,346	1,168	17	55	6,659	228	10,482	22	50	33	104
2012 5-Month Total .....	10	2,330	1,172	16	55	6,716	306	10,606	21	38	28	88

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

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

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

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

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

<sup>f</sup> Fuel oil nos. 5 and 6. Through 1979, data are for steam plant use of

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

R=Revised. NA=Not available.

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

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

Sources: See end of section.

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

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

#### Jet Fuel

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

### Liquefied Petroleum Gases (LPG) Total

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

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

### Motor Gasoline

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

### Other Petroleum Products

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

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

### Total Petroleum

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

## Tables 3.7a–3.7c Sources

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

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

1960–1972: EIA, State Energy Data System.

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

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

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

1981–2012: EIA, *Petroleum Statement Annual*, annual reports, and unpublished revisions.

2013 and 2014: EIA, *Petroleum Supply Monthly*, monthly reports.

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

### Asphalt and Road Oil

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

### Aviation Gasoline

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

### Distillate Fuel Oil

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

### Distillate Fuel Oil Consumed by the Electric Power Sector

See sources for Table 7.4b. For 1973–1979, electric utility consumption of distillate fuel oil is assumed to be the amount of petroleum (minus small amounts of kerosene and kerosene-type jet fuel deliveries) consumed in gas turbine and internal combustion plants. For 1980–2000, electric utility consumption of distillate fuel oil is assumed to be the amount of light oil (fuel oil nos. 1 and 2, plus small amounts of kerosene and jet fuel) consumed.

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

The aggregate end-use amount is total distillate fuel oil supplied minus the amount consumed by the electric power sector. The end-use total consumed annually is allocated to the individual end-use sectors (residential, commercial, industrial, and transportation) in proportion to each sector’s share of sales as reported in EIA’s *Fuel Oil and Kerosene Sales (Sales)* report series (DOE/EIA-0535), which is based primarily on data collected by Form EIA-821, “Annual Fuel Oil and Kerosene Sales Report”

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

Following are notes on the individual sector groupings:

Beginning in 1979, the residential sector sales total is directly from the Sales reports. Through 1978, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

Beginning in 1979, the commercial sector sales total is directly from the Sales reports. Through 1978, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares.

Beginning in 1979, the industrial sector sales total is the sum of the sales for industrial, farm, oil company, off-highway diesel, and all other uses. Through 1978, each year's sales subtotal of the heating plus industrial category is split into residential, commercial, and industrial (including farm) in proportion to the 1979 shares, and this estimated industrial portion is added to oil company, off-highway diesel, and all other uses.

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

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

Residential sector and commercial sector monthly consumption is estimated by allocating the annual estimates, which are described above, into the months in proportion to each month's share of the year's sales of No. 2 heating oil. (For each month of the current year, the residential and commercial consumption increase from the same month in the previous year is based on the percent increase in that month's No. 2 heating oil sales from the same month in the previous year.) The years' No. 2 heating oil sales totals are from the following sources: for 1973–1980, the Ethyl Corporation, *Monthly Report of Heating Oil Sales*; for 1981 and 1982, the American Petroleum Institute, *Monthly Report of Heating Oil Sales*; and for 1983 forward, EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.

The transportation highway use portion is allocated into the months in proportion to each month's share of the year's total sales for highway use as reported by the Federal Highway Administration's Table MF-25, "Private and Commercial Highway Use of Special Fuels by Months." Beginning in 1994, the sales-for-highway-use data are no longer available as a monthly series; the 1993 data are used for allocating succeeding year's totals into months.

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

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

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

#### **Jet Fuel**

Through 1982, small amounts of kerosene-type jet fuel were consumed by the electric power sector. Kerosene-type jet fuel deliveries to the electric power sector as reported on Form FERC-423 (formerly Form FPC-423) were used as estimates of this consumption. Through 2004, all remaining jet fuel (kerosene-type and naphtha-type) is assigned to the transportation sector. Beginning in 2005, kerosene-type jet fuel is assigned to the transportation sector, while naphtha-type jet fuel is classified under "Other Petroleum Products," which is assigned to the industrial sector.

#### **Kerosene**

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

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

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

Beginning in 1979, the industrial sector sales total is the sum of the sales for industrial, farm, and all other uses. Through 1978, each year's sales category called "heating" is allocated to the residential, commercial and industrial sectors in proportion to the 1979 shares, and the estimated industrial (including farm) portion is added to all other uses.

#### **Liquefied Petroleum Gases (LPG)**

The annual shares of LPG's total consumption that are estimated to be used by each sector are applied to each month's total LPG consumption to create monthly sector

consumption estimates. The annual sector shares are calculated as described below.

Sales of LPG to the residential and commercial sectors combined are converted from thousand gallons per year to thousand barrels per year and are assumed to be the annual consumption of LPG by the combined sectors. Beginning in 2003, residential sector LPG consumption is assumed to equal propane retail sales, with the remainder of the combined residential and commercial LPG consumption being assigned to the commercial sector. Through 2002, residential sector LPG consumption is based on the average of the state residential shares for 2003–2008, with the remainder of the combined residential and commercial LPG consumption being assigned to the commercial sector.

The quantity of LPG sold each year for consumption in internal combustion engines is allocated between the transportation and industrial sectors on the basis of data for special fuels used on highways published by the U.S. Department of Transportation, Federal Highway Administration, in *Highway Statistics*. The allocations of LPG sold for internal combustion engine use to the transportation sector range from a low of 20 percent (in 2001) to a high of 80 percent (in 2008).

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

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

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

1983: End-use consumption estimates for 1983 are based on 1982 end-use consumption because the collection of data under Form EIA-174 was discontinued after data year 1982.

1984 forward: American Petroleum Institute (API), "Sales of Natural Gas Liquids and Liquefied Refinery Gases," which is based on an LPG sales survey jointly sponsored by API, the Gas Processors Association, and the National Liquefied Petroleum Gas Association. EIA adjusts the data to remove quantities of pentanes plus and to estimate withheld values.

## **Lubricants**

The consumption of lubricants is allocated to the industrial and transportation sectors for all months according to proportions developed from annual sales of lubricants to the two

sectors from U.S. Department of Commerce, Bureau of the Census, *Current Industrial Reports*, "Sales of Lubricating and Industrial Oils and Greases." The 1973 shares are applied to 1973 and 1974; the 1975 shares are applied to 1975 and 1976; and the 1977 shares are applied to 1977 forward.

## **Motor Gasoline**

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

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

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

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

## **Petroleum Coke**

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

## **Residual Fuel Oil**

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

### **Residual Fuel Oil Consumed by the Electric Power Sector**

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

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

The aggregate end-use amount is total residual fuel oil supplied minus the amount consumed by the electric power sector. The end-use total consumed annually is allocated to the individual end-use sectors (commercial, industrial, and transportation) in proportion to each sector's share of sales as reported in EIA's *Fuel Oil and Kerosene Sales (Sales)* report series (DOE/EIA-535), which is based primarily on data collected by Form EIA-821, "Annual Fuel Oil and Kerosene Sales Report" (previously Form EIA-172). Shares for the current year are based on the most recent Sales report.

Following are notes on the individual sector groupings:

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

Beginning in 1979, industrial sales data are the sum of sales for industrial, oil company, and all other uses. Through 1978, each year's sales subtotal of the heating plus industrial category is allocated to the commercial and industrial sectors in proportion to the 1979 shares, and the estimated industrial portion is added to oil company and all other uses.

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

#### **Residual Fuel Oil Consumed by the End-Use Sectors, Monthly**

Commercial sector monthly consumption is estimated by allocating the annual estimates, which are described above, into the months in proportion to each month's share of the year's sales of No. 2 heating oil. (For each month of the current year, the consumption increase from the same month in the previous year is based on the percent increase in that month's No. 2 heating oil sales from the same month in the previous year.) The years' No. 2 heating oil sales totals are from the following sources: for 1973–1980, the Ethyl Corporation, *Monthly Report of Heating Oil Sales*; for 1981 and 1982, the American Petroleum Institute, *Monthly Report of Heating Oil Sales*; and for 1983 forward, EIA, Form EIA-782A, "Refiners'/Gas Plant Operators' Monthly Petroleum Product Sales Report," No. 2 Fuel Oil Sales to End Users and for Resale.

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

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

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

#### **Other Petroleum Products**

Consumption of all remaining petroleum products is assigned to the industrial sector. Other petroleum products include pentanes plus, petrochemical feedstocks,

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

### **Table 3.8a Sources**

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

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

#### **Liquefied Petroleum Gases (LPG)**

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

#### **Motor Gasoline**

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

#### **Total Petroleum**

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

### **Table 3.8b Sources**

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

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

#### **Liquefied Petroleum Gases (LPG)**

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

### **Motor Gasoline**

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

### **Other Petroleum Products**

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

### **Total Petroleum**

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

## **Table 3.8c Sources**

### **Aviation Gasoline, Distillate Fuel Oil, Lubricants, Petroleum Coke, and Residual Fuel Oil**

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

### **Jet Fuel**

Transportation sector consumption data in thousand barrels

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

### **Liquefied Petroleum Gases (LPG)**

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

### **Motor Gasoline**

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

### **Total Petroleum**

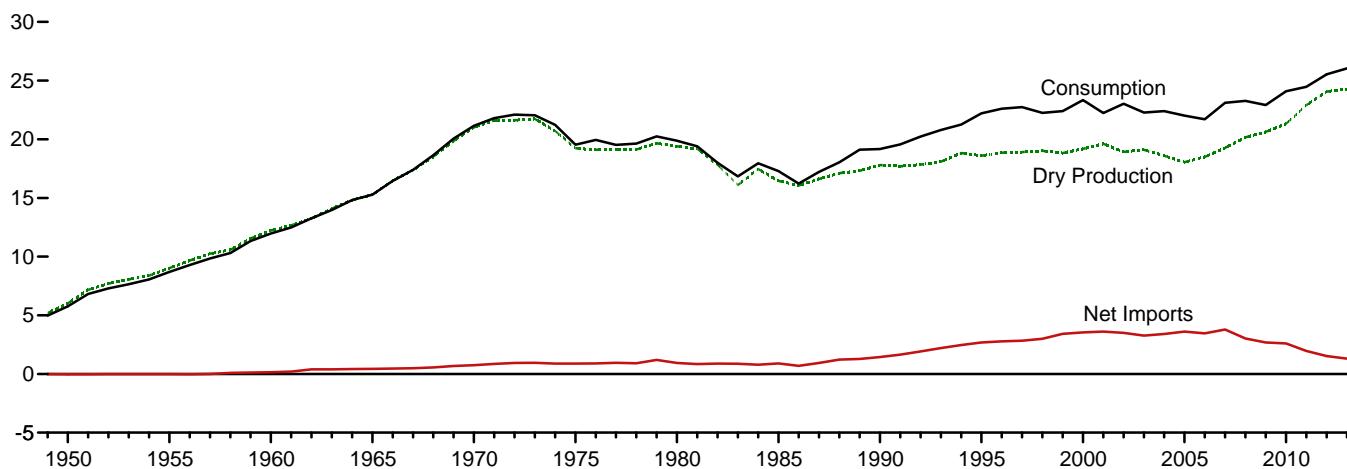
Transportation sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under “Transportation Sector” in Table 3.8c. Electric power sector total petroleum consumption is the sum of the data in trillion Btu for the petroleum products shown under “Electric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

## **4. Natural Gas**

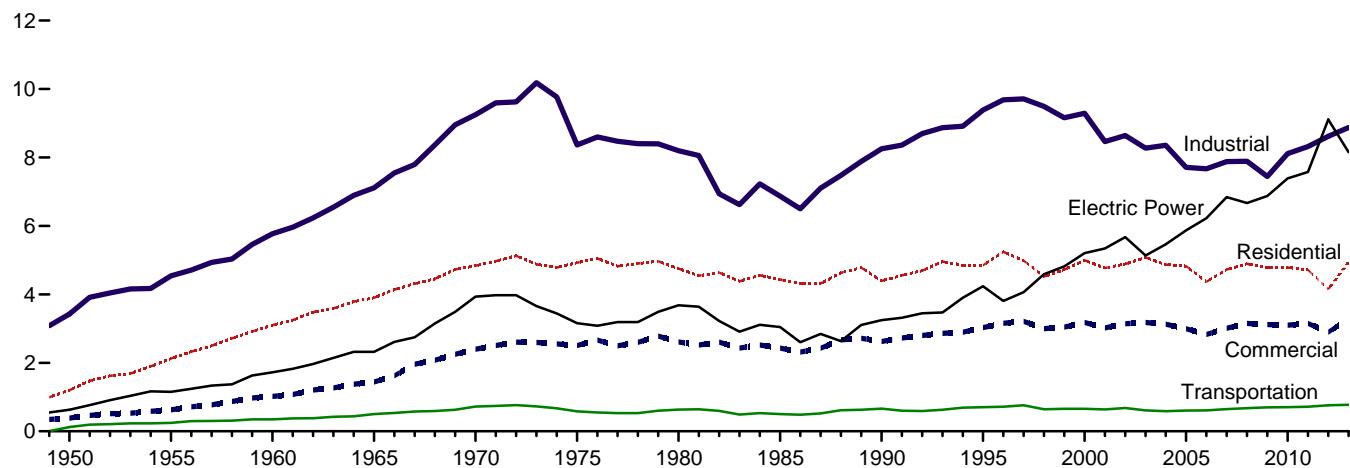
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**Figure 4.1 Natural Gas**  
(Trillion Cubic Feet)

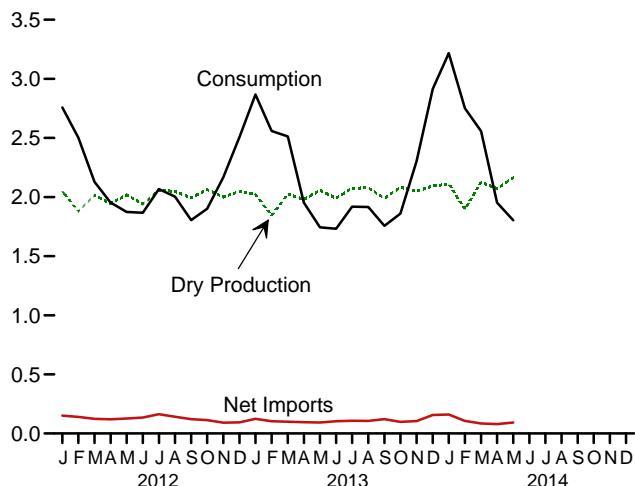
Overview, 1949–2013



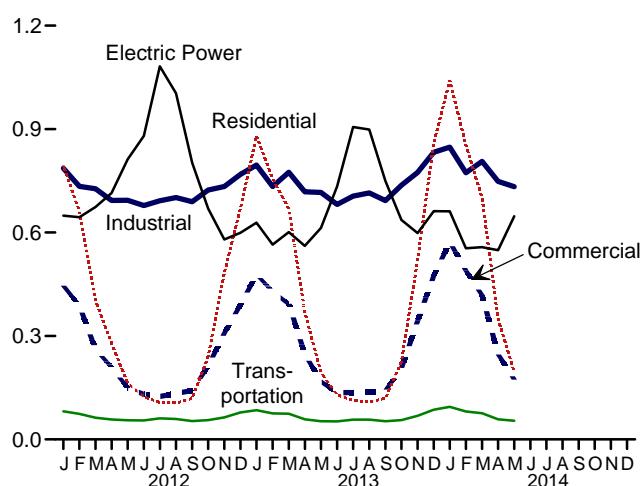
Consumption by Sector, 1949–2013



Overview, Monthly



Consumption by Sector, Monthly



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

**Table 4.1 Natural Gas Overview**  
(Billion Cubic Feet)

	Gross Withdrawals <sup>a</sup>	Marketed Production (Wet) <sup>b</sup>	NGPL Production <sup>c</sup>	Dry Gas Production <sup>d</sup>	Supplemental Gaseous Fuels <sup>e</sup>	Trade			Net Storage Withdrawals <sup>f</sup>	Balancing Item <sup>g</sup>	Consumption <sup>h</sup>
						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	2,155	106	2,048	5	281	130	151	553	(s)	2,757
February .....	2,360	1,976	98	1,879	5	270	130	140	467	11	2,502
March .....	2,524	2,121	105	2,016	5	265	141	124	-38	21	2,129
April .....	2,417	2,047	101	1,946	5	243	123	120	-141	24	1,953
May .....	2,491	2,123	105	2,018	5	259	133	126	-288	13	1,874
June .....	2,377	2,042	101	1,941	5	260	125	135	-236	23	1,867
July .....	2,465	2,164	107	2,057	5	281	118	163	-137	-21	2,067
August .....	2,374	2,154	106	2,048	5	281	139	142	-169	-22	2,003
September .....	2,410	2,097	104	1,993	5	258	137	121	-295	-19	1,805
October .....	2,557	2,171	107	2,064	5	253	140	113	-246	-36	1,901
November .....	2,471	2,104	104	2,000	5	234	142	92	129	-58	2,168
December .....	2,524	2,155	106	2,048	5	252	159	94	392	-32	2,507
Total .....	29,542	25,308	1,250	24,058	61	3,138	1,619	1,519	-9	-96	25,533
2013 January .....	2,536	E 2,127	105	E 2,022	6	278	154	124	721	-5	2,867
February .....	2,307	E 1,942	98	E 1,844	5	237	133	104	604	2	2,558
March .....	2,536	E 2,136	110	E 2,026	6	248	149	100	380	(s)	2,512
April .....	2,473	E 2,086	107	E 1,979	5	221	126	95	-136	11	1,954
May .....	2,541	E 2,166	110	E 2,056	5	234	142	92	-418	8	1,744
June .....	2,444	E 2,097	107	E 1,990	3	237	134	103	-372	8	1,732
July .....	2,550	E 2,188	113	E 2,076	3	236	129	108	-275	7	1,918
August .....	2,546	E 2,194	117	E 2,076	5	236	130	106	-270	(s)	1,916
September .....	2,466	E 2,106	116	E 1,990	5	244	122	121	-355	-7	1,756
October .....	2,580	E 2,201	119	E 2,082	4	220	122	98	-255	-69	1,861
November .....	2,559	E 2,165	117	E 2,048	5	219	114	105	211	-64	2,305
December .....	2,631	E 2,208	116	E 2,092	5	273	117	156	714	-53	2,915
Total .....	30,171	E 25,616	1,335	E 24,282	57	2,883	1,572	1,311	549	-161	26,037
2014 January .....	2,655	E 2,228	118	E 2,110	5	295	135	161	R 971	-30	3,217
February .....	2,384	E 2,007	108	E 1,899	6	245	139	107	728	12	2,751
March .....	2,672	E 2,251	125	E 2,126	4	234	150	85	354	-11	2,558
April .....	R 2,592	RE 2,196	126	RE 2,070	5	R 201	122	R 79	-217	R 16	R 1,952
May .....	2,683	E 2,294	129	E 2,166	5	206	113	93	-474	14	1,803
5-Month Total ....	12,986	E 10,976	606	E 10,370	26	1,182	658	524	1,360	1	12,281
2013 5-Month Total ....	12,394	E 10,457	530	E 9,927	27	1,218	704	514	1,151	17	11,635
2012 5-Month Total ....	12,364	10,422	515	9,907	25	1,318	658	660	553	68	11,214

<sup>a</sup> 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.

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

<sup>c</sup> 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.

<sup>d</sup> Marketed production (wet) minus NGPL production.

<sup>e</sup> See Note 3, "Supplemental Gaseous Fuels," at end of section.

<sup>f</sup> Net withdrawals from underground storage. For 1980–2012, also includes net withdrawals of liquefied natural gas in above-ground tanks. See Note 4, "Natural Gas Storage," at end of section.

<sup>g</sup> 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).

<sup>h</sup> See Note 6, "Natural Gas Consumption," at end of section.

<sup>i</sup> Through 1979, may include unknown quantities of nonhydrocarbon gases.

<sup>j</sup> 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:** 1949–2008—U.S. Energy Information Administration (EIA), *Natural Gas Annual*, annual reports. 2009 forward—EIA, *Natural Gas Monthly*, July 2014, Table 1.

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

	Imports									Exports				
	Algeria <sup>a</sup>	Canada <sup>b</sup>	Egypt <sup>a</sup>	Mexico <sup>b</sup>	Nigeria <sup>a</sup>	Qatar <sup>a</sup>	Trinidad and Tobago <sup>a</sup>	Other <sup>a,c</sup>	Total	Canada <sup>b</sup>	Japan <sup>a</sup>	Mexico <sup>b</sup>	Other <sup>a,d</sup>	Total
1950 Total .....	0	0	0	0	0	0	0	0	0	3	0	23	0	26
1955 Total .....	0	11	0	(s)	0	0	0	0	11	11	0	20	0	31
1960 Total .....	0	109	0	47	0	0	0	0	156	6	0	6	0	11
1965 Total .....	0	405	0	52	0	0	0	0	456	18	0	8	0	26
1970 Total .....	1	779	0	(s)	0	0	0	0	821	11	44	15	0	70
1975 Total .....	5	948	0	0	0	0	0	0	953	10	53	9	0	73
1980 Total .....	86	797	0	102	0	0	0	0	985	(s)	45	4	0	49
1985 Total .....	24	926	0	0	0	0	0	0	950	(s)	53	2	0	55
1990 Total .....	84	1,448	0	0	0	0	0	0	1,532	17	53	16	0	86
1995 Total .....	18	2,816	0	7	0	0	0	0	2,841	28	65	61	0	154
2000 Total .....	47	3,544	0	12	13	46	99	21	3,782	73	66	106	0	244
2001 Total .....	65	3,729	0	10	38	23	98	14	3,977	167	66	141	0	373
2002 Total .....	27	3,785	0	2	8	35	151	8	4,015	189	63	263	0	516
2003 Total .....	53	3,437	0	0	50	14	378	11	3,944	271	66	343	0	680
2004 Total .....	120	3,607	0	0	12	12	462	46	4,259	395	62	397	0	854
2005 Total .....	97	3,700	73	9	8	3	439	11	4,341	358	65	305	0	729
2006 Total .....	17	3,590	120	13	57	0	389	0	4,186	341	61	322	0	724
2007 Total .....	77	3,783	115	54	95	18	448	18	4,608	482	47	292	2	822
2008 Total .....	0	3,589	55	43	12	3	267	15	3,984	559	39	365	0	963
2009 Total .....	0	3,271	160	28	13	13	236	29	3,751	701	31	338	3	1,072
2010 Total .....	0	3,280	73	30	42	46	190	81	3,741	739	33	333	32	1,137
2011 Total .....	0	3,117	35	3	2	91	129	92	3,469	937	18	499	52	1,506
2012 January .....	0	265	0	(s)	0	4	9	3	281	84	3	40	3	130
February .....	0	250	3	(s)	0	0	11	6	270	87	2	42	0	130
March .....	0	246	0	(s)	0	4	13	3	265	93	0	46	3	141
April .....	0	235	0	(s)	0	4	1	3	243	78	0	45	0	123
May .....	0	243	0	(s)	0	6	11	0	259	78	3	52	0	133
June .....	0	251	0	(s)	0	0	8	0	260	64	2	58	0	125
July .....	0	266	0	(s)	0	3	12	0	281	62	0	57	0	118
August .....	0	262	0	(s)	0	3	16	0	281	77	2	60	0	139
September .....	0	246	0	(s)	0	3	8	0	258	80	0	58	0	137
October .....	0	243	0	(s)	0	6	5	0	253	75	2	61	3	140
November .....	0	220	0	(s)	0	3	8	3	234	93	0	49	0	142
December .....	0	235	0	(s)	0	0	8	9	252	101	0	52	6	159
Total .....	0	2,963	3	(s)	0	34	112	26	3,138	971	14	620	14	1,619
2013 January .....	0	265	0	(s)	0	0	11	3	278	99	0	56	0	154
February .....	0	225	0	(s)	0	4	8	0	237	84	0	49	0	133
March .....	0	240	0	(s)	0	4	5	0	248	92	0	56	0	149
April .....	0	215	0	(s)	0	0	5	0	221	71	0	55	0	126
May .....	0	229	0	(s)	0	0	6	0	234	82	0	60	0	142
June .....	0	229	0	(s)	0	0	8	0	237	76	0	58	0	134
July .....	0	228	0	(s)	0	0	8	0	236	66	0	62	0	129
August .....	0	227	0	(s)	0	0	6	3	236	68	0	62	0	130
September .....	0	227	0	(s)	3	0	9	6	244	70	0	53	0	122
October .....	0	215	0	(s)	0	0	3	3	220	70	0	53	0	122
November .....	0	216	0	(s)	0	0	3	0	219	60	0	54	0	114
December .....	0	270	0	(s)	0	0	0	3	273	73	0	44	0	117
Total .....	0	2,786	0	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	92	0	58	0	150
April .....	0	R 198	0	(s)	0	0	3	0	R 201	65	0	57	0	122
May .....	0	204	0	(s)	0	0	0	3	206	50	2	61	0	113
5-Month Total ....	0	1,161	0	1	0	0	16	5	1,182	374	2	280	3	658
2013 5-Month Total ....	0	1,174	0	(s)	0	7	34	3	1,218	428	0	276	0	704
2012 5-Month Total ....	0	1,239	3	(s)	0	16	46	14	1,318	419	8	225	6	658

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

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

<sup>c</sup> Australia in 1997–2001 and 2004; Brunei in 2002; Equatorial Guinea in 2007; Indonesia in 1986 and 2000; Malaysia in 1999 and 2002–2005; Norway in 2008–2013; Oman in 2000–2005; Peru in 2010 and 2011; United Arab Emirates in 1996–2000; Yemen in 2010 forward; and Other (unassigned) in 2004.

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

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

Notes: • See Note 9, "Natural Gas Imports and Exports," at end of section.

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

Web 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."

• **1988–2010:** EIA, *Natural Gas Annual*, annual reports. • **2011 forward:** EIA, *Natural Gas Monthly*, July 2014, Tables 4 and 5; and U.S. Department of Energy, Office of Fossil Energy, "Natural Gas Imports and Exports."

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

	End-Use Sectors										Electric Power Sector <sup>f,g</sup>	Total		
	Residential	Commercial <sup>a</sup>	Industrial					Transportation						
			Lease and Plant Fuel	CHP <sup>b</sup>	Non-CHP <sup>c</sup>	Total	Total	Pipelines <sup>d</sup> and Distribution <sup>e</sup>	Vehicle Fuel	Total				
1950 Total .....	1,198	388	928	(h)	2,498	2,498	3,426	126	NA	126	629	5,767		
1955 Total .....	2,124	629	1,131	(h)	3,411	3,411	4,542	245	NA	245	1,153	8,694		
1960 Total .....	3,103	1,020	1,237	(h)	4,535	4,535	5,771	347	NA	347	1,725	11,967		
1965 Total .....	3,903	1,444	1,156	(h)	5,955	5,955	7,112	501	NA	501	2,321	15,280		
1970 Total .....	4,837	2,399	1,399	(h)	7,851	7,851	9,249	722	NA	722	3,932	21,139		
1975 Total .....	4,924	2,508	1,396	(h)	6,968	6,968	8,365	583	NA	583	3,158	19,538		
1980 Total .....	4,752	2,611	1,026	(h)	7,172	7,172	8,198	635	NA	635	3,682	19,877		
1985 Total .....	4,433	2,432	966	(h)	5,901	5,901	6,867	504	NA	504	3,044	17,281		
1990 Total .....	4,391	2,623	1,236	1,055	5,963	5,963	8,255	660	(S)	660	3,245	19,174		
1995 Total .....	4,850	3,031	1,220	1,258	6,906	8,164	9,384	700	5	705	4,237	22,207		
2000 Total .....	4,996	3,182	1,151	1,386	6,757	8,142	9,293	642	13	655	5,206	23,333		
2001 Total .....	4,771	3,023	1,119	1,310	6,035	7,344	8,463	625	15	640	5,342	22,239		
2002 Total .....	4,889	3,144	1,113	1,240	6,287	7,527	8,640	667	15	682	5,672	23,027		
2003 Total .....	5,079	3,179	1,122	1,144	6,007	7,150	8,273	591	18	610	5,135	22,277		
2004 Total .....	4,869	3,129	1,098	1,191	6,066	7,256	8,354	566	21	587	5,464	22,403		
2005 Total .....	4,827	2,999	1,112	1,084	5,518	6,601	7,713	584	23	607	5,869	22,014		
2006 Total .....	4,368	2,832	1,142	1,115	5,412	6,527	7,669	584	24	608	6,222	21,699		
2007 Total .....	4,722	3,013	1,226	1,050	5,604	6,655	7,881	621	25	646	6,841	23,104		
2008 Total .....	4,892	3,153	1,220	955	5,715	6,670	7,890	648	26	674	6,668	23,277		
2009 Total .....	4,779	3,119	1,275	990	5,178	6,167	7,443	670	27	697	6,873	22,910		
2010 Total .....	4,782	3,103	1,286	1,029	5,797	6,826	8,112	674	29	703	7,387	24,087		
2011 Total .....	4,714	3,155	1,323	1,063	5,931	6,994	8,317	688	30	718	7,574	24,477		
2012 January .....	794	446	121	94	571	666	786	79	3	82	649	2,757		
February .....	662	387	111	89	534	623	734	72	2	74	645	2,502		
March .....	403	262	119	91	517	608	727	60	3	63	674	2,129		
April .....	279	209	114	90	489	579	693	55	2	58	714	1,953		
May .....	163	149	118	95	481	576	694	53	3	55	812	1,874		
June .....	123	131	112	98	468	566	678	53	2	55	880	1,867		
July .....	108	125	117	107	468	575	692	59	3	61	1,082	2,067		
August .....	106	133	114	105	482	587	701	57	3	59	1,004	2,003		
September .....	119	142	114	96	479	575	689	51	2	53	803	1,805		
October .....	240	213	121	94	509	603	723	53	3	56	669	1,901		
November .....	482	308	117	93	524	617	734	62	2	64	580	2,168		
December .....	670	391	119	98	551	649	769	75	3	78	600	2,507		
Total .....	4,149	2,895	1,396	1,149	6,075	7,224	8,620	728	30	758	9,111	25,533		
2013 January .....	880	478	E 117	102	577	678	795	E 82	E 3	E 85	629	2,867		
February .....	756	428	E 107	91	535	626	733	E 73	E 3	E 75	565	2,558		
March .....	669	393	E 118	98	559	657	775	E 72	E 3	E 74	601	2,512		
April .....	369	247	E 115	90	513	603	718	E 56	E 3	E 58	561	1,954		
May .....	194	168	E 120	93	503	597	716	E 50	E 3	E 53	613	1,744		
June .....	129	136	E 116	93	473	566	681	E 49	E 3	E 52	734	1,732		
July .....	113	136	E 121	97	488	585	706	E 55	E 3	E 57	906	1,918		
August .....	109	137	E 121	98	495	594	715	E 55	E 3	E 57	898	1,916		
September .....	119	142	E 116	91	485	576	693	E 60	E 3	E 53	749	1,756		
October .....	225	207	E 121	93	522	615	737	E 53	E 3	E 56	636	1,861		
November .....	520	344	E 119	97	558	655	774	E 66	E 3	E 68	598	2,305		
December .....	859	475	E 122	105	606	711	833	E 83	E 3	E 86	662	2,915		
Total .....	4,941	3,291	E 1,413	1,147	6,316	7,463	8,876	E 743	E 33	E 775	8,153	26,037		
2014 January .....	1,041	573	E 123	101	623	725	R 847	E 92	E 3	E 95	662	3,217		
February .....	854	489	E 111	88	574	R 662	773	E 78	E 3	E 81	554	2,751		
March .....	701	418	E 124	96	586	682	806	E 73	E 3	E 76	557	2,558		
April .....	R 350	247	E 121	88	R 540	R 627	R 748	E 56	E 3	E 58	549	R 1,952		
May .....	196	173	E 127	86	520	607	733	E 51	E 3	E 54	647	1,803		
5-Month Total ....	3,140	1,900	E 606	460	2,843	3,303	3,908	E 350	E 14	E 364	2,969	12,281		
2013 5-Month Total ....	2,868	1,714	E 577	474	2,687	3,161	3,738	E 332	E 14	E 345	2,969	11,635		
2012 5-Month Total ....	2,302	1,453	582	459	2,593	3,052	3,634	319	12	332	3,494	11,214		

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

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

<sup>c</sup> All industrial sector fuel use other than that in "Lease and Plant Fuel" and "CHP."

<sup>d</sup> Natural gas consumed in the operation of pipelines, primarily in compressors. Beginning in 2009, includes line loss, which is known volumes of natural gas that are the result of leaks, damage, accidents, migration, and/or blow down.

<sup>e</sup> Natural gas used as fuel in the delivery of natural gas to consumers. Beginning in 2009, includes line loss, which is known volumes of natural gas that are the result of leaks, damage, accidents, migration, and/or blow down.

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

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

<sup>h</sup> Included in "Non-CHP."

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

<sup>j</sup> See Note 3, "Supplemental Gaseous Fuels," at end of section.

<sup>k</sup> See Note 8, "Natural Gas Data Adjustments, 1993–2000," at end of section.

<sup>l</sup> See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • Through 1964, all volumes are shown on a pressure base of 14.65 psia (pounds per square inch absolute) at 60° Fahrenheit; beginning in 1965, the pressure base is 14.73 psia at 60° Fahrenheit. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

<sup>m</sup> 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: • **Residential, Commercial, Lease and Plant Fuel, Other Industrial Total and Pipelines and Distribution: 1949–2008**—U.S. Energy Information Administration (EIA), *Natural Gas Annual (NGA)*, annual reports and unpublished revisions. • **2009 forward**—EIA, *Natural Gas Monthly (NGM)*, July 2014, Table 2.

• **Industrial CHP:** Table 7.4c. • **Vehicle Fuel: 1990 and 1991**—EIA, *NGA* 2000, (November 2001), Table 95. • **1992–1998**—EIA, "Alternatives to Traditional Transportation Fuels 1999" (October 1999), Table 10, and "Alternatives to Traditional Transportation Fuels 2003" (February 2004), Table 10. Data for compressed natural gas and liquefied natural gas in gasoline-equivalent gallons were converted to cubic feet by multiplying by the motor gasoline conversion factor (see Table A3) and dividing by the natural gas end-use sectors conversion factor (see Table A4). • **1999–2008**—EIA, *NGA*, annual reports. • **2009 forward**—EIA, *NGM*, July 2014, Table 2. • **Electric Power Sector:** Table 7.4b.

Notes: • Data are for natural gas, plus a small amount of supplemental gaseous

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

	Natural Gas in Underground Storage, End of Period			Change in Working Gas From Same Period Previous Year		Storage Activity		
	Base Gas	Working Gas	Total <sup>a</sup>	Volume	Percent	Withdrawals	Injections	Net <sup>b,c</sup>
1950 Total .....	NA	NA	NA	NA	NA	175	230	-54
1955 Total .....	863	505	1,368	40	8.7	437	505	-68
1960 Total .....	NA	NA	2,184	NA	NA	713	844	-132
1965 Total .....	1,848	1,242	3,090	83	7.2	960	1,078	-118
1970 Total .....	2,326	1,678	4,004	257	18.1	1,459	1,857	-398
1975 Total .....	3,162	2,212	5,374	162	7.9	1,760	2,104	-344
1980 Total .....	3,642	2,655	6,297	-99	-3.6	1,910	1,896	14
1985 Total .....	3,842	2,607	6,448	-270	-9.4	2,359	2,128	231
1990 Total .....	3,868	3,068	6,936	555	22.1	1,934	2,433	-499
1995 Total .....	4,349	2,153	6,503	-453	-17.4	2,974	2,566	408
2000 Total .....	4,352	1,719	6,071	-806	-31.9	3,498	2,684	814
2001 Total .....	4,301	2,904	7,204	1,185	68.9	2,309	3,464	-1,156
2002 Total .....	4,340	2,375	6,715	-528	-18.2	3,138	2,670	468
2003 Total .....	4,303	2,563	6,866	187	7.9	3,099	3,292	-193
2004 Total .....	4,201	2,696	6,897	133	5.2	3,037	3,150	-113
2005 Total .....	4,200	2,635	6,835	-61	-2.3	3,057	3,002	55
2006 Total .....	4,211	3,070	7,281	435	16.5	2,493	2,924	-431
2007 Total .....	4,234	2,879	7,113	-191	-6.2	3,325	3,133	192
2008 Total .....	4,232	2,840	7,073	-39	-1.4	3,374	3,340	34
2009 Total .....	4,277	3,130	7,407	290	10.2	2,966	3,315	-349
2010 Total .....	4,301	3,111	7,412	-19	-6	3,274	3,291	-17
2011 Total .....	4,302	3,462	7,764	351	11.3	3,074	3,422	-348
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 .....	4,373	2,702	7,075	-208	-7.1	793	72	721
February .....	4,379	2,102	6,482	-347	-14.2	648	44	604
March .....	4,378	1,723	6,101	-750	-30.3	482	101	380
April .....	4,377	1,858	6,235	-754	-28.9	136	272	-136
May .....	4,381	2,271	6,652	-616	-21.3	49	467	-418
June .....	4,385	2,642	7,027	-473	-15.2	68	440	-372
July .....	4,365	2,937	7,302	-308	-9.5	98	373	-275
August .....	4,362	3,211	7,573	-196	-5.7	102	372	-270
September .....	4,363	3,565	7,928	-128	-3.5	66	421	-355
October .....	4,365	3,816	8,180	-114	-2.9	85	340	-255
November .....	4,366	3,604	7,970	-195	-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	3,700	3,151	549
2014 January .....	R 4,364	R 1,925	R 6,288	R -777	R -28.8	R 1,039	R 68	R 971
February .....	4,360	1,200	5,560	-902	-42.9	832	104	728
March .....	4,350	857	5,208	-866	-50.2	488	134	354
April .....	4,357	1,066	5,423	-791	-42.6	105	323	-217
May .....	4,353	1,544	5,898	-726	-32.0	53	528	-474
5-Month Total ....	--	--	--	--	--	2,518	1,157	1,360
2013 5-Month Total ....	--	--	--	--	--	2,106	956	1,151
2012 5-Month Total ....	--	--	--	--	--	1,541	993	547

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

<sup>b</sup> For 1980–2012, data differ from those shown on Table 4.1, which includes liquefied natural gas storage for that period.

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

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

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

Web 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.

1996–2007—EIA, *Natural Gas Monthly* (NGM), monthly issues. 2008 forward—EIA, NGM, July 2014, Table 8. • **All Other Data:**

1954–1974—American Gas Association, *Gas Facts*, annual issues. 1975 and

1976—Federal Energy Administration (FEA), Form FEA-G318-M-0, "Underground Gas Storage Report," and Federal Power Commission (FPC), Form FPC-8,

"Underground Gas Storage Report." 1977 and 1978—EIA, Form FEA-G318-M-0,

"Underground Gas Storage Report," and Federal Energy Regulatory Commission (FERC), Form FERC-8, "Underground Gas Storage Report." 1979–1995—EIA, Form EIA-191, "Underground Gas Storage Report," and FERC, Form FERC-8, "Underground Gas Storage Report." 1996–2007—EIA, NGM, monthly issues. 2008 forward—EIA, NGM, July 2014, Table 8.

## Natural Gas

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

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

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

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

**Note 2. Natural Gas Plant Liquids Production.** Natural gas plant liquids (NGPL) production is the reduction in volume of natural gas resulting from the removal of natural gas liquid constituents at natural gas processing plants—these natural gas plant liquids are transferred to petroleum supply.

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

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

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

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

Annual data beginning with 1980 are from EIA's *Natural Gas Annual (NGA)*. Unknown quantities of supplemental gaseous fuels are included in consumption data for 1979 and earlier years. Monthly data are considered preliminary until after publication of the NGA. Monthly estimates are based on the annual ratio of supplemental gaseous fuels to the sum of dry

gas production, net imports, and net withdrawals from storage. The ratio is applied to the monthly sum of the three elements to compute a monthly supplemental gaseous fuels figure.

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

**Note 4. Natural Gas Storage.** Natural gas in storage at the end of a reporting period may not equal the quantity derived by adding or subtracting net injections or withdrawals from the quantity in storage at the end of the previous period. Injection and withdrawal data from the FERC-8/EIA-191 survey may be adjusted to correspond to data from Form EIA-176 for publication of EIA's *Natural Gas Annual (NGA)*.

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

1975	...	6,280	1989	...	8,120	2003	...	8,206
1976	...	6,544	1990	...	7,794	2004	...	8,255
1977	...	6,678	1991	...	7,993	2005	...	8,268
1978	...	6,890	1992	...	7,932	2006	...	8,330
1979	...	6,929	1993	...	7,989	2007	...	8,402
1980	...	7,434	1994	...	8,043	2008	...	8,499
1981	...	7,805	1995	...	7,953	2009	...	8,656
1982	...	7,915	1996	...	7,980	2010	...	8,764
1983	...	7,985	1997	...	8,332	2011	...	8,849
1984	...	8,043	1998	...	8,179	2012	...	8,991
1985	...	8,087	1999	...	8,229	2013	...	9,173
1986	...	8,145	2000	...	8,241			
1987	...	8,124	2001	...	8,182			
1988	...	8,124	2002	...	8,207			

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 1980–2012 include both underground and liquefied natural gas (LNG) storage. Annual data on LNG additions and withdrawals are from Form EIA-176. Monthly data are estimated by computing the ratio of each month's underground storage additions and withdrawals to annual underground storage additions and withdrawals and applying the ratio to the annual LNG data.

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

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

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

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

consumption. In 1993, 0.28 trillion cubic feet was reported as delivered to nonutility generators.

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

For 1996–2000, monthly data for several natural gas series shown in EIA's *Natural Gas Navigator* (see [http://www.eia.gov/dnav/ng/ng\\_cons\\_sum\\_dcu\\_nus\\_m.htm](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), and 2013 (555 million cubic feet). The United States exports natural gas via pipeline to Canada and Mexico; and exports LNG via tanker to Brazil, China, Chile, India, Japan, 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 compressed natural gas have been exported to Canada since 2013.

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

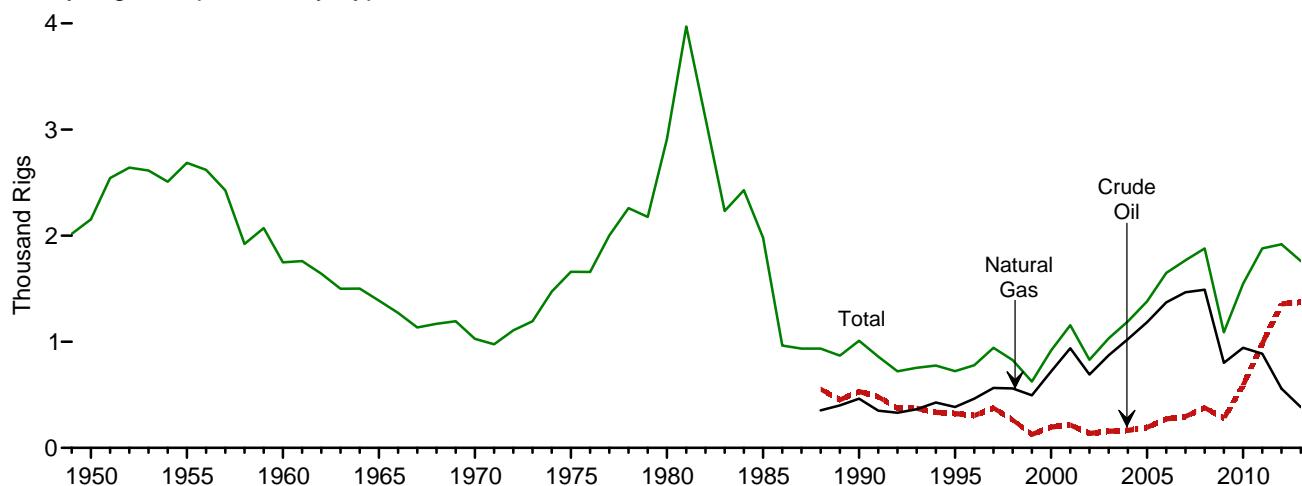
Preliminary monthly data are EIA estimates. For a discussion of estimation procedures, see EIA's *Natural Gas Monthly*. Preliminary data are revised after publication of EIA's *U.S. Imports and Exports of Natural Gas*.

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

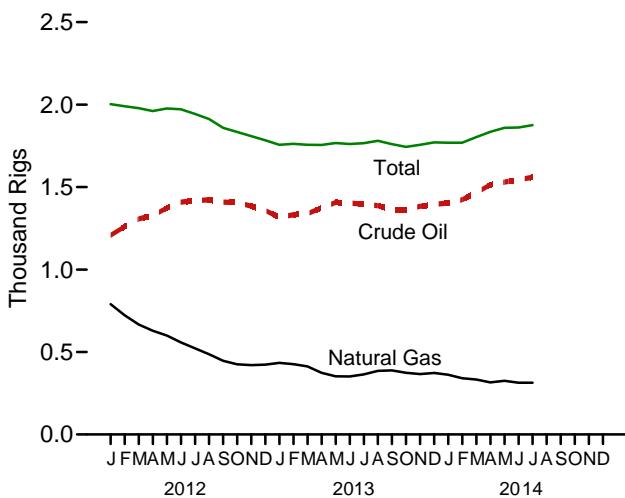
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**Figure 5.1 Crude Oil and Natural Gas Resource Development Indicators**

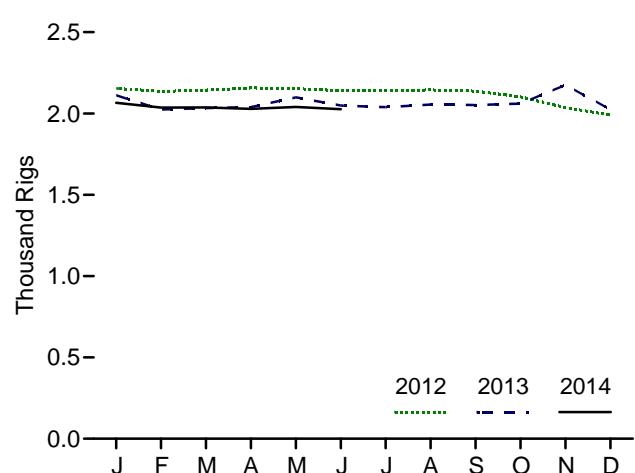
Rotary Rigs in Operation by Type, 1949–2013



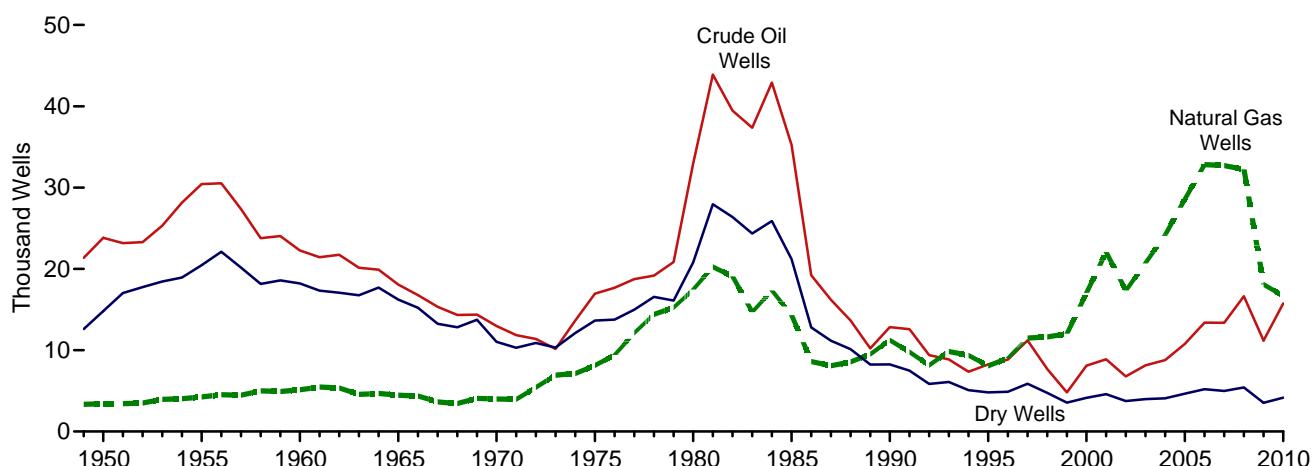
Rotary Rigs in Operation by Type, Monthly



Active Well Service Rig Count, Monthly



Total Wells Drilled by Type, 1949–2010



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

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

	Rotary Rigs in Operation <sup>a</sup>					Active Well Service Rig Count <sup>c</sup>	
	By Site		By Type		Total <sup>b</sup>		
	Onshore	Offshore	Crude Oil	Natural Gas			
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 January .....	1,960	43	1,208	790	2,003	2,154	
February .....	1,949	42	1,261	723	1,990	2,135	
March .....	1,935	43	1,307	667	1,979	2,143	
April .....	1,917	44	1,329	629	1,961	2,157	
May .....	1,931	46	1,373	600	1,977	2,153	
June .....	1,923	49	1,409	558	1,972	2,139	
July .....	1,894	51	1,419	522	1,944	2,140	
August .....	1,863	50	1,423	487	1,913	2,144	
September .....	1,808	51	1,409	447	1,859	2,137	
October .....	1,785	49	1,407	425	1,834	2,102	
November .....	1,758	51	1,385	421	1,809	2,036	
December .....	1,733	51	1,358	423	1,784	1,990	
Average .....	1,871	48	1,357	558	1,919	2,113	
2013 January .....	1,704	52	1,318	434	1,756	2,112	
February .....	1,708	54	1,332	426	1,762	2,024	
March .....	1,705	51	1,339	413	1,756	2,033	
April .....	1,707	49	1,374	374	1,755	2,039	
May .....	1,715	52	1,407	353	1,767	2,099	
June .....	1,706	55	1,404	352	1,761	2,049	
July .....	1,708	58	1,396	364	1,766	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	NA	
7-Month Average .....	1,768	56	1,490	330	1,824	NA	
2013 7-Month Average .....	1,708	53	1,367	388	1,760	2,056	
2012 7-Month Average .....	1,930	45	1,331	639	1,975	2,146	

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

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

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

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/Forms/Product.aspx?prodID=cdc209c4-79a3-47e5-99c2-fd6da6d4aad6>.

**Table 5.2 Crude Oil and Natural Gas Exploratory and Development Wells**

	Wells Drilled												Total Footage Drilled	
	Exploratory				Development				Total					
	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total	Crude Oil	Natural Gas	Dry	Total		
Number												Thousand Feet		
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 .....	56	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

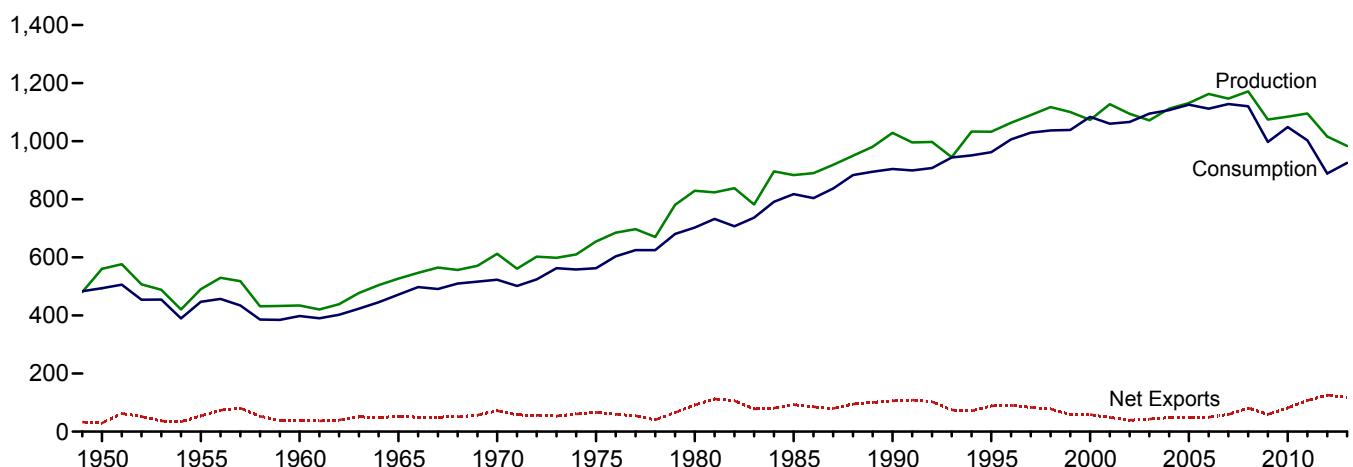
completion data for the above types and classes of wells as reported to the American Petroleum Institute (API) during a given month. Due to time lags between the date of well completion and the date of completion reporting to the API, as-reported well completions proved to be an inaccurate indicator 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.

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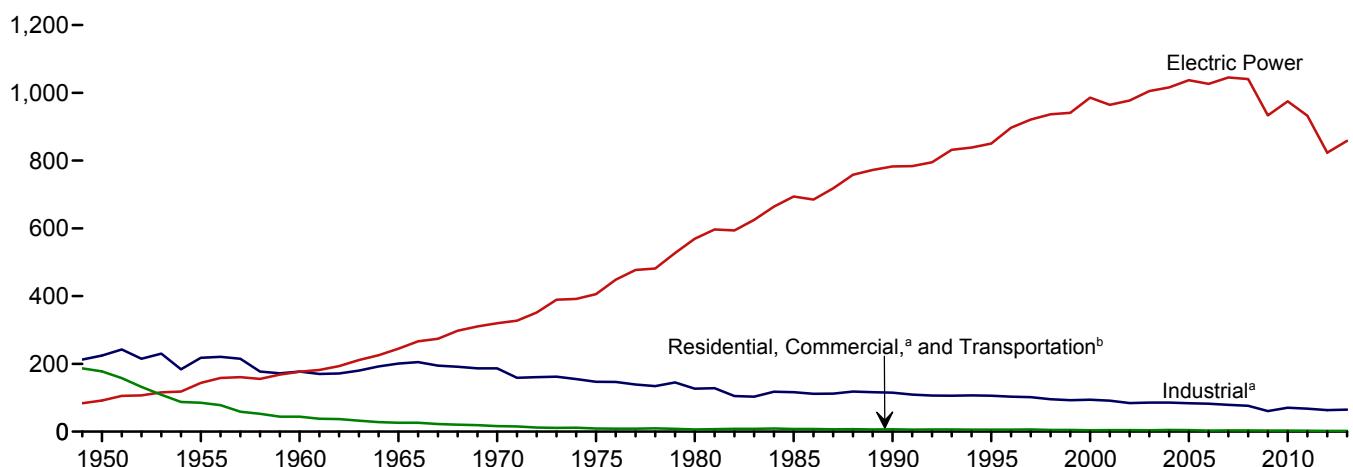
## **6. Coal**

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

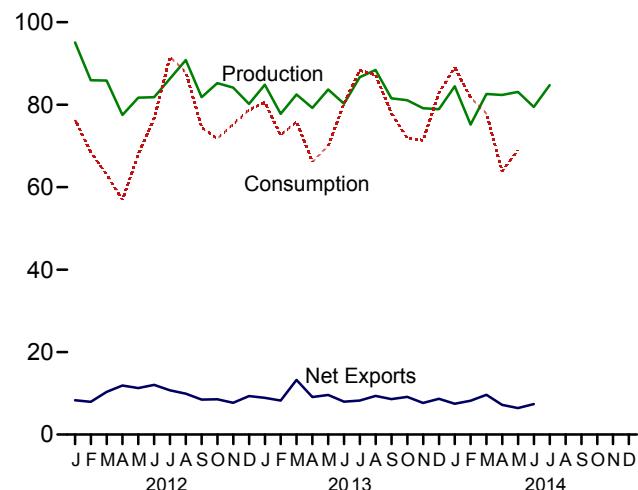
Overview, 1949–2013



Consumption by Sector, 1949–2013



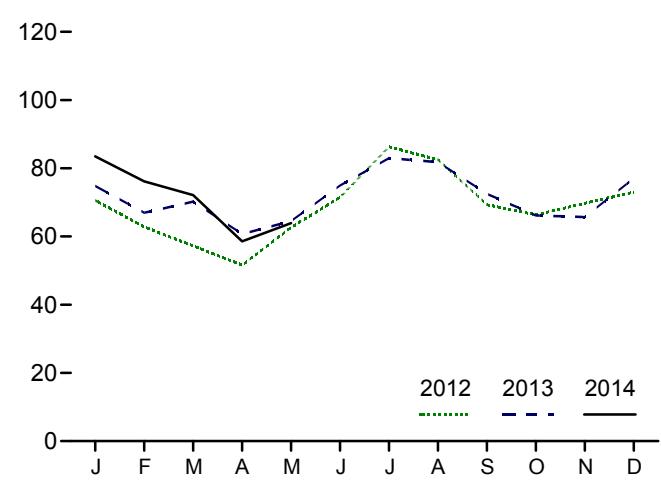
Overview, Monthly



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

<sup>b</sup>For 1978 forward, small amounts of transportation sector use are included in "Industrial."

Electric Power Sector Consumption, Monthly



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

**Table 6.1 Coal Overview**  
(Thousand Short Tons)

	Production <sup>a</sup>	Waste Coal Supplied <sup>b</sup>	Trade			Stock Change <sup>d,e</sup>	Losses and Unaccounted for <sup>e,f</sup>	Consumption
			Imports	Exports	Net Imports <sup>c</sup>			
1950 Total .....	560,388	NA	365	29,360	-28,995	27,829	9,462	494,102
1955 Total .....	490,838	NA	337	54,429	-54,092	-3,974	-6,292	447,012
1960 Total .....	434,329	NA	262	37,981	-37,719	-3,194	1,722	398,081
1965 Total .....	526,954	NA	184	51,032	-50,848	1,897	2,244	471,965
1970 Total .....	612,661	NA	36	71,733	-71,697	11,100	6,633	523,231
1975 Total .....	654,641	NA	940	66,309	-65,369	32,154	-5,522	562,640
1980 Total .....	829,700	NA	1,194	91,742	-90,548	25,595	10,827	702,730
1985 Total .....	883,638	NA	1,952	92,680	-90,727	-27,934	2,796	818,049
1990 Total .....	1,029,076	3,339	2,699	105,804	-103,104	26,542	-1,730	904,498
1995 Total .....	1,032,974	8,561	9,473	88,547	-79,074	-275	632	962,104
2000 Total .....	1,073,612	9,089	12,513	58,489	-45,976	-48,309	938	1,084,095
2001 Total .....	1,127,689	10,085	19,787	48,666	-28,879	41,630	7,120	1,060,146
2002 Total .....	1,094,283	9,052	16,875	39,601	-22,726	10,215	4,040	1,066,355
2003 Total .....	1,071,753	10,016	25,044	43,014	-17,970	-26,659	-4,403	1,094,861
2004 Total .....	1,112,099	11,299	27,280	47,998	-20,718	-11,462	6,887	1,107,255
2005 Total .....	1,131,498	13,352	30,460	49,942	-19,482	-9,702	9,092	1,125,978
2006 Total .....	1,162,750	14,409	36,246	49,647	-13,401	42,642	8,824	1,112,292
2007 Total .....	1,146,635	14,076	36,347	59,163	-22,816	5,812	4,085	1,127,998
2008 Total .....	1,171,809	14,146	34,208	81,519	-47,311	12,354	5,740	1,120,548
2009 Total .....	1,074,923	13,666	22,639	59,097	-36,458	39,668	14,985	997,478
2010 Total .....	1,084,368	13,651	19,353	81,716	-62,363	-13,039	182	1,048,514
2011 Total .....	1,095,628	13,209	13,088	107,259	-94,171	211	11,506	1,002,948
2012 January .....	95,102	1,104	789	9,126	-8,337	3,832	7,745	76,292
February .....	85,914	926	534	8,460	-7,927	7,905	2,542	68,466
March .....	85,849	863	699	11,055	-10,356	9,618	3,663	63,075
April .....	77,514	681	623	12,529	-11,905	7,132	2,260	56,899
May .....	81,717	892	986	12,257	-11,271	419	2,905	68,015
June .....	81,816	926	719	12,749	-12,030	-5,461	-469	76,642
July .....	86,321	1,058	894	11,623	-10,729	-15,082	145	91,588
August .....	90,816	1,039	667	10,597	-9,930	-6,905	912	87,919
September .....	81,818	885	855	9,344	-8,489	2,352	-2,615	74,477
October .....	85,239	796	868	9,421	-8,554	3,999	1,709	71,774
November .....	84,147	1,090	798	8,516	-7,718	1,639	562	75,319
December .....	80,205	934	727	10,068	-9,341	-2,545	-4,377	78,721
Total .....	1,016,458	11,196	9,159	125,746	-116,586	6,902	14,980	889,185
2013 January .....	84,828	933	654	9,572	-8,917	-8,189	4,461	80,571
February .....	77,766	869	385	8,627	-8,242	-6,262	4,121	72,535
March .....	82,464	1,063	390	13,637	-13,247	-5,516	-141	75,936
April .....	79,207	676	672	9,754	-9,082	2,486	2,190	66,125
May .....	83,664	940	870	10,478	-9,608	5,308	-320	70,008
June .....	80,234	934	1,213	9,194	-7,981	-7,412	265	80,335
July .....	86,674	1,040	874	9,125	-8,251	-9,336	455	88,344
August .....	88,436	840	710	10,073	-9,363	-7,765	446	87,231
September .....	81,547	608	815	9,391	-8,576	-2,482	-1,858	77,919
October .....	81,067	626	707	9,855	-9,148	672	R -32	R 71,906
November .....	79,154	618	850	8,511	-7,662	2,376	R -1,653	71,388
December .....	78,922	1,047	766	9,443	-8,676	-5,268	-6,249	82,810
Total .....	983,964	10,194	8,906	117,659	-108,753	-41,386	1,684	925,106
2014 January .....	84,456	1,116	1,064	8,516	-7,452	-16,063	R 5,138	89,046
February .....	75,202	999	583	8,785	-8,203	-14,274	562	81,710
March .....	82,607	1,089	803	10,430	-9,627	-1,742	-2,037	77,849
April .....	82,366	F 721	930	8,134	-7,205	10,848	1,206	63,829
May .....	83,117	RF 887	1,280	7,718	-6,439	R 8,348	R 190	R 69,027
June .....	79,455	NA	R 1,319	R 8,704	R 7,385	NA	NA	NA
July .....	84,719	NA	NA	NA	NA	NA	NA	NA
7-Month Total ....	571,924	NA	NA	NA	NA	NA	NA	NA
2013 7-Month Total ....	574,837	6,455	5,059	70,387	-65,328	-28,919	11,031	533,853
2012 7-Month Total ....	594,233	6,451	5,244	77,799	-72,555	8,363	18,790	500,976

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

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

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

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

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

<sup>f</sup> The difference between calculated coal supply and disposition, due to coal

quantities lost or to data reporting problems.

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

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

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

Sources: See end of section.

**Table 6.2 Coal Consumption by Sector**  
 (Thousand Short Tons)

	End-Use Sectors											Transportation	Electric Power Sector <sup>e,f</sup>	Total			
	Residential	Commercial			Coke Plants	Industrial			Total								
		CHP <sup>a</sup>	Other <sup>b</sup>	Total		CHP <sup>c</sup>	Non-CHP <sup>d</sup>	Total	Total	Transportation							
1950 Total .....	51,562	(g)	63,021	63,021	104,014	(h)	120,623	120,623	224,637	63,011	91,871	494,102					
1955 Total .....	35,590	(g)	32,852	32,852	107,743	(h)	110,096	110,096	217,839	16,972	143,759	447,012					
1960 Total .....	24,159	(g)	16,789	16,789	81,385	(h)	96,017	96,017	177,402	3,046	176,685	398,081					
1965 Total .....	14,635	(g)	11,041	11,041	95,286	(h)	105,560	105,560	200,846	655	244,788	471,965					
1970 Total .....	9,024	(g)	7,090	7,090	96,481	(h)	90,156	90,156	186,637	298	320,182	523,231					
1975 Total .....	2,823	(g)	6,587	6,587	83,598	(h)	63,646	63,646	147,244	24	405,962	562,640					
1980 Total .....	1,355	(g)	5,097	5,097	66,657	(h)	60,347	60,347	127,004	(h)	569,274	702,730					
1985 Total .....	1,711	(g)	6,068	6,068	41,056	(h)	75,372	75,372	116,429	(h)	693,841	818,049					
1990 Total .....	1,345	1,191	4,189	5,379	38,877	27,781	48,549	76,330	115,207	(h)	782,567	904,498					
1995 Total .....	755	1,419	3,633	5,052	33,011	29,363	43,693	73,055	106,067	(h)	850,230	962,104					
2000 Total .....	454	1,547	2,126	3,673	28,939	28,031	37,177	65,208	94,147	(h)	985,821	1,084,095					
2001 Total .....	481	1,448	2,441	3,888	26,075	25,755	39,514	65,268	91,344	(h)	964,433	1,060,146					
2002 Total .....	533	1,405	2,506	3,912	23,656	26,232	34,515	60,747	84,403	(h)	977,507	1,066,355					
2003 Total .....	551	1,816	1,869	3,685	24,248	24,846	36,415	61,261	85,509	(h)	1,005,116	1,094,861					
2004 Total .....	512	1,917	2,693	4,610	23,670	26,613	35,582	62,195	85,865	(h)	1,016,268	1,107,255					
2005 Total .....	378	1,922	2,420	4,342	23,434	25,875	34,465	60,340	83,774	(h)	1,037,485	1,125,978					
2006 Total .....	290	1,886	1,050	2,936	22,957	25,262	34,210	59,472	82,429	(h)	1,026,636	1,112,292					
2007 Total .....	353	1,927	1,247	3,173	22,715	22,537	34,078	56,615	79,331	(h)	1,045,141	1,127,998					
2008 Total .....	(i)	2,021	1,485	3,506	22,070	21,902	32,491	54,393	76,463	(h)	1,040,580	1,120,548					
2009 Total .....	(i)	1,798	1,412	3,210	15,326	19,766	25,549	45,314	60,641	(h)	933,627	997,478					
2010 Total .....	(i)	1,720	1,361	3,081	21,092	24,638	24,650	49,289	70,381	(h)	975,052	1,048,514					
2011 Total .....	(i)	1,668	1,125	2,793	21,434	22,319	23,919	46,238	67,671	(h)	932,484	1,002,948					
2012 January .....	(i)	155	100	256	1,701	2,015	1,726	3,741	5,442	(h)	70,594	76,292					
February .....	(i)	135	87	222	1,687	1,832	1,921	3,753	5,440	(h)	62,804	68,466					
March .....	(i)	128	82	210	1,895	1,684	2,020	3,704	5,599	(h)	57,266	63,075					
April .....	(i)	102	30	132	1,783	1,481	1,910	3,391	5,173	(h)	51,593	56,899					
May .....	(i)	108	32	141	1,857	1,563	1,807	3,370	5,226	(h)	62,648	68,015					
June .....	(i)	109	32	141	1,657	1,553	1,811	3,365	5,021	(h)	71,480	76,642					
July .....	(i)	120	16	136	1,676	1,712	1,781	3,493	5,169	(h)	86,283	91,588					
August .....	(i)	120	16	136	1,816	1,703	1,780	3,483	5,299	(h)	82,484	87,919					
September .....	(i)	107	14	121	1,552	1,535	1,960	3,495	5,047	(h)	69,309	74,477					
October .....	(i)	101	51	152	1,647	1,587	2,045	3,632	5,279	(h)	66,343	71,774					
November .....	(i)	124	62	186	1,715	1,649	2,030	3,679	5,393	(h)	69,740	75,319					
December .....	(i)	141	71	212	1,766	1,751	1,982	3,734	5,500	(h)	73,009	78,721					
Total .....	(i)	1,450	595	2,045	20,751	20,065	22,773	42,838	63,589	(h)	823,551	889,185					
2013 January .....	(i)	148	89	237	1,825	1,728	1,983	3,711	5,536	(h)	74,798	80,571					
February .....	(i)	139	84	223	1,644	1,601	2,121	3,722	5,367	(h)	66,944	72,535					
March .....	(i)	136	82	219	1,810	1,716	1,978	3,693	5,504	(h)	70,214	75,936					
April .....	(i)	108	23	132	1,817	1,533	1,918	3,451	5,268	(h)	60,725	66,125					
May .....	(i)	114	24	138	1,868	1,577	1,881	3,459	5,326	(h)	64,544	70,008					
June .....	(i)	105	22	128	1,787	1,576	1,879	3,455	5,242	(h)	74,964	80,335					
July .....	(i)	103	16	119	1,756	1,656	1,827	3,483	5,239	(h)	82,986	88,344					
August .....	(i)	105	16	121	1,836	1,594	1,892	3,486	5,323	(h)	81,788	87,231					
September .....	(i)	100	15	115	1,836	1,545	1,929	3,475	5,311	(h)	72,493	77,919					
October .....	(i)	98	47	145	1,807	1,647	R 2,143	R 3,790	R 5,597	(h)	66,163	R 71,906					
November .....	(i)	120	57	177	1,737	1,679	R 2,107	R 3,786	R 5,523	(h)	65,688	71,388					
December .....	(i)	134	64	198	1,750	1,760	2,059	3,819	5,569	(h)	77,043	82,810					
Total .....	(i)	1,412	539	1,951	21,474	19,613	23,717	43,331	64,805	(h)	858,351	925,106					
2014 January .....	(i)	149	99	247	1,605	1,803	1,932	3,735	5,339	(h)	83,459	89,046					
February .....	(i)	147	98	245	1,543	1,644	2,134	3,778	5,321	(h)	76,144	81,710					
March .....	(i)	142	94	236	1,687	1,759	2,040	3,799	5,486	(h)	72,127	77,849					
April .....	(i)	111	F 50	F 161	F 1,472	1,520	F 2,084	F 3,604	F 5,076	(h)	58,592	63,829					
May .....	(i)	94	F 69	F 163	F 1,644	1,553	F 1,771	F 3,324	F 4,968	(h)	63,896	69,027					
5-Month Total ....	(i)	643	E 410	E 1,053	E 7,951	8,280	E 9,960	E 18,240	E 26,191	(h)	354,217	381,461					
2013 5-Month Total ....	(i)	646	302	948	8,964	8,155	9,881	18,036	27,001	(h)	337,226	365,175					
2012 5-Month Total ....	(i)	629	332	961	8,922	8,575	9,384	17,959	26,881	(h)	304,905	332,746					

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

<sup>b</sup> All commercial sector fuel use other than that in "Commercial CHP."

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

<sup>d</sup> All industrial sector fuel use other than that in "Coke Plants" and "Industrial CHP."

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

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

<sup>g</sup> Included in "Commercial Other."

<sup>h</sup> Included in "Industrial Non-CHP."

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

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

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

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

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

Sources: See end of section.

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

	Producers and Distributors	End-Use Sectors					Electric Power Sector <sup>c,d</sup>	Total		
		Residential <sup>a</sup> and Commercial	Industrial			Total				
			Coke Plants	Other <sup>b</sup>	Total					
1950 Year .....	NA	2,462	16,809	26,182	42,991	45,453	31,842	77,295		
1955 Year .....	NA	998	13,422	15,880	29,302	30,300	41,391	71,691		
1960 Year .....	NA	666	11,122	11,637	22,759	23,425	51,735	75,160		
1965 Year .....	NA	353	10,640	13,122	23,762	24,115	54,525	78,640		
1970 Year .....	NA	300	9,045	11,781	20,826	21,126	71,908	93,034		
1975 Year .....	12,108	233	8,797	8,529	17,326	17,559	110,724	140,391		
1980 Year .....	24,379	NA	9,067	11,951	21,018	21,018	183,010	228,407		
1985 Year .....	33,133	NA	3,420	10,438	13,857	13,857	156,376	203,367		
1990 Year .....	33,418	NA	3,329	8,716	12,044	12,044	156,166	201,629		
1995 Year .....	34,444	NA	2,632	5,702	8,334	8,334	126,304	169,083		
2000 Year .....	31,905	NA	1,494	4,587	6,081	6,081	<sup>d</sup> 102,296	140,282		
2001 Year .....	35,900	NA	1,510	6,006	7,516	7,516	138,496	181,912		
2002 Year .....	43,257	NA	1,364	5,792	7,156	7,156	141,714	192,127		
2003 Year .....	38,277	NA	905	4,718	5,623	5,623	121,567	165,468		
2004 Year .....	41,151	NA	1,344	4,842	6,186	6,186	106,669	154,006		
2005 Year .....	34,971	NA	2,615	5,582	8,196	8,196	101,137	144,304		
2006 Year .....	36,548	NA	2,928	6,506	9,434	9,434	140,964	186,946		
2007 Year .....	33,977	NA	1,936	5,624	7,560	7,560	151,221	192,758		
2008 Year .....	34,688	498	2,331	6,007	8,338	8,836	161,589	205,112		
2009 Year .....	47,718	529	1,957	5,109	7,066	7,595	189,467	244,780		
2010 Year .....	49,820	552	1,925	4,525	6,451	7,003	174,917	231,740		
2011 Year .....	51,897	603	2,610	4,455	7,065	7,668	172,387	231,951		
2012 January .....	48,318	587	2,507	4,280	6,786	7,374	180,091	235,783		
February .....	49,743	572	2,403	4,104	6,508	7,080	186,866	243,688		
March .....	51,141	557	2,300	3,929	6,229	6,786	195,380	253,307		
April .....	51,283	566	2,299	4,025	6,324	6,890	202,265	260,439		
May .....	50,726	575	2,297	4,122	6,419	6,995	203,137	260,858		
June .....	50,374	585	2,295	4,219	6,514	7,099	197,924	255,397		
July .....	49,120	589	2,329	4,318	6,647	7,236	183,958	240,314		
August .....	47,499	592	2,363	4,418	6,781	7,373	178,537	233,409		
September .....	46,231	596	2,396	4,518	6,914	7,510	182,020	235,761		
October .....	45,830	592	2,438	4,504	6,942	7,534	186,396	239,760		
November .....	45,550	587	2,480	4,489	6,970	7,557	188,291	241,398		
December .....	46,157	583	2,522	4,475	6,997	7,581	185,116	238,853		
2013 January .....	F 44,632	565	2,417	4,303	6,720	7,286	178,747	230,664		
February .....	F 42,087	548	2,312	4,131	6,443	6,991	175,325	224,403		
March .....	F 40,673	530	2,207	3,959	6,166	6,696	171,518	218,887		
April .....	F 41,922	529	2,305	3,964	6,268	6,797	172,654	221,373		
May .....	F 43,112	529	2,402	3,968	6,370	6,899	176,670	226,681		
June .....	F 41,735	528	2,500	3,973	6,473	7,001	170,534	219,270		
July .....	F 43,263	529	2,516	4,090	6,606	7,135	159,536	209,934		
August .....	F 40,782	529	2,531	4,208	6,739	7,269	154,119	202,169		
September .....	F 40,100	530	2,546	4,326	6,872	7,402	152,185	199,688		
October .....	F 39,805	518	2,431	4,253	6,684	7,202	153,352	200,360		
November .....	F 39,979	506	2,315	4,181	6,496	R 7,003	155,754	202,736		
December .....	F 42,692	R 495	2,200	4,108	6,308	R 6,803	147,973	R 197,468		
2014 January .....	F 42,632	465	2,064	3,921	5,984	6,449	132,324	181,404		
February .....	F 42,087	435	1,927	3,733	5,660	6,095	118,949	167,131		
March .....	F 41,673	405	1,791	3,545	5,336	5,741	117,974	165,388		
April .....	F 41,922	F 406	F 1,913	F 3,675	F 5,588	F 5,994	128,321	176,236		
May .....	F 42,112	F 407	F 2,041	F 3,807	F 5,848	F 6,255	136,218	184,585		

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

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

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

<sup>d</sup> 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.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## Table 6.1 Sources

### Production

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

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

### Waste Coal Supplied

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

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

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

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

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

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

#### **Imports and Exports**

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

#### **Stock Change**

1950 forward: Calculated from data in Table 6.3.

#### **Losses and Unaccounted for**

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

#### **Consumption**

1949 forward: Table 6.2.

### **Table 6.2 Sources**

#### **Residential and Commercial Total**

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

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

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

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

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

#### **Commercial Total**

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

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

#### **Commercial CHP**

1989 forward: Table 7.4c.

#### **Commercial Other**

1949 forward: Calculated as "Commercial Total" minus "Commercial CHP."

#### **Industrial Coke Plants**

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

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

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

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

#### **Other Industrial Total**

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

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

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

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

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

#### **Other Industrial CHP**

1989 forward: Table 7.4c.

#### **Other Industrial Non-CHP**

1949 forward: Calculated as "Other Industrial Total" minus "Other Industrial CHP."

#### **Transportation**

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

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

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

#### **Electric Power**

1949 forward: Table 7.4b.

### **Table 6.3 Sources**

#### **Producers and Distributors**

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

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

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

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

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

#### **Residential and Commercial**

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

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

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

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

#### **Industrial Coke Plants**

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

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

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

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

#### **Industrial Other**

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

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

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

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

#### **Electric Power**

1949 forward: Table 7.5.

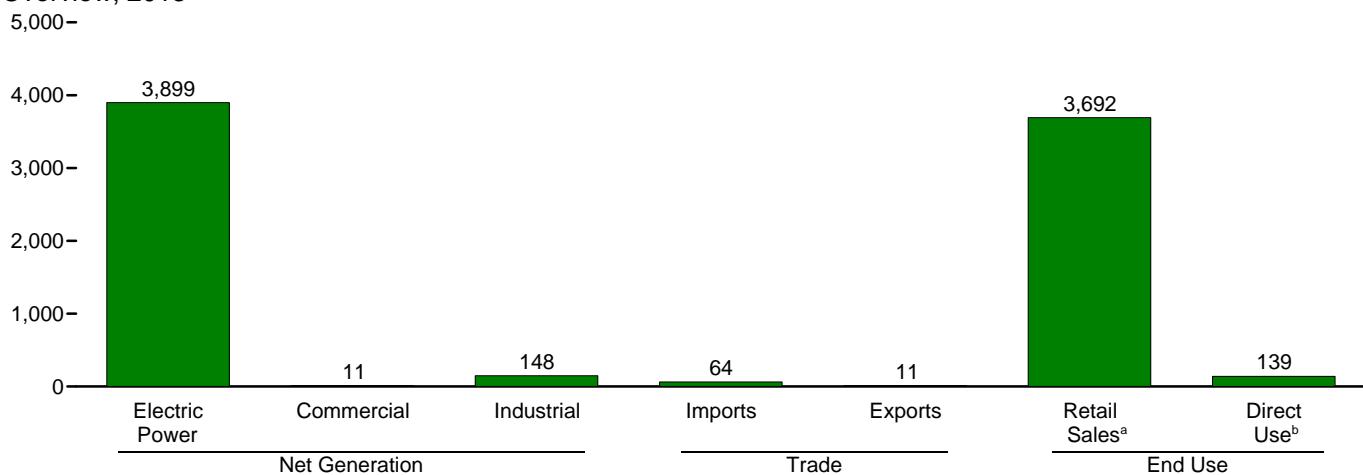
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## **7. Electricity**

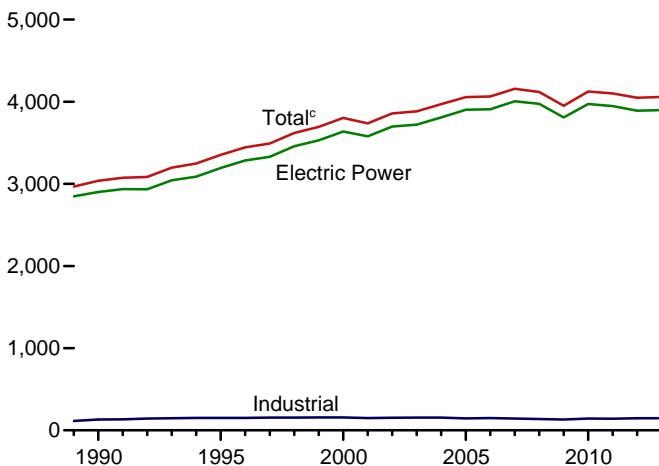
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**Figure 7.1 Electricity Overview**  
(Billion Kilowatthours)

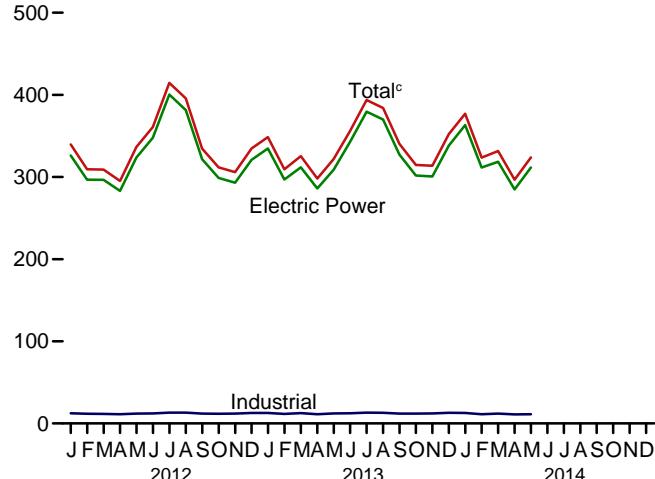
Overview, 2013



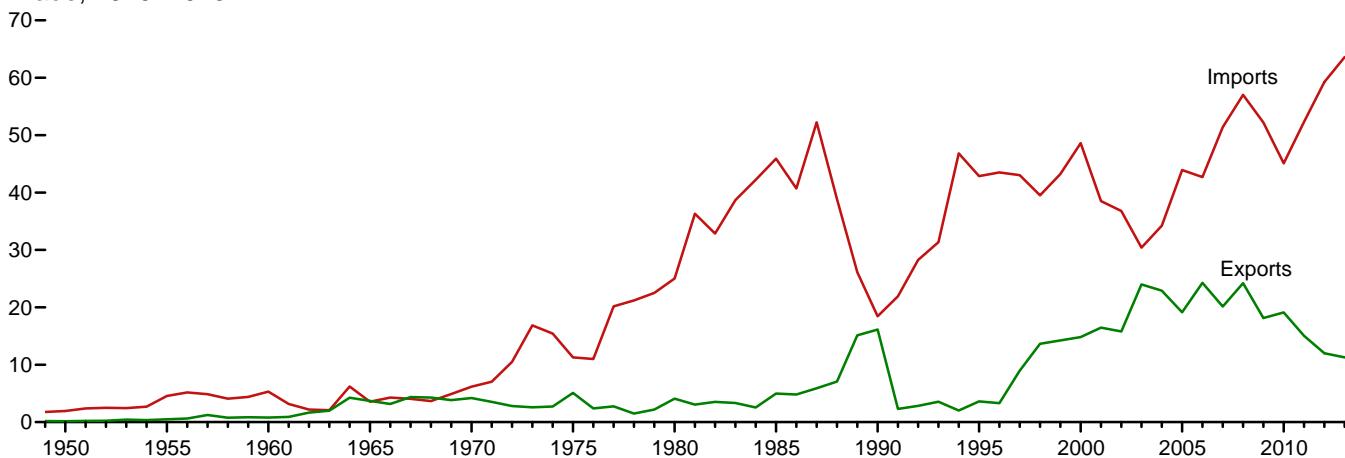
Net Generation by Sector, 1989–2013



Net Generation by Sector, Monthly



Trade, 1949–2013



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

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

<sup>c</sup> Includes commercial sector.  
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.  
Source: Table 7.1.

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

	Net Generation				Trade			T&D Losses <sup>e</sup> and Unaccounted for <sup>f</sup>	End Use		
	Electric Power Sector <sup>a</sup>	Commercial Sector <sup>b</sup>	Industrial Sector <sup>c</sup>	Total	Imports <sup>d</sup>	Exports <sup>d</sup>	Net Imports <sup>d</sup>		Retail Sales <sup>g</sup>	Direct Use <sup>h</sup>	Total
1950 Total .....	329	NA	5	334	2	(s)	2	44	291	NA	291
1955 Total .....	547	NA	3	550	5	(s)	4	58	497	NA	497
1960 Total .....	756	NA	4	759	5	1	5	76	688	NA	688
1965 Total .....	1,055	NA	3	1,058	4	4	(s)	104	954	NA	954
1970 Total .....	1,532	NA	3	1,535	6	4	2	145	1,392	NA	1,392
1975 Total .....	1,918	NA	3	1,921	11	5	6	180	1,747	NA	1,747
1980 Total .....	2,286	NA	3	2,290	25	4	21	216	2,094	NA	2,094
1985 Total .....	2,470	NA	3	2,473	46	5	41	190	2,324	NA	2,324
1990 Total .....	2,901	6	c 131	3,038	18	16	2	203	2,713	125	2,837
1995 Total .....	3,194	8	151	3,353	43	4	39	229	3,013	151	3,164
2000 Total .....	3,638	8	157	3,802	49	15	34	244	3,421	171	3,592
2001 Total .....	3,580	7	149	3,737	39	16	22	202	3,394	163	3,557
2002 Total .....	3,698	7	153	3,858	37	16	21	248	3,465	166	3,632
2003 Total .....	3,721	7	155	3,883	30	24	6	228	3,494	168	3,662
2004 Total .....	3,808	8	154	3,971	34	23	11	266	3,547	168	3,716
2005 Total .....	3,902	8	145	4,055	44	19	25	269	3,661	150	3,811
2006 Total .....	3,908	8	148	4,065	43	24	18	266	3,670	147	3,817
2007 Total .....	4,005	8	143	4,157	51	20	31	298	3,765	126	3,890
2008 Total .....	3,974	8	137	4,119	57	24	33	287	3,733	132	3,865
2009 Total .....	3,810	8	132	3,950	52	18	34	261	3,597	127	3,724
2010 Total .....	3,972	9	144	4,125	45	19	26	265	3,754	132	3,886
2011 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	348	5	1	4	23	318	E 12	330
February .....	297	1	12	309	5	1	4	14	289	E 11	300
March .....	312	1	13	325	5	1	4	23	294	E 12	306
April .....	286	1	11	298	5	1	3	16	275	E 11	285
May .....	309	1	12	322	5	1	5	28	287	E 11	298
June .....	343	1	12	356	6	1	5	32	317	E 12	329
July .....	380	1	13	394	6	1	5	31	356	E 12	368
August .....	370	1	13	384	6	1	6	27	350	E 12	363
September .....	327	1	12	340	5	1	4	12	321	E 11	332
October .....	302	1	12	315	5	1	4	15	292	E 11	303
November .....	301	1	12	314	5	1	4	27	279	E 12	291
December .....	338	1	13	352	5	1	4	30	314	E 12	326
Total .....	3,899	11	148	4,058	64	11	52	279	3,692	E 139	3,831
2014 January .....	363	1	13	377	5	1	4	30	339	E 12	351
February .....	312	1	11	324	4	1	3	7	309	E 11	320
March .....	319	1	12	332	5	2	3	24	300	E 11	311
April .....	285	1	11	297	4	1	3	16	273	E 10	283
May .....	312	1	11	324	5	1	4	29	288	E 11	299
5-Month Total ....	1,590	5	58	1,653	23	7	17	106	1,509	E 55	1,564
2013 5-Month Total ....	1,538	5	60	1,603	25	5	20	104	1,462	E 57	1,519
2012 5-Month Total ....	1,526	5	59	1,590	22	5	17	102	1,449	E 56	1,505

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

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

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

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

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

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

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

in 1996, other energy service providers.

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

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

Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.

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

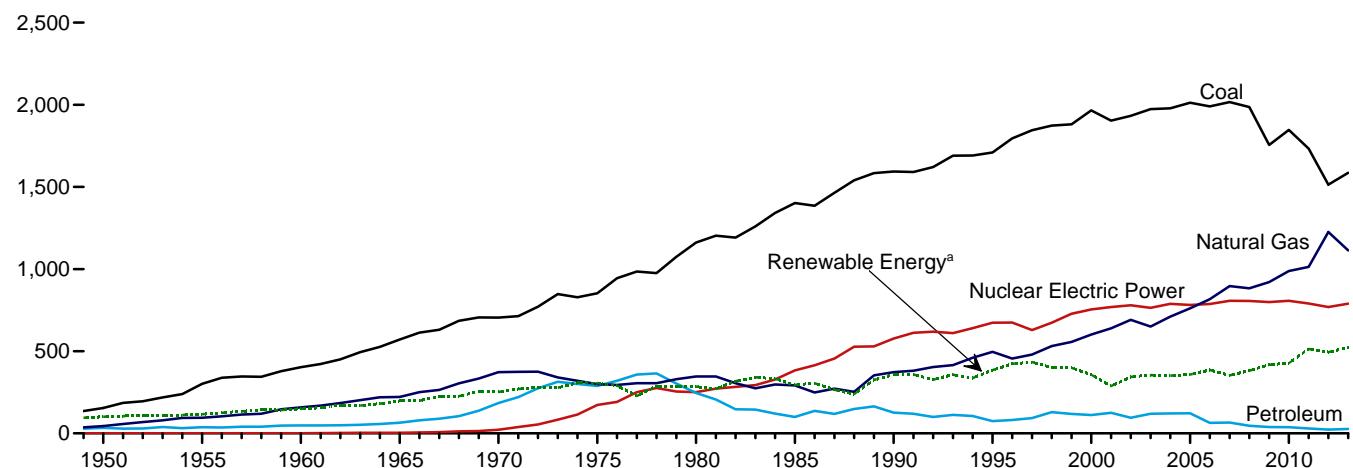
• Geographic coverage is the 50 states and the District of Columbia.

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

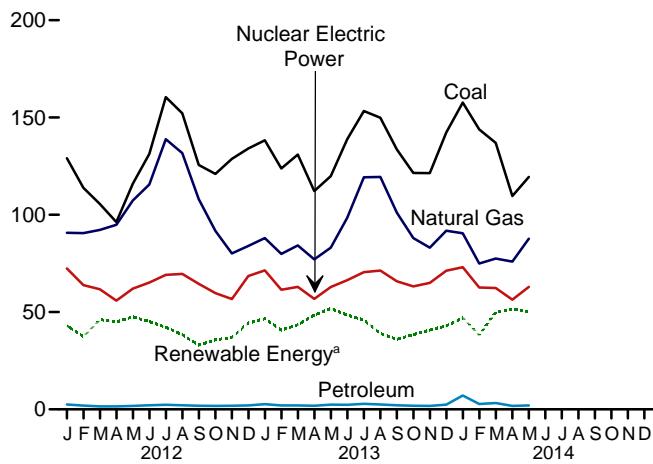
Sources: See end of section.

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

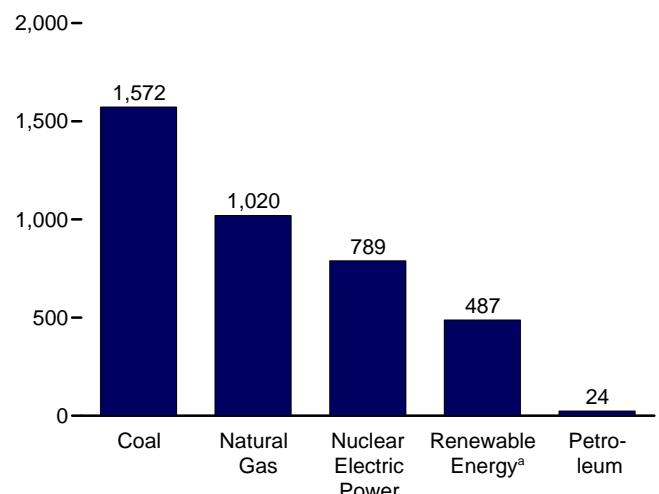
Total (All Sectors), Major Sources, 1949–2013



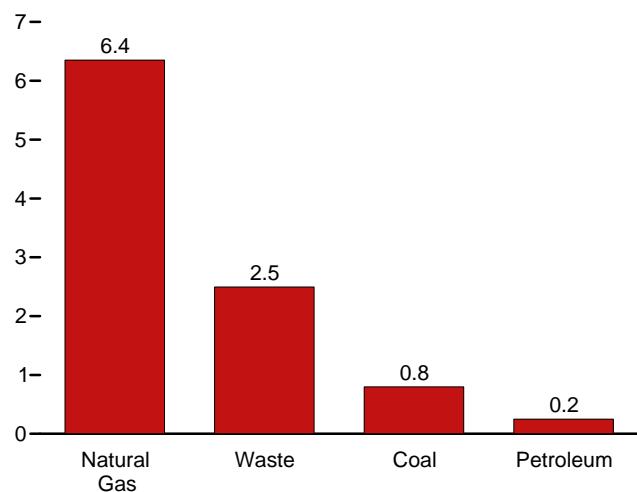
Total (All Sectors), Major Sources, Monthly



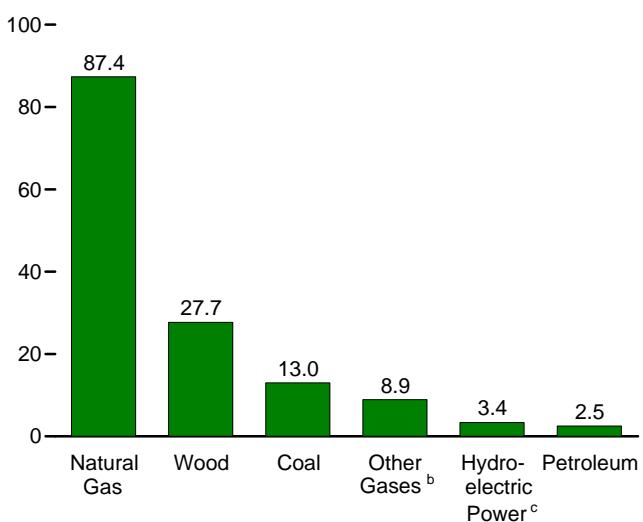
Electric Power Sector, Major Sources, 2013



Commercial Sector, Major Sources, 2013



Industrial Sector, Major Sources, 2013



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

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

<sup>c</sup> Conventional hydroelectric power.  
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#electricity>.

Sources: Tables 7.2a–7.2c.

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

	Fossil Fuels				Nuclear Electric Power	Hydro-electric Pumped Storage <sup>e</sup>	Renewable Energy						
							Conventional Hydro-electric Power <sup>f</sup>		Biomass		Geo-thermal	Solar/PV <sup>i</sup>	
	Coal <sup>a</sup>	Petroleum <sup>b</sup>	Natural Gas <sup>c</sup>	Other Gases <sup>d</sup>			Wood <sup>g</sup>	Waste <sup>h</sup>				Wind	
1950 Total .....	154,520	33,734	44,559	NA	0	(f)	100,885	390	NA	NA	NA	NA	334,088
1955 Total .....	301,363	37,138	95,285	NA	0	(f)	116,236	276	NA	NA	NA	NA	550,299
1960 Total .....	403,067	47,987	157,970	NA	518	(f)	149,440	140	NA	33	NA	NA	759,156
1965 Total .....	570,926	64,801	221,559	NA	3,657	(f)	196,984	269	NA	189	NA	NA	1,058,386
1970 Total .....	704,394	184,183	372,890	NA	21,804	(f)	250,957	136	220	525	NA	NA	1,535,111
1975 Total .....	852,786	289,095	299,778	NA	172,505	(f)	303,153	18	174	3,246	NA	NA	1,920,755
1980 Total .....	1,161,562	245,994	346,240	NA	251,116	(f)	279,182	275	158	5,073	NA	NA	2,289,600
1985 Total .....	1,402,128	100,202	291,946	NA	383,691	(f)	284,311	743	640	9,325	11	6	2,473,002
1990 Total <sup>k</sup> .....	1,594,011	126,460	372,765	10,383	576,862	-3,508	292,866	32,522	13,260	15,434	367	2,789	3,037,827
1995 Total .....	1,709,426	74,554	496,058	13,870	673,402	-2,725	310,833	36,521	20,405	13,378	497	3,164	3,353,487
2000 Total .....	1,966,265	111,221	601,038	13,955	753,893	-5,539	275,573	37,595	23,131	14,093	493	5,593	3,802,105
2001 Total .....	1,903,956	124,880	639,129	9,039	768,826	-8,823	216,961	35,200	14,548	13,741	543	6,737	3,736,644
2002 Total .....	1,933,130	94,567	691,006	11,463	780,064	-8,743	264,329	38,665	15,044	14,491	555	10,354	3,858,452
2003 Total .....	1,973,737	119,406	649,908	15,600	763,733	-8,535	275,806	37,529	15,812	14,424	534	11,187	3,883,185
2004 Total .....	1,978,301	121,145	710,100	15,252	788,528	-8,488	268,417	38,117	15,421	14,811	575	14,144	3,970,555
2005 Total .....	2,012,873	122,225	760,960	13,464	781,986	-6,558	270,321	38,856	15,420	14,692	550	17,811	4,055,423
2006 Total .....	1,990,511	64,166	816,441	14,177	787,219	-6,558	289,246	38,762	16,099	14,568	508	26,589	4,064,702
2007 Total .....	2,016,456	65,739	896,590	13,453	806,425	-6,896	247,510	39,014	16,525	14,637	612	34,450	4,156,745
2008 Total .....	1,985,801	46,243	882,981	11,707	806,208	-6,288	254,831	37,300	17,734	14,840	864	55,363	4,119,388
2009 Total .....	1,755,904	38,937	920,979	10,632	798,855	-4,627	273,445	36,050	18,443	15,009	891	73,886	3,950,331
2010 Total .....	1,847,290	37,061	987,697	11,313	806,968	-5,501	260,203	37,172	18,917	15,219	1,212	94,652	4,125,060
2011 Total .....	1,733,430	30,182	1,013,689	11,566	790,204	-6,421	319,355	37,449	19,222	15,316	1,818	120,177	4,100,141
2012 January .....	129,091	2,477	90,761	1,017	72,381	-348	23,107	3,314	1,601	1,263	95	13,632	339,528
February .....	113,872	1,902	90,610	1,044	63,847	-237	20,283	3,111	1,504	1,193	135	11,052	309,389
March .....	105,526	1,541	92,251	1,076	61,729	-281	25,909	3,034	1,623	1,285	231	14,026	309,091
April .....	96,285	1,503	94,829	1,057	55,871	-265	26,294	2,704	1,583	1,248	319	12,709	295,228
May .....	115,983	1,730	107,352	1,002	62,081	-371	28,643	2,937	1,654	1,304	463	12,541	336,518
June .....	131,261	2,068	115,598	972	65,140	-507	26,659	3,081	1,612	1,277	527	11,972	360,826
July .....	160,450	2,340	138,863	1,042	69,129	-619	26,491	3,352	1,721	1,321	510	8,822	414,640
August .....	152,181	2,118	131,736	1,050	69,602	-529	23,034	3,370	1,726	1,304	461	8,469	395,700
September .....	125,589	1,860	108,012	904	64,511	-431	17,604	3,227	1,626	1,300	458	8,790	334,585
October .....	120,999	1,805	91,725	895	59,743	-378	16,501	3,113	1,716	1,329	431	12,636	311,651
November .....	128,727	1,810	80,169	875	56,713	-409	18,732	3,190	1,684	1,347	347	11,649	305,975
December .....	134,079	2,036	83,989	963	68,584	-576	22,984	3,365	1,773	1,390	349	14,524	334,635
Total .....	1,514,043	23,190	1,225,894	11,898	769,331	-4,950	276,240	37,799	19,823	15,562	4,327	140,822	4,047,765
2013 January .....	138,265	2,708	88,012	998	71,406	-463	25,114	3,424	1,632	1,443	319	14,633	348,490
February .....	123,828	1,974	79,874	877	61,483	-300	20,511	3,141	1,435	1,301	479	13,907	309,435
March .....	130,961	2,011	84,281	989	62,947	-409	20,654	3,372	1,708	1,424	667	15,643	325,301
April .....	112,232	1,887	77,128	925	56,767	-288	24,758	2,701	1,634	1,330	734	17,294	298,074
May .....	119,898	2,410	83,063	1,059	62,848	-355	28,549	3,140	1,747	1,357	827	16,264	321,834
June .....	138,849	2,341	98,517	1,015	66,430	-355	27,308	3,287	1,702	1,377	930	13,766	356,224
July .....	153,304	2,839	119,274	1,150	70,539	-345	27,240	3,526	1,750	1,404	861	11,146	393,799
August .....	149,875	2,469	119,480	1,144	71,344	-454	21,712	3,586	1,717	1,379	1,001	9,593	383,968
September .....	133,577	2,108	101,102	1,037	65,799	-389	16,929	3,396	1,624	1,356	979	11,709	340,293
October .....	121,474	1,883	88,049	966	63,184	-320	17,307	3,327	1,659	1,425	967	13,720	314,683
November .....	121,431	1,807	83,110	1,064	64,975	-345	17,732	3,413	1,652	1,298	750	15,888	313,752
December .....	142,304	2,426	91,777	1,048	71,294	-402	21,323	3,623	1,696	1,424	737	14,100	352,357
Total .....	1,585,998	26,863	1,113,665	12,271	789,017	-4,424	269,136	39,937	19,957	16,517	9,252	167,665	4,058,209
2014 January .....	157,699	7,130	90,489	947	73,064	-263	21,616	3,635	1,583	1,396	774	17,989	377,019
February .....	143,908	2,798	74,987	760	62,639	-419	17,430	3,271	1,344	1,257	858	14,001	323,662
March .....	137,004	3,283	77,506	845	62,397	-398	24,243	3,574	1,628	1,376	1,355	17,779	331,595
April .....	109,686	1,730	75,975	778	56,385	-362	25,075	3,219	1,608	1,359	1,607	18,747	296,766
May .....	119,483	2,006	87,700	926	62,947	-603	26,442	3,373	1,628	1,385	1,880	15,532	323,731
5-Month Total .....	667,781	16,937	406,657	4,256	317,432	-2,045	114,806	17,073	7,791	6,773	6,474	84,048	1,652,773
2013 5-Month Total .....	625,184	10,989	412,357	4,848	315,452	-1,814	119,585	15,778	8,156	6,855	3,026	77,741	1,603,134
2012 5-Month Total .....	560,757	9,153	475,802	5,196	315,909	-1,502	124,236	15,100	7,966	6,294	1,243	63,961	1,589,754

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

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

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

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

<sup>e</sup> Pumped storage facility production minus energy used for pumping.

<sup>f</sup> Through 1989, hydroelectric pumped storage is included in "Conventional Hydroelectric Power."

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

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

<sup>i</sup> Solar thermal and photovoltaic (PV) energy.

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

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

NA=Not available.

Notes:

- See Note 1, "Coverage of Electricity Statistics," at end of section.
- Totals may not equal sum of components due to independent rounding.
- Geographic coverage is the 50 states and the District of Columbia.

Web 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 7.2b and 7.2c.

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

	Fossil Fuels				Nuclear Electric Power	Hydro-electric Pumped Storage <sup>e</sup>	Renewable Energy						
							Conventional Hydroelectric Power <sup>f</sup>	Biomass		Geo-thermal	Solar/PV <sup>i</sup>		
	Coal <sup>a</sup>	Petroleum <sup>b</sup>	Natural Gas <sup>c</sup>	Other Gases <sup>d</sup>				Wood <sup>g</sup>	Waste <sup>h</sup>				
1950 Total .....	154,520	33,734	44,559	NA	0	(f)	95,938	390	NA	NA	NA	NA	329,141
1955 Total .....	301,363	37,138	95,285	NA	0	(f)	112,975	276	NA	NA	NA	NA	547,038
1960 Total .....	403,067	47,987	157,970	NA	518	(f)	145,833	140	NA	33	NA	NA	755,549
1965 Total .....	570,926	64,801	221,559	NA	3,657	(f)	193,851	269	NA	189	NA	NA	1,055,252
1970 Total .....	704,394	184,183	372,890	NA	21,804	(f)	247,714	136	220	525	NA	NA	1,531,868
1975 Total .....	852,786	289,095	299,778	NA	172,505	(f)	300,047	18	174	3,246	NA	NA	1,917,649
1980 Total .....	1,161,562	245,994	346,240	NA	251,116	(f)	276,021	275	158	5,073	NA	NA	2,286,439
1985 Total .....	1,402,128	100,202	291,946	NA	383,691	(f)	281,149	743	640	9,325	11	6	2,469,841
1990 Total <sup>k</sup> .....	1,572,109	118,864	309,466	621	576,862	-3,508	289,753	7,032	11,500	15,434	367	2,789	2,901,322
1995 Total .....	1,686,056	68,146	419,179	1,927	673,402	-2,725	305,410	7,597	17,986	13,378	497	3,164	3,194,230
2000 Total .....	1,943,111	105,192	517,978	2,028	753,893	-5,539	271,338	8,916	20,307	14,093	493	5,593	3,637,529
2001 Total .....	1,882,826	119,149	554,940	586	768,826	-8,823	213,749	8,294	12,944	13,741	543	6,737	3,580,053
2002 Total .....	1,910,613	89,733	607,683	1,970	780,064	-8,743	260,491	9,009	13,145	14,491	555	10,354	3,698,458
2003 Total .....	1,952,714	113,697	567,303	2,647	763,733	-8,535	271,512	9,528	13,808	14,424	534	11,187	3,721,159
2004 Total .....	1,957,188	114,678	627,172	3,568	788,528	-8,488	265,064	9,736	13,062	14,811	575	14,144	3,808,360
2005 Total .....	1,992,054	116,482	683,829	3,777	781,986	-6,558	267,040	10,570	13,031	14,692	550	17,811	3,902,192
2006 Total .....	1,969,737	59,708	734,417	4,254	787,219	-6,558	286,254	10,341	13,927	14,568	508	26,589	3,908,077
2007 Total .....	1,998,390	61,306	814,752	4,042	806,425	-6,896	245,843	10,711	14,294	14,637	612	34,450	4,005,343
2008 Total .....	1,968,838	42,881	802,372	3,200	806,208	-6,288	253,096	10,638	15,379	14,840	864	55,363	3,974,349
2009 Total .....	1,741,123	35,811	841,006	3,058	798,855	-4,627	271,506	10,738	15,954	15,009	891	73,886	3,809,837
2010 Total .....	1,827,738	34,679	901,389	2,967	806,968	-5,501	258,455	11,446	16,376	15,219	1,206	94,636	3,972,386
2011 Total .....	1,717,891	28,202	926,290	2,939	790,204	-6,421	317,531	10,733	15,989	15,316	1,727	120,121	3,948,186
 2012 January .....	127,874	2,132	83,122	263	72,381	-348	22,830	971	1,353	1,263	91	13,624	326,186
February .....	112,774	1,672	83,308	256	63,847	-237	20,041	912	1,250	1,193	129	11,045	296,790
March .....	104,410	1,304	85,001	261	61,729	-281	25,672	892	1,353	1,285	221	14,019	296,498
April .....	95,284	1,287	87,748	254	55,871	-265	26,113	716	1,317	1,248	305	12,702	283,182
May .....	114,930	1,527	99,625	244	62,081	-371	28,427	813	1,386	1,304	445	12,535	323,599
June .....	130,147	1,840	107,685	253	65,140	-507	26,482	935	1,369	1,277	508	11,967	347,760
July .....	159,178	2,086	130,133	266	69,129	-619	26,352	1,047	1,444	1,321	492	8,818	400,315
August .....	150,941	1,821	123,160	266	69,602	-529	22,880	1,060	1,432	1,304	445	8,465	381,494
September .....	124,496	1,595	100,267	232	64,511	-431	17,443	949	1,362	1,300	439	8,785	321,586
October .....	119,952	1,556	84,207	225	59,743	-378	16,306	876	1,422	1,329	415	12,628	298,905
November .....	127,648	1,515	72,601	211	56,713	-409	18,518	911	1,389	1,347	335	11,642	293,046
December .....	132,923	1,737	75,934	253	68,584	-576	22,795	968	1,478	1,390	339	14,517	320,996
Total .....	1,500,557	20,072	1,132,791	2,984	769,331	-4,950	273,859	11,050	16,555	15,562	4,164	140,749	3,890,358
 2013 January .....	137,168	2,428	79,820	244	71,406	-463	24,794	1,016	1,344	1,443	308	14,626	334,716
February .....	122,759	1,799	72,491	198	61,483	-300	20,163	908	1,172	1,301	461	13,899	296,860
March .....	129,790	1,766	76,346	220	62,947	-409	20,352	1,011	1,410	1,424	642	15,634	311,758
April .....	111,221	1,644	70,014	226	56,767	-288	24,501	669	1,358	1,330	704	17,284	286,013
May .....	118,735	2,136	75,479	274	62,848	-355	28,225	921	1,469	1,357	794	16,254	308,782
June .....	137,631	2,089	90,813	284	66,430	-355	27,010	985	1,413	1,377	896	13,758	342,970
July .....	151,994	2,561	111,040	323	70,539	-345	26,925	1,094	1,449	1,404	831	11,139	379,613
August .....	148,684	2,201	111,354	321	71,344	-454	21,473	1,172	1,407	1,379	962	9,587	370,063
September .....	132,449	1,871	93,574	303	65,799	-389	16,698	1,091	1,327	1,356	943	11,702	327,318
October .....	120,361	1,682	80,497	295	63,184	-320	17,077	1,038	1,347	1,425	933	13,713	301,805
November .....	120,290	1,673	75,197	333	64,975	-345	17,527	1,124	1,346	1,298	728	15,879	300,597
December .....	141,097	2,245	83,337	325	71,294	-402	20,994	1,200	1,376	1,424	716	14,091	338,299
Total .....	1,572,179	24,094	1,019,962	3,345	789,017	-4,424	265,738	12,228	16,416	16,517	8,918	167,567	3,898,792
 2014 January .....	156,370	6,780	82,449	304	73,064	-263	21,268	1,263	1,281	1,396	754	17,977	363,189
February .....	142,691	2,562	67,888	241	62,639	-419	17,179	1,112	1,098	1,257	841	13,991	311,554
March .....	135,755	3,038	69,871	240	62,397	-398	24,034	1,225	1,343	1,376	1,321	17,767	318,574
April .....	108,652	1,568	68,974	232	56,385	-362	24,889	937	1,317	1,359	1,565	18,733	284,793
May .....	118,389	1,865	80,732	336	62,947	-603	26,241	1,017	1,355	1,385	1,831	15,520	311,611
5-Month Total .....	661,856	15,813	369,913	1,353	317,432	-2,045	113,612	5,554	6,393	6,773	6,312	83,988	1,589,721
2013 5-Month Total .....	619,673	9,773	374,149	1,161	315,452	-1,814	118,035	4,525	6,752	6,855	2,908	77,698	1,538,128
2012 5-Month Total .....	555,272	7,922	438,804	1,278	315,909	-1,502	123,083	4,305	6,660	6,294	1,192	63,926	1,526,256

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

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

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

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

<sup>e</sup> Pumped storage facility production minus energy used for pumping.

<sup>f</sup> Through 1989, hydroelectric pumped storage is included in "Conventional Hydroelectric Power."

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

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

<sup>i</sup> Solar thermal and photovoltaic (PV) energy.

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

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

NA=Not available.

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

	Commercial Sector <sup>a</sup>					Industrial Sector <sup>b</sup>									
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Biomass	Total <sup>g</sup>	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>h</sup>	Hydroelectric Power <sup>i</sup>	Biomass		Total <sup>k</sup>		
				Waste <sup>f</sup>							Wood <sup>j</sup>	Waste <sup>f</sup>			
1950 Total .....	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,946	NA	NA	4,946		
1955 Total .....	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,261	NA	NA	3,261		
1960 Total .....	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,607	NA	NA	3,607		
1965 Total .....	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,134	NA	NA	3,134		
1970 Total .....	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,244	NA	NA	3,244		
1975 Total .....	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,106	NA	NA	3,106		
1980 Total .....	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,161	NA	NA	3,161		
1985 Total .....	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,161	NA	NA	3,161		
1990 Total .....	796	589	3,272	812	5,837	21,107	7,008	60,007	9,641	2,975	25,379	949	130,830		
1995 Total .....	998	379	5,162	1,519	8,232	22,372	6,030	71,717	11,943	5,304	28,868	900	151,025		
2000 Total .....	1,097	432	4,262	1,985	7,903	22,056	5,597	78,798	11,927	4,135	28,652	839	156,673		
2001 Total .....	995	438	4,434	1,007	7,416	20,135	5,293	79,755	8,454	3,145	26,888	596	149,175		
2002 Total .....	992	431	4,310	1,053	7,415	21,525	4,403	79,013	9,493	3,825	29,643	846	152,580		
2003 Total .....	1,206	423	3,899	1,289	7,496	19,817	5,285	78,705	12,953	4,222	27,988	715	154,530		
2004 Total .....	1,340	499	3,969	1,562	8,270	19,773	5,967	78,959	11,684	3,248	28,367	797	153,925		
2005 Total .....	1,353	375	4,249	1,657	8,492	19,466	5,368	72,882	9,687	3,195	28,271	733	144,739		
2006 Total .....	1,310	235	4,355	1,599	8,371	19,464	4,223	77,669	9,923	2,899	28,400	572	148,254		
2007 Total .....	1,371	189	4,257	1,599	8,273	16,694	4,243	77,580	9,411	1,590	28,287	631	143,128		
2008 Total .....	1,261	142	4,188	1,534	7,926	15,703	3,219	76,421	8,507	1,676	26,641	821	137,113		
2009 Total .....	1,096	163	4,225	1,748	8,165	13,686	2,963	75,748	7,574	1,868	25,292	740	132,329		
2010 Total .....	1,111	124	4,725	1,672	8,592	18,441	2,258	81,583	8,343	1,668	25,706	869	144,082		
2011 Total .....	1,049	89	5,487	2,315	10,080	14,490	1,891	81,911	8,624	1,799	26,691	917	141,875		
2012 January .....	83	15	543	186	916	1,135	330	7,096	754	275	2,340	62	12,425		
February .....	81	16	531	182	900	1,017	214	6,771	788	240	2,197	72	11,699		
March .....	74	12	537	188	911	1,041	225	6,713	815	234	2,140	82	11,681		
April .....	66	17	510	187	888	935	199	6,571	803	178	1,986	79	11,158		
May .....	69	12	541	193	930	984	191	7,186	758	212	2,122	75	11,988		
June .....	79	21	585	180	975	1,035	207	7,327	719	175	2,144	62	12,091		
July .....	83	19	716	198	1,135	1,189	234	8,013	776	137	2,303	79	13,190		
August .....	81	19	620	208	1,046	1,159	279	7,956	784	152	2,308	85	13,160		
September .....	66	15	537	196	930	1,026	250	7,209	672	159	2,277	68	12,069		
October .....	57	20	513	200	904	990	229	7,006	670	192	2,235	94	11,841		
November .....	67	16	488	199	876	1,012	280	7,080	664	213	2,277	96	12,052		
December .....	77	16	483	203	888	1,079	283	7,573	709	186	2,394	93	12,751		
<b>Total .....</b>	<b>883</b>	<b>196</b>	<b>6,603</b>	<b>2,319</b>	<b>11,301</b>	<b>12,603</b>	<b>2,922</b>	<b>86,500</b>	<b>8,913</b>	<b>2,353</b>	<b>26,725</b>	<b>948</b>	<b>146,107</b>		
2013 January .....	76	34	558	202	980	1,020	246	7,634	755	317	2,406	86	12,795		
February .....	83	25	503	184	904	986	150	6,880	678	345	2,230	79	11,671		
March .....	72	16	516	217	955	1,099	229	7,419	769	298	2,359	81	12,589		
April .....	55	16	440	195	841	956	227	6,674	700	253	2,029	81	11,220		
May .....	67	18	491	200	909	1,097	256	7,093	785	320	2,218	78	12,143		
June .....	75	17	512	205	948	1,142	235	7,192	731	295	2,300	84	12,306		
July .....	77	27	606	213	1,065	1,233	251	7,628	827	312	2,429	88	13,121		
August .....	66	17	587	218	1,041	1,125	251	7,539	823	235	2,412	92	12,864		
September .....	54	16	543	212	972	1,075	221	6,984	734	230	2,303	85	12,003		
October .....	54	16	500	218	923	1,059	185	7,052	671	228	2,288	95	11,955		
November .....	51	16	528	209	928	1,090	117	7,385	731	204	2,285	97	12,227		
December .....	69	30	566	222	1,014	1,138	125	7,873	722	326	2,418	98	13,044		
<b>Total .....</b>	<b>799</b>	<b>248</b>	<b>6,351</b>	<b>2,496</b>	<b>11,480</b>	<b>13,020</b>	<b>2,521</b>	<b>87,352</b>	<b>8,926</b>	<b>3,363</b>	<b>27,678</b>	<b>1,044</b>	<b>147,937</b>		
2014 January .....	105	128	564	213	1,137	1,225	222	7,476	643	344	2,367	89	12,694		
February .....	97	44	516	177	943	1,121	182	6,583	519	247	2,154	69	11,166		
March .....	88	46	514	204	995	1,162	199	7,121	605	205	2,342	82	12,026		
April .....	62	17	488	210	934	971	145	6,514	546	181	2,279	82	11,039		
May .....	57	16	495	200	937	1,038	125	6,473	590	197	2,347	73	11,182		
<b>5-Month Total ....</b>	<b>408</b>	<b>251</b>	<b>2,577</b>	<b>1,003</b>	<b>4,945</b>	<b>5,516</b>	<b>873</b>	<b>34,167</b>	<b>2,903</b>	<b>1,175</b>	<b>11,488</b>	<b>395</b>	<b>58,107</b>		
<b>2013 5-Month Total ....</b>	<b>353</b>	<b>108</b>	<b>2,508</b>	<b>999</b>	<b>4,588</b>	<b>5,158</b>	<b>1,108</b>	<b>35,699</b>	<b>3,686</b>	<b>1,534</b>	<b>11,243</b>	<b>406</b>	<b>60,417</b>		
<b>2012 5-Month Total ....</b>	<b>372</b>	<b>72</b>	<b>2,661</b>	<b>935</b>	<b>4,546</b>	<b>5,113</b>	<b>1,160</b>	<b>34,336</b>	<b>3,918</b>	<b>1,140</b>	<b>10,786</b>	<b>371</b>	<b>58,953</b>		

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

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

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

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

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

<sup>f</sup> Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass. Through 2010, also includes non-renewable waste (municipal solid waste from non-biogenic sources, and tire-derived fuels).

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

<sup>h</sup> Blast furnace gas, and other manufactured and waste gases derived from

fossil fuels. Through 2010, also includes propane gas.

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

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

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

NA=Not available.

Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.

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

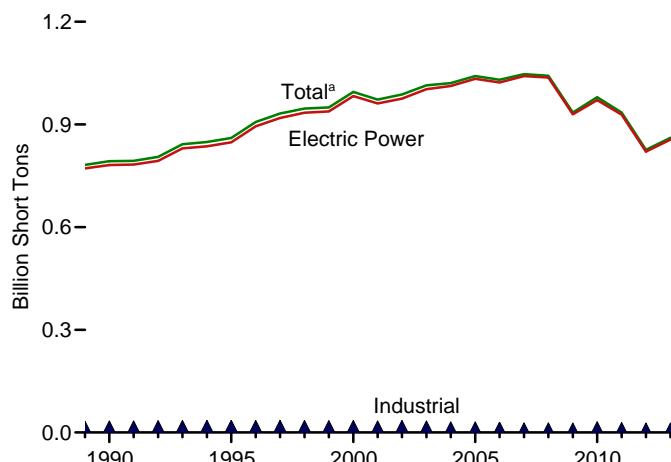
• Geographic coverage is the 50 states and the District of Columbia.

Web 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.

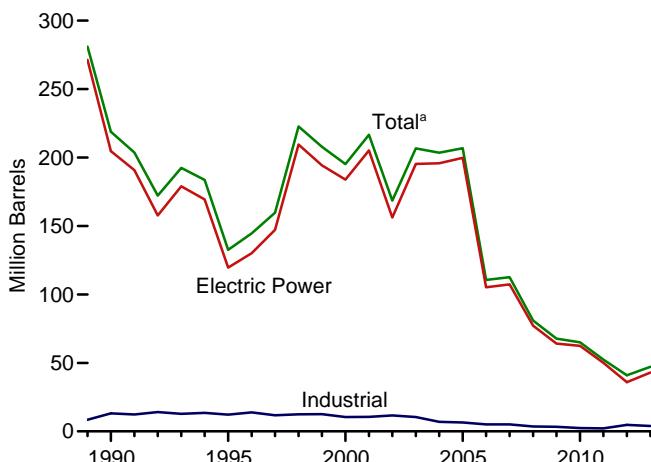
Sources: See end of section.

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

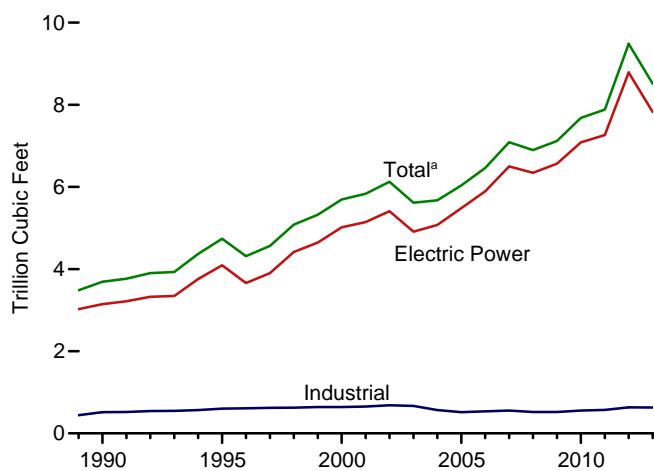
Coal by Sector, 1989–2013



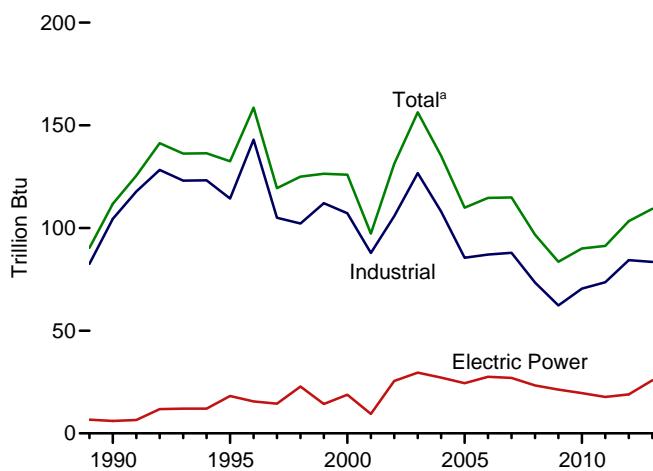
Petroleum by Sector, 1989–2013



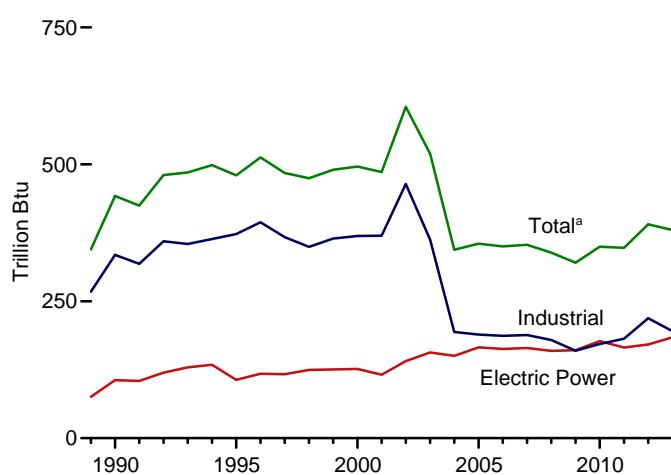
Natural Gas by Sector, 1989–2013



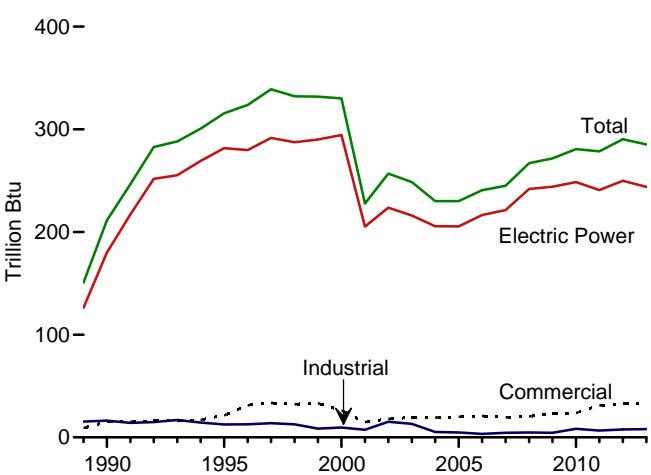
Other Gases<sup>b</sup> by Sector, 1989–2013



Wood by Sector, 1989–2013



Waste by Sector, 1989–2013



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

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

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

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

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Biomass		Other <sup>h</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e</sup>			Wood <sup>i</sup>	Waste <sup>j</sup>	
		Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu		
1950 Total .....	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total .....	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total .....	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total .....	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total .....	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total .....	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total .....	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total .....	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total <sup>k</sup> .....	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 .....	74,985	1,014	1,569	231	382	4,726	660	9	32	23	14
February .....	67,141	676	1,010	134	313	3,386	593	8	29	21	13
March .....	70,395	654	832	96	371	3,435	632	9	32	24	15
April .....	60,899	661	827	110	347	3,334	587	8	25	23	14
May .....	64,737	816	817	116	475	4,123	641	10	30	24	15
June .....	75,178	681	903	92	481	4,082	765	9	32	24	16
July .....	83,223	1,085	1,466	156	480	5,108	939	10	34	25	16
August .....	81,984	693	979	103	495	4,251	929	10	35	24	16
September .....	72,704	661	831	110	452	3,862	777	9	32	23	15
October .....	66,359	606	801	87	408	3,535	665	9	32	24	15
November .....	65,902	733	744	106	309	3,127	629	10	33	23	14
December .....	77,283	1,016	1,174	163	378	4,245	694	9	35	26	16
Total .....	860,790	9,294	11,952	1,505	4,893	47,214	8,512	109	380	285	182
2014 January .....	83,710	4,918	4,426	1,032	446	12,607	689	9	36	23	14
February .....	76,350	1,294	1,552	179	376	4,905	573	7	33	20	12
March .....	72,320	1,469	1,759	294	439	5,718	585	8	36	24	15
April .....	58,747	599	782	81	313	3,028	575	7	31	23	14
May .....	64,097	783	678	83	384	3,464	673	9	33	23	15
5-Month Total ....	355,225	9,061	9,197	1,670	1,959	29,722	3,096	39	168	114	72
2013 5-Month Total ....	338,158	3,820	5,054	688	1,888	19,004	3,114	43	147	115	73
2012 5-Month Total ....	305,793	3,736	4,343	503	1,533	16,249	3,638	45	156	117	83

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

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

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

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

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

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

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

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

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

tire-derived fuels).

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

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

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

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

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

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

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

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Biomass		Other <sup>i</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>e</sup>			Wood <sup>h</sup>	Waste <sup>i</sup>	
		Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu		
1950 Total .....	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total .....	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total .....	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total .....	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total .....	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total .....	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total .....	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total .....	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total <sup>k</sup> .....	781,301	16,394	183,285	25	1,008	204,745	3,147	6	106	180	(s)
1995 Total .....	847,854	18,066	88,895	441	2,452	119,663	4,094	18	106	282	2
2000 Total .....	982,713	29,722	138,047	403	3,155	183,946	5,014	19	126	294	1
2001 Total .....	961,523	29,056	159,150	374	3,308	205,119	5,142	9	116	205	109
2002 Total .....	975,251	21,810	104,577	1,243	5,705	156,154	5,408	25	141	224	137
2003 Total .....	1,003,036	27,441	137,361	1,937	5,719	195,336	4,909	30	156	216	136
2004 Total .....	1,012,459	18,793	138,831	2,511	7,135	195,809	5,075	27	150	206	131
2005 Total .....	1,033,567	19,450	138,337	2,591	7,877	199,760	5,485	24	166	205	116
2006 Total .....	1,022,802	12,578	56,347	1,783	6,905	105,235	5,891	28	163	216	117
2007 Total .....	1,041,346	15,135	62,072	2,496	5,523	107,316	6,502	27	165	221	117
2008 Total .....	1,036,891	12,318	37,222	2,608	5,000	77,149	6,342	23	159	242	122
2009 Total .....	929,692	11,848	27,768	2,110	4,485	64,151	6,567	21	160	244	115
2010 Total .....	971,245	13,677	23,560	1,848	4,679	62,477	7,085	20	177	249	116
2011 Total .....	928,857	10,961	13,861	1,655	4,726	50,105	7,265	18	166	241	133
2012 January .....	70,305	809	965	38	389	3,759	621	2	15	20	11
February .....	62,572	649	735	80	307	2,997	619	2	14	19	10
March .....	57,053	607	848	93	168	2,388	650	2	14	20	11
April .....	51,427	683	778	82	157	2,328	689	2	11	20	10
May .....	62,417	868	803	112	200	2,784	785	2	13	21	11
June .....	71,251	853	1,278	121	222	3,364	852	2	15	21	12
July .....	86,036	926	1,547	127	244	3,821	1,052	2	16	22	12
August .....	82,209	726	1,099	110	257	3,222	974	2	16	22	11
September .....	69,074	634	807	80	241	2,726	777	1	15	20	11
October .....	66,104	681	868	88	220	2,735	644	1	13	21	11
November .....	69,521	728	769	78	229	2,722	556	1	14	21	11
December .....	72,791	835	795	331	226	3,092	571	2	15	22	11
Total .....	820,762	9,000	11,292	1,339	2,861	35,937	8,788	19	171	250	132
2013 January .....	74,596	987	1,497	218	323	4,317	600	2	15	20	10
February .....	66,767	658	963	129	284	3,171	538	1	14	17	9
March .....	69,973	636	801	88	305	3,052	574	2	15	20	11
April .....	60,534	639	801	100	281	2,943	535	2	10	20	10
May .....	64,318	796	785	99	403	3,696	586	2	14	21	11
June .....	74,740	662	871	86	412	3,677	708	2	15	21	11
July .....	82,750	1,053	1,419	148	410	4,669	878	2	17	22	12
August .....	81,553	668	949	95	426	3,842	869	3	17	20	11
September .....	72,293	643	807	101	387	3,486	723	2	16	20	11
October .....	65,968	587	776	82	356	3,226	610	2	16	20	10
November .....	65,509	716	718	97	279	2,925	571	3	17	20	10
December .....	76,857	998	1,121	150	342	3,978	633	3	18	23	12
Total .....	855,856	9,044	11,507	1,393	4,207	42,981	7,825	26	184	244	127
2014 January .....	83,248	4,833	4,219	1,013	404	12,087	631	3	19	20	10
February .....	75,927	1,263	1,474	167	332	4,564	521	2	18	17	9
March .....	71,881	1,439	1,678	279	389	5,342	529	2	19	20	11
April .....	58,381	578	758	77	267	2,748	524	2	15	20	10
May .....	63,702	766	653	76	349	3,241	621	3	16	20	11
5-Month Total ....	353,139	8,880	8,781	1,613	1,742	27,982	2,826	12	87	97	50
2013 5-Month Total ....	336,186	3,717	4,847	634	1,596	17,178	2,833	8	68	98	51
2012 5-Month Total ....	303,776	3,616	4,129	404	1,222	14,256	3,363	8	68	100	53

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

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

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

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

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

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

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

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

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

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

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

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

Notes: • Data are for fuels consumed to produce electricity. Data also include fuels consumed to produce useful thermal output at a small number of electric utility combined-heat-and-power (CHP) plants. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 1, "Coverage of Electricity Statistics," at end of section.

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

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

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

Sources: See end of section.

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

	Commercial Sector <sup>a</sup>				Industrial Sector <sup>b</sup>					
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Biomass	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>g</sup>	Biomass	Other <sup>i</sup>
				Waste <sup>f</sup>					Wood <sup>h</sup>	
	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
1995 Total .....	569	649	43	21	12,171	12,265	601	114	373	13
2000 Total .....	514	823	37	26	11,706	10,459	640	107	369	10
2001 Total .....	532	1,023	36	15	10,636	10,530	654	88	370	7
2002 Total .....	477	834	33	18	11,855	11,608	685	106	464	15
2003 Total .....	582	894	38	19	10,440	10,424	668	127	362	13
2004 Total .....	377	766	33	19	7,687	6,919	566	108	194	5
2005 Total .....	377	585	34	20	7,504	6,440	518	85	189	5
2006 Total .....	347	333	35	21	7,408	5,066	536	87	187	3
2007 Total .....	361	258	34	19	5,089	5,041	554	88	188	4
2008 Total .....	369	166	33	20	5,075	3,617	520	73	179	5
2009 Total .....	317	190	34	23	4,674	3,328	520	62	160	4
2010 Total .....	314	172	39	24	8,125	2,422	555	70	172	8
2011 Total .....	347	137	47	31	5,735	2,145	572	74	182	7
2012 January .....	29	29	5	3	410	528	51	7	19	1
February .....	27	19	5	3	374	342	49	7	18	1
March .....	26	17	5	3	388	357	48	8	17	1
April .....	23	17	5	3	356	329	48	7	17	1
May .....	22	25	5	3	361	332	53	7	17	1
June .....	26	24	6	3	379	332	55	7	18	1
July .....	28	33	7	3	452	367	59	7	19	1
August .....	28	28	6	3	439	454	59	7	19	1
September .....	24	19	5	3	381	417	53	7	18	1
October .....	21	22	5	3	361	366	52	6	18	1
November .....	25	24	4	3	366	469	51	6	19	1
December .....	27	24	4	3	398	469	55	7	20	1
Total .....	307	279	63	33	4,665	4,761	633	84	219	8
2013 January .....	31	54	5	3	359	355	55	7	17	1
February .....	28	32	5	3	347	183	50	6	16	1
March .....	29	15	5	3	393	368	53	7	16	1
April .....	23	17	4	3	342	374	48	6	15	1
May .....	26	19	5	3	394	408	50	7	16	1
June .....	28	21	5	3	410	384	52	7	17	1
July .....	28	42	6	3	444	397	55	8	17	1
August .....	26	20	6	3	404	388	55	8	17	1
September .....	23	18	5	3	388	357	50	7	16	1
October .....	20	15	5	3	371	294	50	6	16	1
November .....	22	17	5	3	371	185	53	7	16	1
December .....	25	41	5	3	401	225	56	6	17	1
Total .....	309	312	60	33	4,624	3,921	628	84	195	8
2014 January .....	34	210	5	3	429	310	53	6	16	1
February .....	32	68	5	2	391	272	47	5	15	1
March .....	29	72	5	3	410	304	51	6	17	1
April .....	21	20	5	3	344	260	46	5	16	1
May .....	20	20	5	3	375	203	47	6	17	1
5-Month Total ....	136	390	24	13	1,949	1,350	245	27	81	3
2013 5-Month Total ....	136	137	24	14	1,835	1,689	257	34	79	3
2012 5-Month Total ....	128	105	25	13	1,890	1,887	249	37	89	3

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

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

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

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

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

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

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

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

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

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

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

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

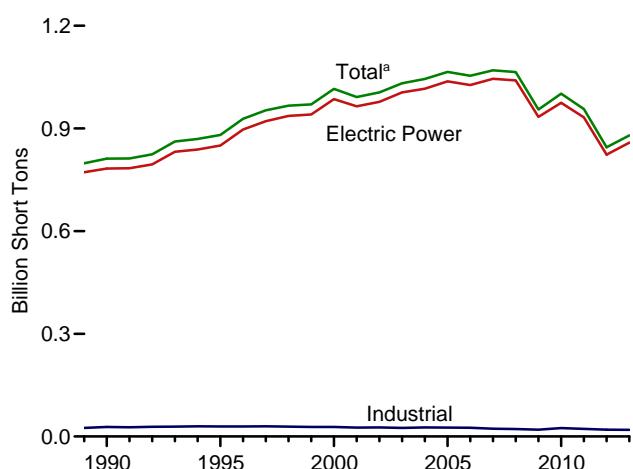
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 1989.

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

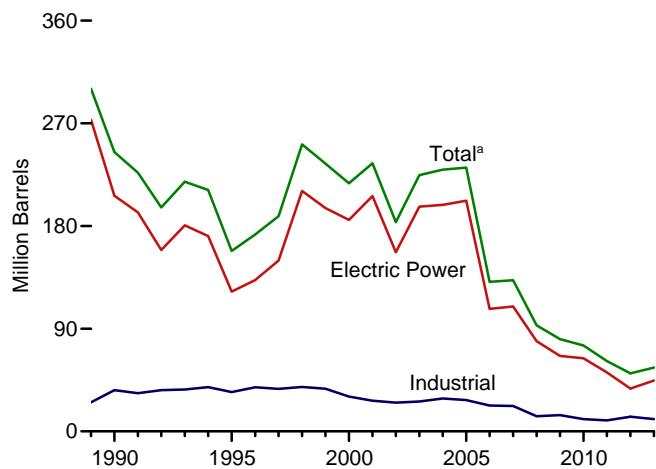
• 2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

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

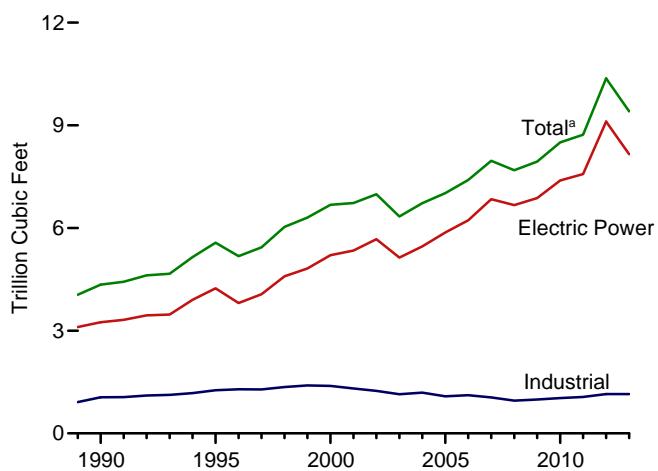
Coal by Sector, 1989–2013



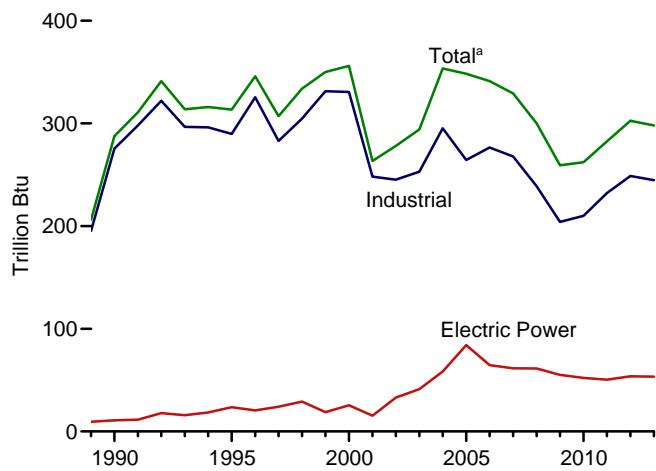
Petroleum by Sector, 1989–2013



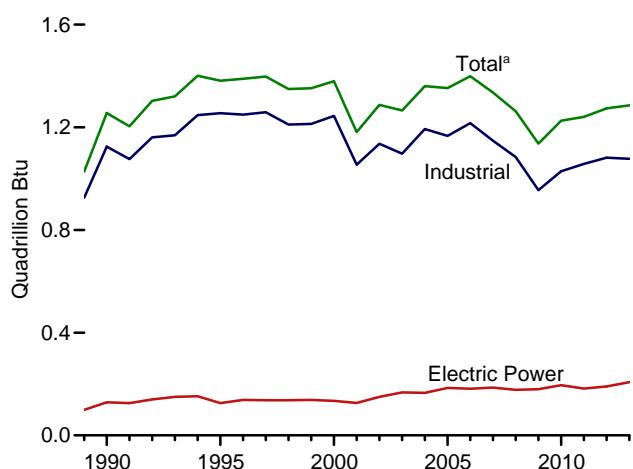
Natural Gas by Sector, 1989–2013



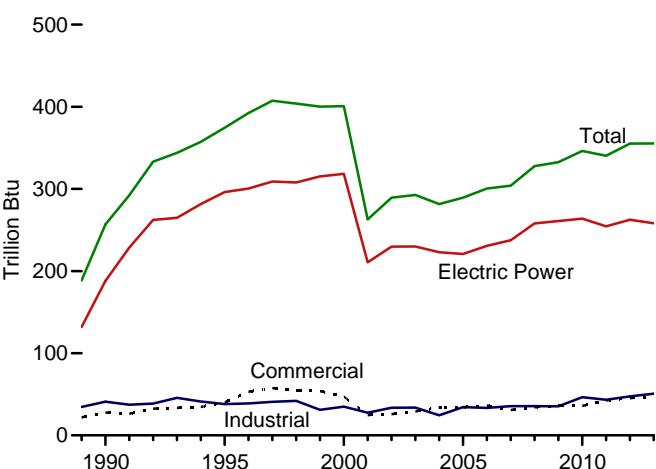
Other Gases<sup>b</sup> by Sector, 1989–2013



Wood by Sector, 1989–2013



Waste by Sector, 1989–2013



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

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

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

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

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Biomass		Other <sup>j</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>g</sup>			Wood <sup>h</sup>	Waste <sup>i</sup>	
	Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	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	NA	636	338,686	3,932	NA	1	2
1975 Total .....	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total .....	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total .....	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total <sup>k</sup> .....	811,538	20,194	209,081	1,332	2,832	244,765	4,346	288	1,256	257	86
1995 Total .....	881,012	21,697	112,168	1,322	4,590	158,140	5,572	313	1,382	374	97
2000 Total .....	1,015,398	34,572	156,673	2,904	4,669	217,494	6,677	356	1,380	401	109
2001 Total .....	991,635	33,724	177,137	1,418	4,532	234,940	6,731	263	1,182	263	229
2002 Total .....	1,005,144	24,749	118,637	3,257	7,353	183,409	6,986	278	1,287	289	252
2003 Total .....	1,031,778	31,825	152,859	4,576	7,067	224,593	6,337	294	1,266	293	262
2004 Total .....	1,044,798	23,520	157,478	4,764	8,721	229,364	6,727	353	1,360	282	254
2005 Total .....	1,065,281	24,446	156,915	4,270	9,113	231,193	7,021	348	1,353	289	237
2006 Total .....	1,053,783	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 .....	76,673	1,079	1,745	274	525	5,724	740	25	111	30	17
February .....	68,685	733	1,185	158	440	4,278	664	23	99	27	16
March .....	72,066	711	983	124	476	4,196	708	25	108	30	18
April .....	62,367	721	988	150	451	4,115	659	24	96	28	17
May .....	66,235	870	986	155	526	4,639	714	25	103	29	18
June .....	76,646	737	1,060	119	538	4,605	835	24	106	30	18
July .....	84,745	1,148	1,633	180	551	5,715	1,013	27	117	31	19
August .....	83,487	759	1,134	127	562	4,831	1,006	26	112	29	18
September .....	74,138	701	969	139	520	4,411	849	25	105	28	18
October .....	67,909	647	950	110	517	4,292	738	25	106	30	17
November .....	67,487	778	887	130	420	3,895	704	24	109	29	16
December .....	78,938	1,062	1,352	207	511	5,174	777	25	114	33	18
Total .....	879,377	9,946	13,871	1,872	6,037	55,874	9,407	298	1,286	355	209
2014 January .....	85,411	5,145	4,781	1,125	530	13,703	772	24	110	29	17
February .....	77,935	1,372	1,776	218	429	5,514	651	22	101	25	14
March .....	74,028	1,541	1,978	341	499	6,356	662	23	109	30	17
April .....	60,223	657	931	98	368	3,524	645	22	105	28	17
May .....	65,543	827	831	111	407	3,802	742	23	109	28	17
5-Month Total ....	363,140	9,543	10,297	1,893	2,233	32,899	3,473	114	534	141	82
2013 5-Month Total ....	346,027	4,114	5,887	860	2,418	22,951	3,486	122	516	145	84
2012 5-Month Total ....	314,108	4,164	5,111	812	2,055	20,364	3,998	132	517	144	102

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

	Coal <sup>a</sup>	Petroleum					Natural Gas <sup>f</sup>	Other Gases <sup>g</sup>	Biomass		Other <sup>j</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>	Total <sup>g</sup>			Wood <sup>h</sup>	Waste <sup>i</sup>	
		Thousand Short Tons	Thousand Barrels			Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu		
1950 Total .....	91,871	5,423	69,998	NA	NA	75,421	629	NA	5	NA	NA
1955 Total .....	143,759	5,412	69,862	NA	NA	75,274	1,153	NA	3	NA	NA
1960 Total .....	176,685	3,824	84,371	NA	NA	88,195	1,725	NA	2	NA	NA
1965 Total .....	244,788	4,928	110,274	NA	NA	115,203	2,321	NA	3	NA	NA
1970 Total .....	320,182	24,123	311,381	NA	636	338,686	3,932	NA	1	2	NA
1975 Total .....	405,962	38,907	467,221	NA	70	506,479	3,158	NA	(s)	2	NA
1980 Total .....	569,274	29,051	391,163	NA	179	421,110	3,682	NA	3	2	NA
1985 Total .....	693,841	14,635	158,779	NA	231	174,571	3,044	NA	8	7	NA
1990 Total <sup>k</sup> .....	782,567	16,567	184,915	26	1,008	206,550	3,245	11	129	188	(s)
1995 Total .....	850,230	18,553	90,023	499	2,674	122,447	4,237	24	125	296	2
2000 Total .....	985,821	30,016	138,513	454	3,275	185,358	5,206	25	134	318	1
2001 Total .....	964,433	29,274	159,504	377	3,427	206,291	5,342	15	126	211	113
2002 Total .....	977,507	21,876	104,773	1,267	5,816	156,996	5,672	33	150	230	143
2003 Total .....	1,005,116	27,632	138,279	2,026	5,799	196,932	5,135	41	167	230	140
2004 Total .....	1,016,268	19,107	139,816	2,713	7,372	198,498	5,464	58	165	223	138
2005 Total .....	1,037,485	19,675	139,409	2,685	8,083	202,184	5,869	84	185	221	123
2006 Total .....	1,026,636	12,646	57,345	1,870	7,101	107,365	6,222	65	182	231	125
2007 Total .....	1,045,141	15,327	63,086	2,594	5,685	109,431	6,841	61	186	237	124
2008 Total .....	1,040,580	12,547	38,241	2,670	5,119	79,056	6,668	61	177	258	131
2009 Total .....	933,627	12,035	28,782	2,210	4,611	66,081	6,873	55	180	261	124
2010 Total .....	975,052	13,790	24,503	1,877	4,777	64,055	7,387	52	196	264	124
2011 Total .....	932,484	11,021	14,803	1,658	4,837	51,667	7,574	50	182	255	143
2012 January .....	70,594	834	1,057	38	400	3,930	649	5	17	22	12
February .....	62,804	667	796	80	318	3,131	645	4	16	20	11
March .....	57,266	610	898	93	178	2,493	674	5	16	22	12
April .....	51,593	686	841	82	166	2,439	714	5	13	21	11
May .....	62,648	873	883	112	211	2,924	812	4	14	22	12
June .....	71,480	856	1,364	121	228	3,481	880	4	16	22	12
July .....	86,283	931	1,624	127	253	3,949	1,082	5	18	23	13
August .....	82,484	729	1,178	110	267	3,353	1,004	5	18	23	12
September .....	69,309	637	884	80	250	2,852	803	4	16	21	12
October .....	66,343	685	951	88	229	2,866	669	4	15	22	12
November .....	69,740	732	850	78	238	2,851	580	4	15	23	12
December .....	73,009	839	877	331	236	3,226	600	5	16	24	12
Total .....	823,551	9,080	12,203	1,339	2,974	37,495	9,111	54	190	262	143
2013 January .....	74,798	997	1,547	218	333	4,429	629	4	17	22	11
February .....	66,944	672	1,028	129	293	3,293	565	4	15	19	10
March .....	70,214	644	882	88	315	3,190	601	4	17	22	11
April .....	60,725	646	882	101	291	3,084	561	4	12	21	11
May .....	64,544	803	870	99	412	3,830	613	4	16	22	12
June .....	74,964	668	950	86	418	3,794	734	4	17	22	12
July .....	82,986	1,059	1,503	148	419	4,805	906	5	19	22	13
August .....	81,788	673	1,033	95	436	3,980	898	5	20	21	12
September .....	72,493	648	895	101	395	3,618	749	5	18	21	11
October .....	66,163	593	866	82	366	3,370	636	5	18	22	11
November .....	65,688	722	799	97	288	3,060	598	5	19	21	11
December .....	77,043	1,005	1,207	150	351	4,117	662	5	20	24	12
Total .....	858,351	9,131	12,464	1,394	4,317	44,572	8,153	53	207	258	136
2014 January .....	83,459	4,914	4,275	1,050	413	12,302	662	4	22	21	11
February .....	76,144	1,280	1,549	167	339	4,690	554	3	20	18	9
March .....	72,127	1,449	1,765	286	397	5,487	557	3	22	21	12
April .....	58,592	584	837	78	276	2,878	549	3	18	21	11
May .....	63,896	772	737	76	357	3,371	647	4	19	21	11
5-Month Total ....	354,217	9,000	9,164	1,656	1,782	28,729	2,969	19	102	102	54
2013 5-Month Total ....	337,226	3,762	5,210	634	1,644	17,827	2,969	21	77	105	55
2012 5-Month Total ....	304,905	3,671	4,475	404	1,273	14,917	3,494	23	75	106	58

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

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

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

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

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

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

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

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

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

tire-derived fuels).

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

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

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

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

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

Sources: See end of section.

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

	Commercial Sector <sup>a</sup>				Industrial Sector <sup>b</sup>						
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Biomass	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Other Gases <sup>g</sup>	Biomass		Other <sup>i</sup>
				Waste <sup>f</sup>					Wood <sup>h</sup>	Waste <sup>f</sup>	
	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet	Trillion Btu	Thousand Short Tons	Thousand Barrels	Billion Cubic Feet		Trillion Btu		
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 .....	148	86	9	4	1,728	1,208	102	21	94	5	4
February .....	139	54	9	4	1,601	930	91	19	84	4	4
March .....	136	29	9	4	1,716	976	98	21	91	4	4
April .....	108	26	8	4	1,533	1,005	90	20	83	4	4
May .....	114	30	8	4	1,577	779	93	21	87	4	3
June .....	105	32	8	4	1,576	779	93	20	89	4	4
July .....	103	61	10	4	1,656	849	97	22	98	4	4
August .....	105	36	10	4	1,594	816	98	21	92	4	4
September .....	100	33	8	4	1,545	759	91	20	87	4	4
October .....	98	28	8	4	1,647	894	93	20	88	4	4
November .....	120	30	9	4	1,679	805	97	19	90	4	4
December .....	134	69	10	4	1,760	988	105	20	94	5	3
Total .....	1,412	514	107	46	19,613	10,788	1,147	245	1,077	51	46
2014 January .....	149	318	10	4	1,803	1,083	101	20	88	4	4
February .....	147	110	9	3	1,644	714	88	18	80	4	3
March .....	142	117	9	4	1,759	752	96	20	87	4	3
April .....	111	34	8	4	1,520	611	88	18	88	4	4
May .....	94	32	8	4	1,553	398	86	19	90	4	4
5-Month Total ....	643	612	44	19	8,280	3,558	460	95	432	20	18
2013 5-Month Total ....	646	225	43	19	8,155	4,899	474	102	439	20	19
2012 5-Month Total ....	629	192	44	19	8,575	5,255	459	109	441	19	33

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

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

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

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

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

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

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

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

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

Notes: • See Note 1, "Coverage of Electricity Statistics," and Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of section.

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

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

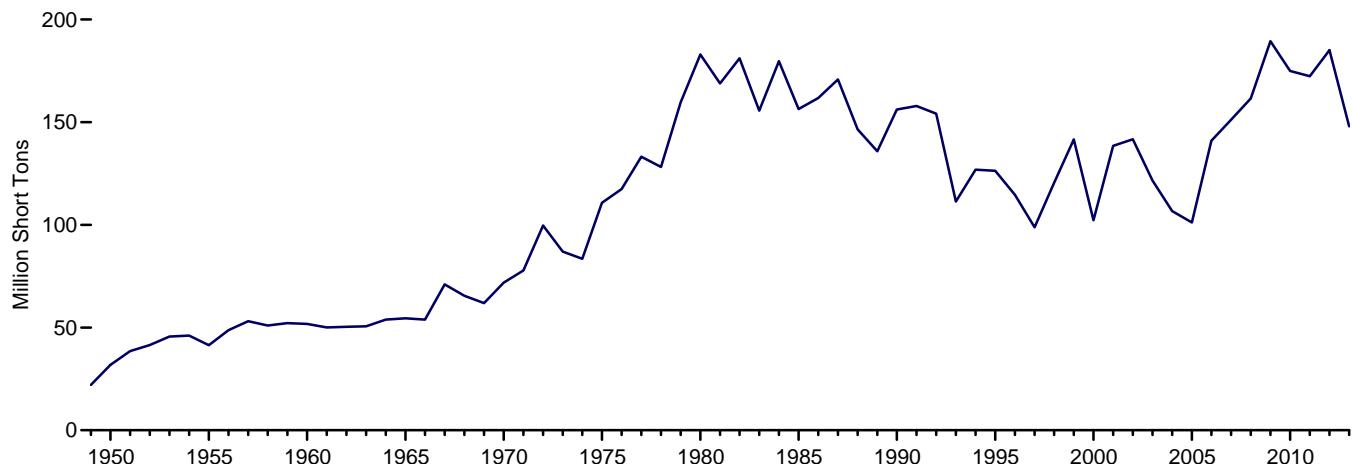
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#electricity> (Excel and CSV files) for all available annual and monthly data beginning in 1989.

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

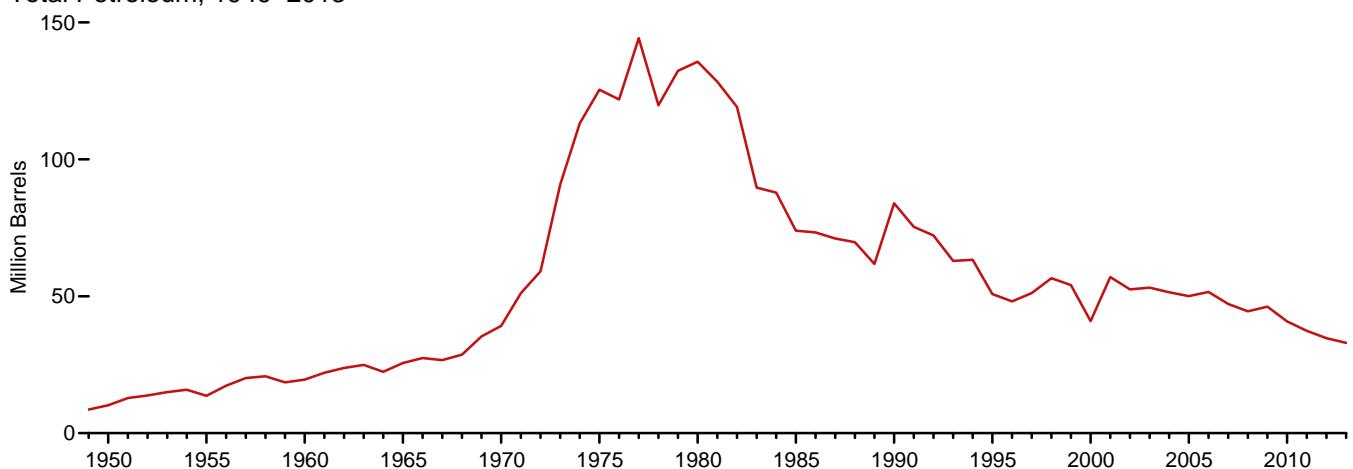
• 2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

**Figure 7.5 Stocks of Coal and Petroleum: Electric Power Sector**

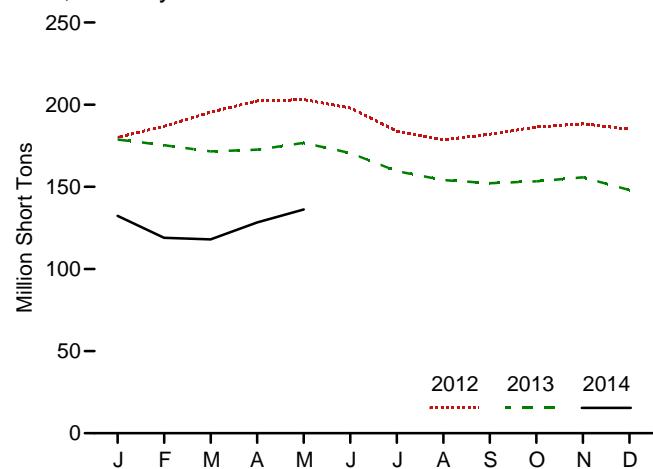
Coal, 1949–2013



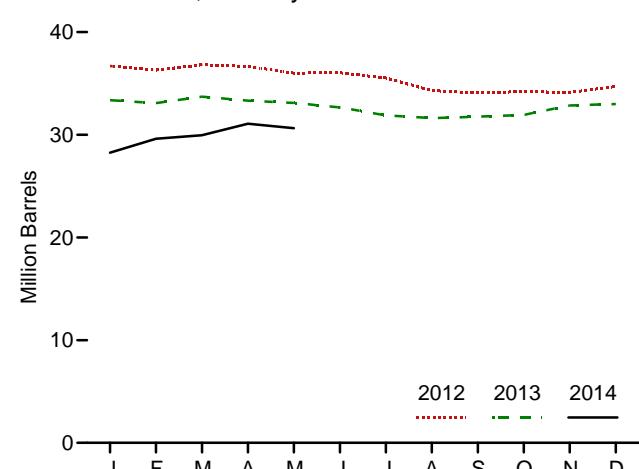
Total Petroleum, 1949–2013



Coal, Monthly



Total Petroleum, Monthly



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

Source: Table 7.5.

**Table 7.5 Stocks of Coal and Petroleum: Electric Power Sector**

	Coal <sup>a</sup>	Petroleum					Total <sup>e,f</sup>
		Distillate Fuel Oil <sup>b</sup>	Residual Fuel Oil <sup>c</sup>	Other Liquids <sup>d</sup>	Petroleum Coke <sup>e</sup>		
		Thousand Short Tons	Thousand Barrels	Thousand Short Tons	Thousand Barrels		
1950 Year .....	31,842	NA	NA	NA	NA	10,201	
1955 Year .....	41,391	NA	NA	NA	NA	13,671	
1960 Year .....	51,735	NA	NA	NA	NA	19,572	
1965 Year .....	54,525	NA	NA	NA	NA	25,647	
1970 Year .....	71,908	NA	NA	NA	239	39,151	
1975 Year .....	110,724	16,432	108,825	NA	31	125,413	
1980 Year .....	183,010	30,023	105,351	NA	52	135,635	
1985 Year .....	156,376	16,386	57,304	NA	49	73,933	
1990 Year .....	156,166	16,471	67,030	NA	94	83,970	
1995 Year .....	126,304	15,392	35,102	NA	65	50,821	
2000 Year <sup>g</sup> .....	102,296	15,127	24,748	NA	211	40,932	
2001 Year .....	138,496	20,486	34,594	NA	390	57,031	
2002 Year .....	141,714	17,413	25,723	800	1,711	52,490	
2003 Year .....	121,567	19,153	25,820	779	1,484	53,170	
2004 Year .....	106,669	19,275	26,596	879	937	51,434	
2005 Year .....	101,137	18,778	27,624	1,012	530	50,062	
2006 Year .....	140,964	18,013	28,823	1,380	674	51,583	
2007 Year .....	151,221	18,395	24,136	1,902	554	47,203	
2008 Year .....	161,589	17,761	21,088	1,955	739	44,498	
2009 Year .....	189,467	17,886	19,068	2,257	1,394	46,181	
2010 Year .....	174,917	16,758	16,629	2,319	1,019	40,800	
2011 Year .....	172,387	16,649	15,491	2,707	508	37,387	
2012 January .....	180,091	16,682	15,242	2,736	409	36,704	
February .....	186,866	16,500	15,150	2,780	374	36,300	
March .....	195,380	16,413	15,324	2,815	453	36,817	
April .....	202,265	16,371	15,154	2,850	457	36,661	
May .....	203,137	16,290	14,814	2,868	406	36,002	
June .....	197,924	16,248	14,600	2,899	458	36,038	
July .....	183,958	16,700	13,872	2,930	406	35,534	
August .....	178,537	16,123	13,668	2,827	336	34,302	
September .....	182,020	16,059	13,524	2,734	353	34,081	
October .....	186,396	16,019	13,406	2,757	406	34,212	
November .....	188,291	16,031	13,221	2,793	416	34,126	
December .....	185,116	16,433	12,999	2,792	495	34,698	
2013 January .....	178,747	16,329	12,161	2,673	442	33,373	
February .....	175,325	16,315	11,935	2,631	442	33,090	
March .....	171,518	16,209	12,869	2,600	406	33,710	
April .....	172,654	16,009	12,451	2,592	455	33,326	
May .....	176,670	15,894	12,412	2,588	442	33,105	
June .....	170,534	15,898	12,134	2,594	407	32,663	
July .....	159,536	15,696	11,677	2,551	394	31,895	
August .....	154,119	15,637	12,157	2,534	260	31,628	
September .....	152,185	15,511	12,212	2,493	309	31,760	
October .....	153,352	15,652	12,384	2,451	291	31,941	
November .....	155,754	15,793	12,911	2,466	338	32,858	
December .....	147,973	15,735	12,863	2,446	390	32,994	
2014 January .....	132,324	14,605	9,923	2,242	298	28,260	
February .....	118,949	15,384	10,623	2,278	265	29,609	
March .....	117,974	15,436	10,538	2,241	349	29,960	
April .....	128,321	15,707	10,527	2,272	514	31,078	
May .....	136,218	15,447	10,609	2,308	457	30,647	

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

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

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

<sup>d</sup> Jet fuel and kerosene. Through 2003, data also include a small amount of waste oil.

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

<sup>f</sup> Distillate fuel oil and residual fuel oil. Beginning in 1970, also includes petroleum coke. Beginning in 2002, also includes other liquids.

<sup>g</sup> Through 1998, data are for electric utilities only. Beginning in 1999, data are for electric utilities and independent power producers.

NA=Not available.

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

are at end of period. • See Note 1, "Coverage of Electricity Statistics," at end of section. • Totals may not equal sum of components due to independent rounding.

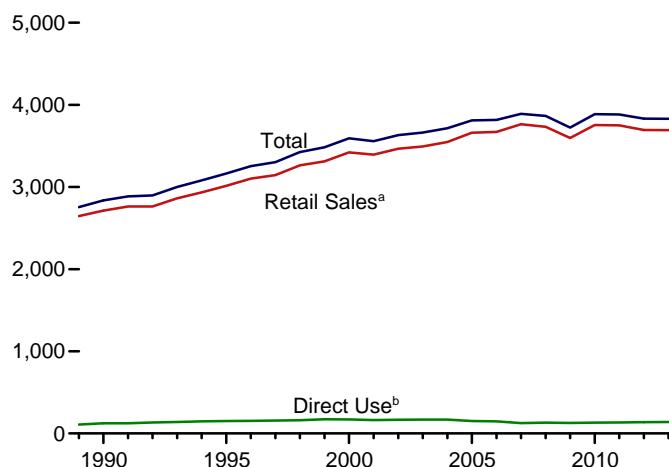
• Geographic coverage is the 50 states and the District of Columbia.

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

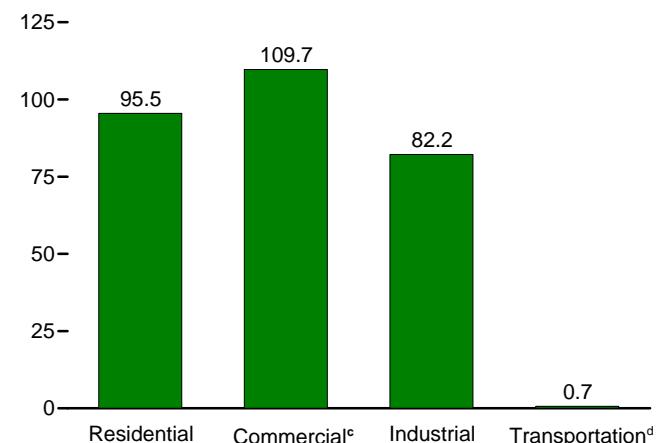
Sources: • **1949–September 1977:** Federal Power Commission, Form FPC-4, "Monthly Power Plant Report." • **October 1977–1981:** Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report." • **1982–1988:** U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report." • **1989–1997:** EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report." • **1998–2000:** EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility." • **2001–2003:** EIA, Form EIA-906, "Power Plant Report." • **2004–2007:** EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report." • **2008 forward:** EIA, Form EIA-923, "Power Plant Operations Report."

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

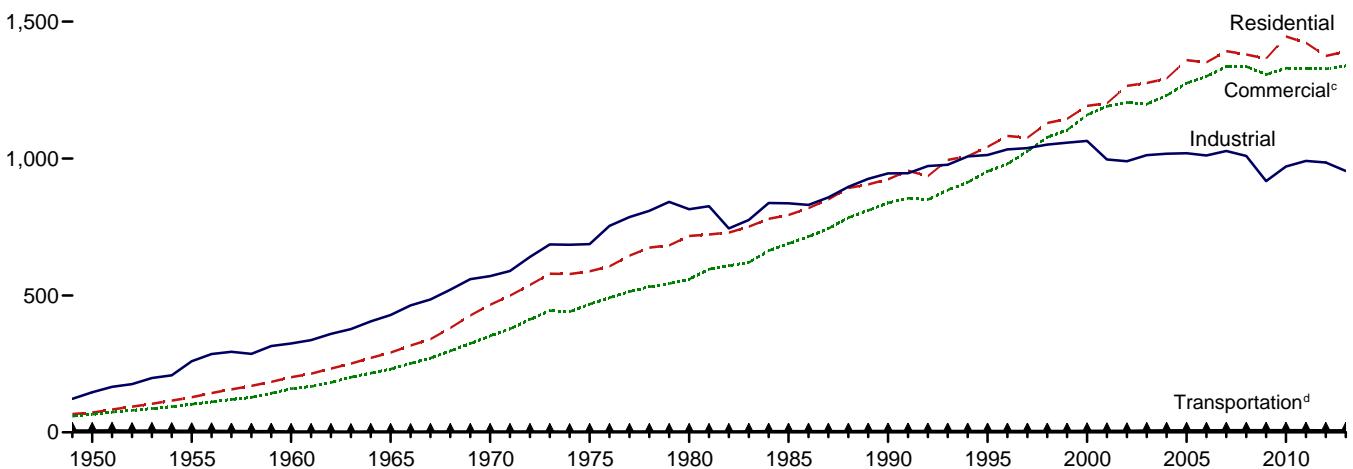
Electricity End Use Overview, 1989–2013



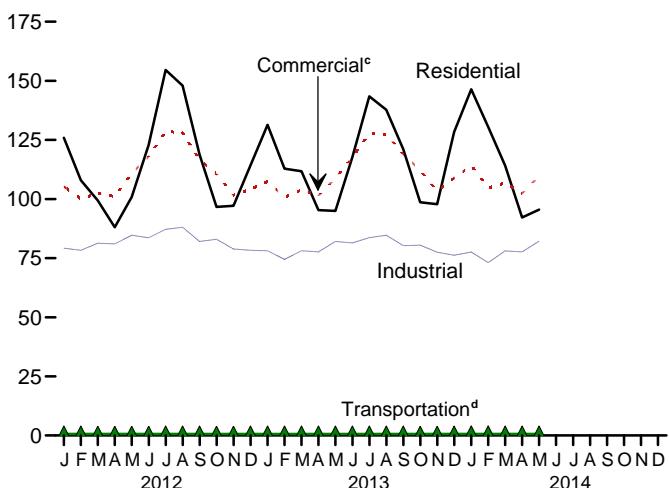
Retail Sales<sup>a</sup> by Sector, May 2014



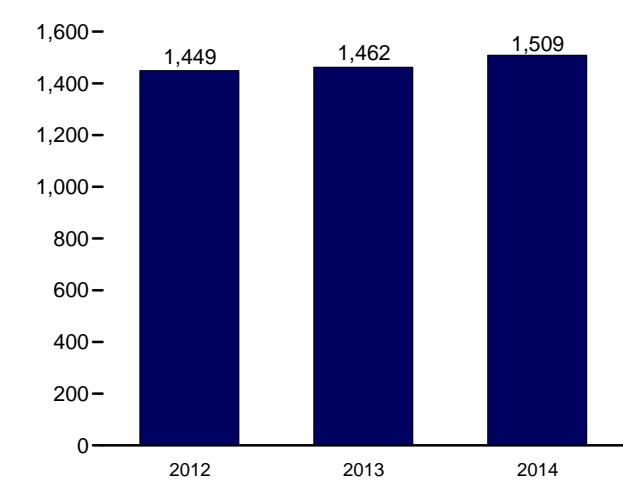
Retail Sales<sup>a</sup> by Sector, 1949–2013



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



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



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

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

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

departmental sales, and other sales to public authorities.

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

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

Source: Table 7.6.

**Table 7.6 Electricity End Use**  
(Million Kilowatthours)

	Retail Sales <sup>a</sup>					Direct Use <sup>f</sup>	Total End Use <sup>g</sup>	Discontinued Retail Sales Series	
	Residential	Commercial <sup>b</sup>	Industrial <sup>c</sup>	Transportation <sup>d</sup>	Total Retail Sales <sup>e</sup>			Commercial (Old) <sup>h</sup>	Other (Old) <sup>i</sup>
1950 Total .....	72,200	E 65,971	146,479	E 6,793	291,443	NA	291,443	50,637	22,127
1955 Total .....	128,401	E 102,547	259,974	E 5,826	496,748	NA	496,748	79,389	28,984
1960 Total .....	201,463	E 159,144	324,402	E 3,066	688,075	NA	688,075	130,702	31,508
1965 Total .....	291,013	E 231,126	428,727	E 2,923	953,789	NA	953,789	200,470	33,580
1970 Total .....	466,291	E 352,041	570,854	E 3,115	1,392,300	NA	1,392,300	306,703	48,452
1975 Total .....	588,140	E 468,296	687,680	E 2,974	1,747,091	NA	1,747,091	403,049	68,222
1980 Total .....	717,495	558,643	815,067	3,244	2,094,449	NA	2,094,449	488,155	73,732
1985 Total .....	793,934	689,121	836,772	4,147	2,323,974	NA	2,323,974	605,989	87,279
1990 Total .....	924,019	838,263	945,522	4,751	2,712,555	124,529	2,837,084	751,027	91,988
1995 Total .....	1,042,501	953,117	1,012,693	4,975	3,013,287	150,677	3,163,963	862,685	95,407
2000 Total .....	1,192,446	1,159,347	1,064,239	5,382	3,421,414	170,943	3,592,357	1,055,232	109,496
2001 Total .....	1,201,607	1,190,518	996,609	5,724	3,394,458	162,649	3,557,107	1,083,069	113,174
2002 Total .....	1,265,180	1,204,531	990,238	5,517	3,465,466	166,184	3,631,650	1,104,497	105,552
2003 Total .....	1,275,824	1,198,728	1,012,373	6,810	3,493,734	168,295	3,662,029	--	--
2004 Total .....	1,291,982	1,230,425	1,017,850	7,224	3,547,479	168,470	3,715,949	--	--
2005 Total .....	1,359,227	1,275,079	1,019,156	7,506	3,660,969	150,016	3,810,984	--	--
2006 Total .....	1,351,520	1,299,744	1,011,298	7,358	3,669,919	146,927	3,816,845	--	--
2007 Total .....	1,392,241	1,336,315	1,027,832	8,173	3,764,561	125,670	3,890,231	--	--
2008 Total .....	1,379,981	1,335,981	1,009,300	7,700	3,732,962	132,197	3,865,159	--	--
2009 Total .....	1,364,474	1,307,168	917,442	7,781	3,596,865	126,938	3,723,803	--	--
2010 Total .....	1,445,708	1,330,199	970,873	7,712	3,754,493	131,910	3,886,403	--	--
2011 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 .....	131,354	107,400	78,141	656	317,551	E 12,046	329,597	--	--
February .....	112,857	100,722	74,453	649	288,681	E 10,997	299,678	--	--
March .....	111,784	103,839	78,097	633	294,352	E 11,844	306,196	--	--
April .....	95,297	101,385	77,633	623	274,937	E 10,548	285,484	--	--
May .....	94,978	108,883	82,086	619	286,566	E 11,414	297,980	--	--
June .....	117,708	117,670	81,411	629	317,418	E 11,591	329,010	--	--
July .....	143,438	127,735	83,703	637	355,513	E 12,406	367,919	--	--
August .....	137,734	127,369	84,701	634	350,437	E 12,160	362,598	--	--
September .....	121,114	118,977	80,298	631	321,020	E 11,347	332,367	--	--
October .....	98,656	112,171	80,463	589	291,879	E 11,262	303,141	--	--
November .....	97,812	103,449	77,536	562	279,359	E 11,504	290,863	--	--
December .....	128,357	108,849	76,205	665	314,076	E 12,294	326,369	--	--
Total .....	1,391,090	1,338,448	954,725	7,525	3,691,789	E 139,414	3,831,203	--	--
2014 January .....	146,435	114,230	77,616	724	339,006	E 12,095	351,100	--	--
February .....	130,478	104,662	73,135	723	308,997	E 10,589	319,586	--	--
March .....	114,158	106,873	78,081	645	299,756	E 11,387	311,143	--	--
April .....	92,188	102,403	77,638	634	272,863	E 10,471	283,334	--	--
May .....	95,507	109,713	82,174	655	288,049	E 10,599	298,648	--	--
5-Month Total ....	578,766	537,881	388,644	3,381	1,508,672	E 55,140	1,563,812	--	--
2013 5-Month Total ....	546,270	522,228	390,410	3,179	1,462,086	E 56,849	1,518,935	--	--
2012 5-Month Total ....	522,217	519,631	404,508	3,061	1,449,417	E 55,531	1,504,948	--	--

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

<sup>b</sup> Commercial sector, including public street and highway lighting, interdepartmental sales, and other sales to public authorities.

<sup>c</sup> Industrial sector. Through 2002, excludes agriculture and irrigation; beginning in 2003, includes agriculture and irrigation.

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

<sup>e</sup> The sum of "Residential," "Commercial," "Industrial," and "Transportation."

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

<sup>g</sup> The sum of "Total Retail Sales" and "Direct Use."

<sup>h</sup> "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.

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

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

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

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

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

Web 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.doc](http://www.eia.gov/survey/form/eia_860/instructions.doc).

## Table 7.1 Sources

### Net Generation, Electric Power Sector

1949 forward: Table 7.2b.

### Net Generation, Commercial and Industrial Sectors

1949 forward: Table 7.2c.

### Trade

1949–September 1977: Unpublished Federal Power Commission data.

October 1977–1980: Unpublished Economic Regulatory Administration (ERA) data.

1981: U.S. Department of Energy (DOE), Office of Energy Emergency Operations, "Report on Electric Energy Exchanges with Canada and Mexico for Calendar Year 1981," April 1982 (revised June 1982).

1982 and 1983: DOE, ERA, *Electricity Exchanges Across International Borders*.

1984–1986: DOE, ERA, *Electricity Transactions Across International Borders*.

1987 and 1988: DOE, ERA, Form ERA-781R, "Annual Report of International Electrical Export/Import Data."

1989: DOE, Fossil Energy, Form FE-781R, "Annual Report of International Electrical Export/Import Data."

1990–2000: National Energy Board of Canada; and DOE, Office of Electricity Delivery and Energy Reliability, Form FE-781R, "Annual Report of International Electrical Export/Import Data."

2001–May 2011: National Energy Board of Canada; DOE, Office of Electricity Delivery and Energy Reliability, Form OE-781R, "Monthly Electricity Imports and Exports Report," and predecessor form; and California Independent System Operator.

June 2011 forward: National Energy Board of Canada; California Independent System Operator; and EIA estimates for Texas transfers.

### T&D Losses and Unaccounted for

1949 forward: Calculated as the sum of total net generation and imports minus end use and exports.

### End Use

1949 forward: Table 7.6.

## Table 7.2b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."

October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."

1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."

1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."

1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."

2001–2003: EIA, Form EIA-906, "Power Plant Report."

2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

## Table 7.2c Sources

### Industrial Sector, Hydroelectric Power, 1949–1988

1949–September 1977: Federal Power Commission (FPC), Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and FPC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.

October 1977–1978: Federal Energy Regulatory Commission (FERC), Form FPC-4, "Monthly Power Plant

Report," for plants with generating capacity exceeding 10 megawatts, and FERC, Form FPC-12C, "Industrial Electric Generating Capacity," for all other plants.  
 1979: FERC, Form FPC-4, "Monthly Power Plant Report," for plants with generating capacity exceeding 10 megawatts, and U.S. Energy Information Administration (EIA) estimates for all other plants.  
 1980–1988: Estimated by EIA as the average generation over the 6-year period of 1974–1979.

### All Data, 1989 Forward

1989–1997: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."  
 1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility."  
 2001–2003: EIA, Form EIA-906, "Power Plant Report."  
 2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."  
 2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

### Table 7.3b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."  
 October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."  
 1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."  
 1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."  
 1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."  
 2001–2003: EIA, Form EIA-906, "Power Plant Report."  
 2004–2007: EIA, Form EIA-906, "Power Plant Report," and Form EIA-920, "Combined Heat and Power Plant Report."  
 2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

### Table 7.4b Sources

1949–September 1977: Federal Power Commission, Form FPC-4, "Monthly Power Plant Report."  
 October 1977–1981: Federal Energy Regulatory Commission, Form FPC-4, "Monthly Power Plant Report."  
 1982–1988: U.S. Energy Information Administration (EIA), Form EIA-759, "Monthly Power Plant Report."  
 1989–1997: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-867, "Annual Nonutility Power Producer Report."  
 1998–2000: EIA, Form EIA-759, "Monthly Power Plant Report," and Form EIA-860B, "Annual Electric Generator Report—Nonutility."  
 2001–2003: EIA, Form EIA-906, "Power Plant Report."  
 2004–2007: EIA, Form EIA-906, "Power Plant Report,"

and Form EIA-920, "Combined Heat and Power Plant Report."

2008 forward: EIA, Form EIA-923, "Power Plant Operations Report."

### Table 7.6 Sources

#### Retail Sales, Residential and Industrial

1949–September 1977: Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."  
 October 1977–February 1980: Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenue and Income."  
 March 1980–1982: FERC, Form FPC-5, "Electric Utility Company Monthly Statement."  
 1983: U.S. Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement."  
 1984–2003: EIA, Form EIA-861, "Annual Electric Utility Report."  
 2004 forward: EIA, *Electric Power Monthly (EPM)*, July 2014, Table 5.1.

#### Retail Sales, Commercial

1949–2002: Estimated by EIA as the sum of "Commercial (Old)" and the non-transportation portion of "Other (Old)." See estimation methodology at [http://www.eia.gov/state/seds/sep\\_use/notes/use\\_elec.pdf](http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf).  
 2003: EIA, Form EIA-861, "Annual Electric Utility Report."  
 2004 forward: EIA, EPM, July 2014, Table 5.1.

#### Retail Sales, Transportation

1949–2002: Estimated by EIA as the transportation portion of "Other (Old)." See estimation methodology at [http://www.eia.gov/state/seds/sep\\_use/notes/use\\_elec.pdf](http://www.eia.gov/state/seds/sep_use/notes/use_elec.pdf).  
 2003: EIA, Form EIA-861, "Annual Electric Utility Report."  
 2004 forward: EIA, EPM, July 2014, Table 5.1.

#### Direct Use, Annual

1989–1997: EIA, Form EIA-867, "Annual Nonutility Power Producer Report."  
 1998–2000: EIA, Form EIA-860B, "Annual Electric Generator Report—Nonutility."  
 2001–2012: EIA, *Electric Power Annual 2012*, December 2013, Table 2.2.  
 2013: Sum of monthly estimates.

#### Direct Use, Monthly

1989 forward: Annual shares are calculated as annual direct use divided by annual commercial and industrial net generation (on Table 7.1). Then monthly direct use estimates are calculated as the annual share multiplied by the monthly commercial and industrial net generation values. For 2013 and 2014, the 2012 annual share is used.

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

1949–2002: See sources for "Residential" and "Industrial."

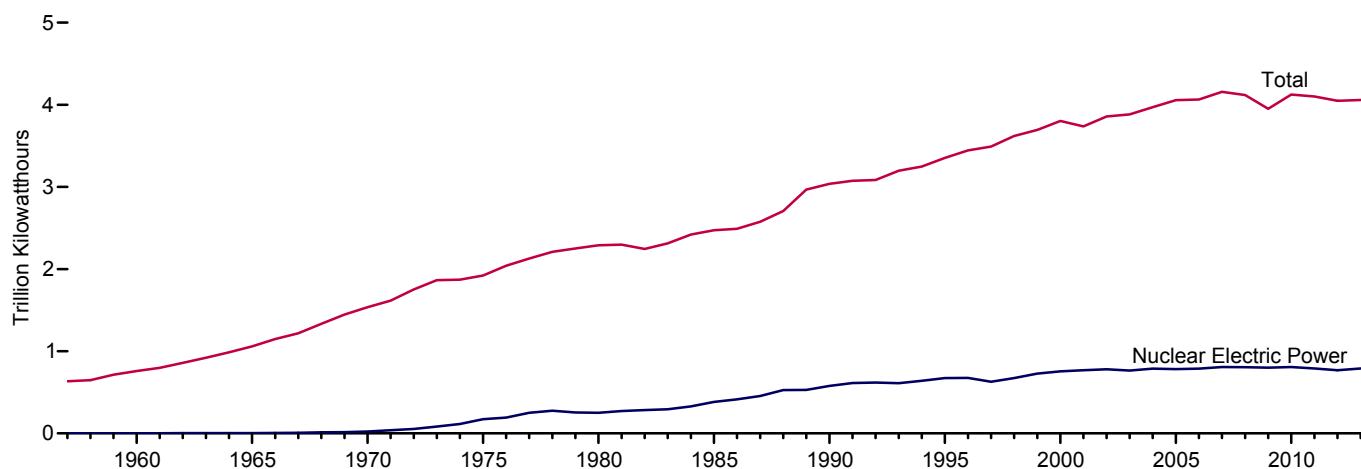
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## 8. Nuclear Energy

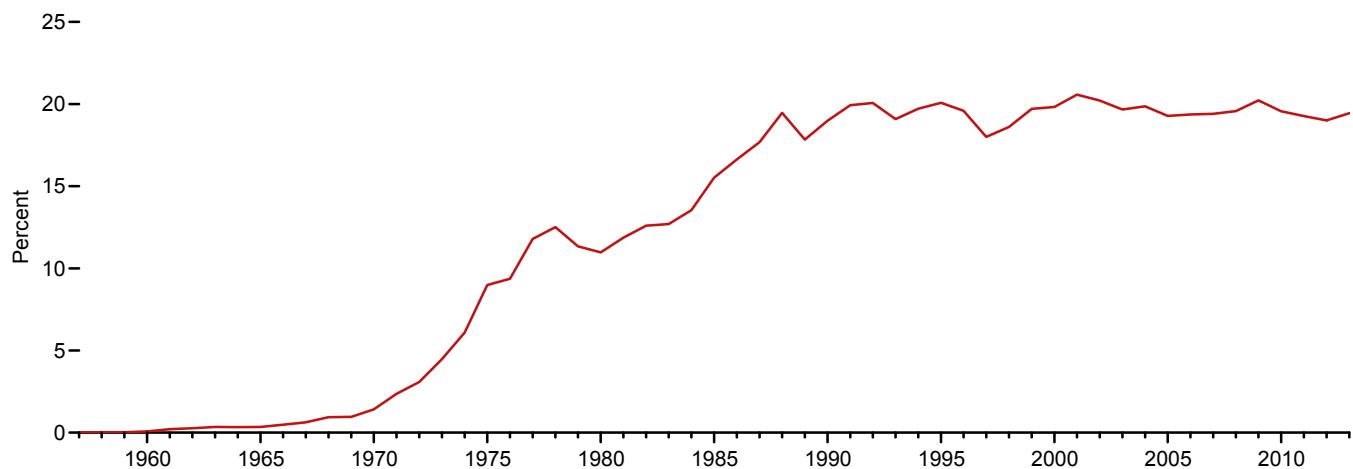
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## Figure 8.1 Nuclear Energy Overview

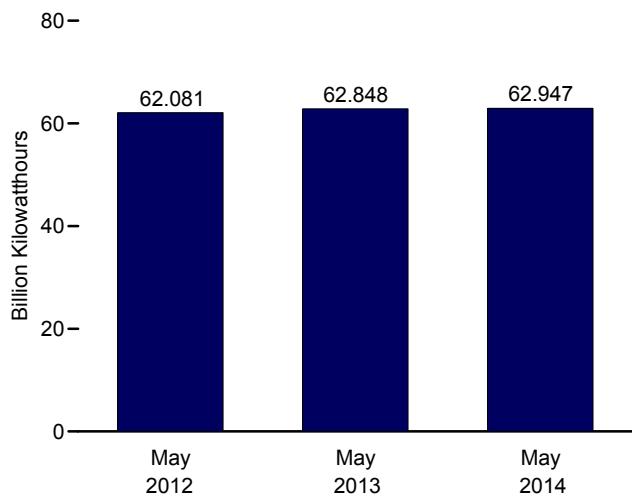
Electricity Net Generation, 1957–2013



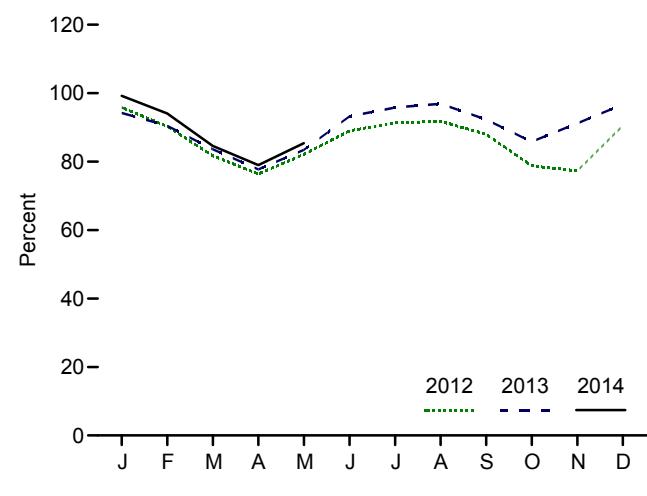
Nuclear Share of Electricity Net Generation, 1957–2013



Nuclear Electricity Net Generation



Capacity Factor, Monthly



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

**Table 8.1 Nuclear Energy Overview**

	Total Operable Units <sup>a,b</sup>	Net Summer Capacity of Operable Units <sup>b,c</sup>	Nuclear Electricity Net Generation	Nuclear Share of Electricity Net Generation	Capacity Factor <sup>d</sup>
	Number	Million Kilowatts	Million Kilowatthours	Percent	
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	<sup>d</sup> 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	<sup>c</sup> 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
<b>Total .....</b>	<b>104</b>	<b>101.885</b>	<b>769,331</b>	<b>19.0</b>	<b>86.1</b>
2013 January .....	104	E 101.923	71,406	20.5	E 94.2
February .....	103	E 101.063	61,483	19.9	E 90.5
March .....	103	E 101.172	62,947	19.4	E 83.6
April .....	103	E 101.468	56,767	19.0	E 77.7
May .....	102	E 101.147	62,848	19.5	E 83.4
June .....	100	E 98.997	66,430	18.6	E 93.2
July .....	100	E 98.997	70,539	17.9	E 95.8
August .....	100	E 98.997	71,344	18.6	E 96.9
September .....	100	E 98.997	65,799	19.3	E 92.3
October .....	100	E 98.997	63,184	20.1	E 85.8
November .....	100	E 98.997	64,975	20.7	E 91.2
December .....	100	E 99.105	71,294	20.2	E 96.7
<b>Total .....</b>	<b>100</b>	<b>E 99.105</b>	<b>789,017</b>	<b>19.4</b>	<b>E 90.1</b>
2014 January .....	100	E 98.957	73,064	19.4	E 99.2
February .....	100	E 98.977	62,639	19.4	E 94.1
March .....	100	E 98.977	62,397	18.8	E 84.6
April .....	100	E 98.977	56,385	19.0	E 79.0
May .....	100	E 98.977	62,947	19.4	E 85.4
<b>5-Month Total .....</b>	<b>100</b>	<b>E 98.977</b>	<b>317,432</b>	<b>19.2</b>	<b>E 88.4</b>
<b>2013 5-Month Total .....</b>	<b>102</b>	<b>E 101.147</b>	<b>315,452</b>	<b>19.7</b>	<b>E 85.9</b>
<b>2012 5-Month Total .....</b>	<b>104</b>	<b>101.625</b>	<b>315,909</b>	<b>19.9</b>	<b>85.2</b>

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

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

<sup>c</sup> For the definition of "Net Summer Capacity," see Note 2, "Nuclear Capacity," at end of section. Beginning in 2011, monthly capacity values are estimated in two steps: 1) uprates and derates reported on Form EIA-860M are added to specific months; and 2) the difference between the resulting year-end capacity (from data reported on Form EIA-860M) and final capacity (reported on Form EIA-860) is allocated to the month of January.

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

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

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 have recently been retired: Crystal River 3 in February 2013; Keweenaw in May 2013; and San Onofre 2 and 3 in June 2013.

**Note 2. Nuclear Capacity.** Nuclear generating units may have more than one type of net capacity rating, including the following:

- (a) Net Summer Capacity—The steady hourly output that generating equipment is expected to supply to system load, exclusive of auxiliary power, as demonstrated by test at the time of summer peak demand. Auxiliary power of a typical nuclear power plant is about 5 percent of gross generation.

(b) Net Design Capacity or Net Design Electrical Rating (DER)—The nominal net electrical output of a unit, specified by the utility and used for plant design.

Through 2007, the monthly capacity factors are calculated as the monthly nuclear electricity net generation divided by the maximum possible nuclear electricity net generation for that month. The maximum possible nuclear electricity net generation is the number of hours in the month (assuming 24-hour days, with no adjustment for changes to or from Daylight Savings Time) multiplied by the net summer capacity of operable nuclear generating units at the end of the month. That fraction is then multiplied by 100 to obtain a percentage. Annual capacity factors are calculated as the annual nuclear electricity net generation divided by the annual maximum possible nuclear electricity net generation (the sum of the monthly values for maximum possible nuclear electricity net generation). For the methodology used to calculate capacity factors beginning in 2008, see U.S. Energy Information Administration, *Electric Power Monthly*, Appendix C notes on “Average Capacity Factors.”

### Table 8.1 Sources

#### Total Operable Units and Net Summer Capacity of Operable Units

1957–1982: Compiled from various sources, primarily U.S. Department of Energy, Office of Nuclear Reactor Programs, “U.S. Central Station Nuclear Electric Generating Units: Significant Milestones.”

1983 forward: U.S. Energy Information Administration (EIA), Form EIA-860, “Annual Electric Generator Report,” and predecessor forms; Form EIA-860M, “Monthly Update to the Annual Electric Generator Report”; and monthly updates as appropriate. For a list of operable units as of November 2011, see [http://www.eia.gov/nuclear/reactors/stats\\_table1.html](http://www.eia.gov/nuclear/reactors/stats_table1.html).

#### Nuclear Electricity Net Generation and Nuclear Share of Electricity Net Generation

1957 forward: Table 7.2a.

#### Capacity Factor

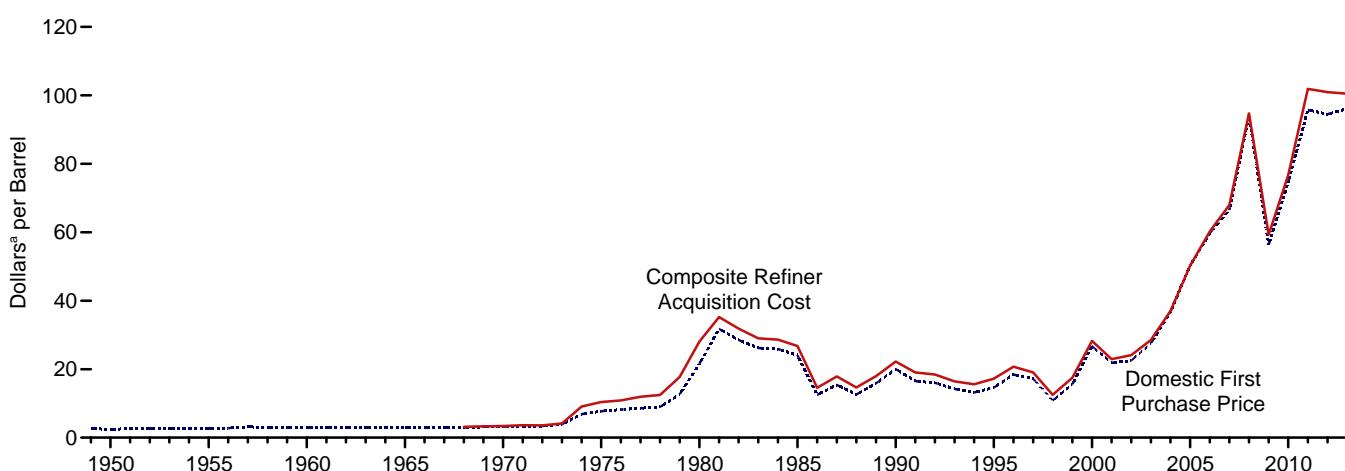
1973–2007: Calculated by EIA using the method described above in Note 2.

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

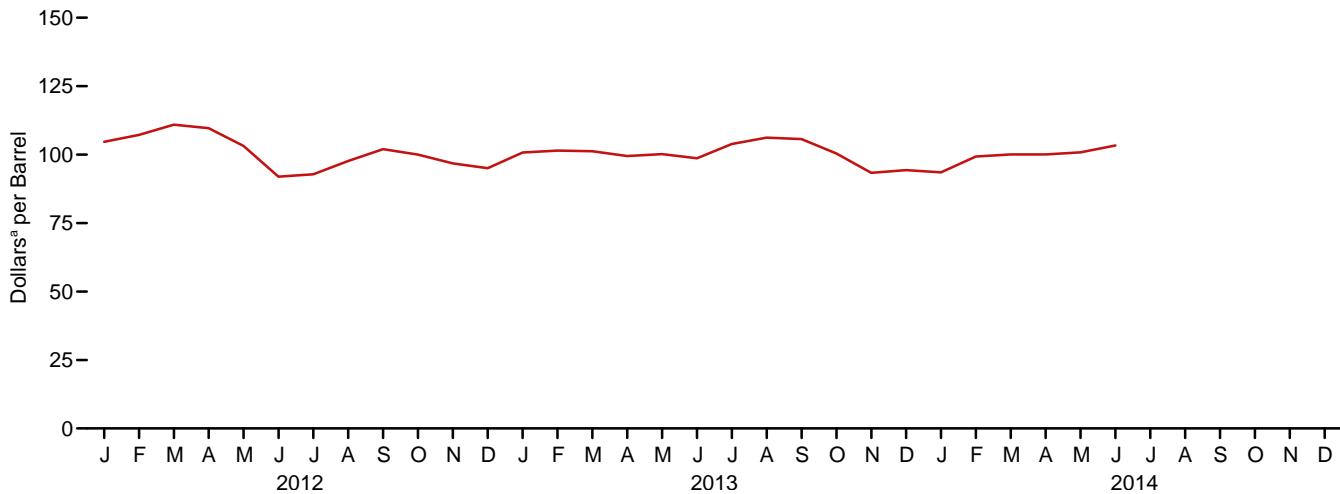
## **9. Energy Prices**

**Figure 9.1 Petroleum Prices**

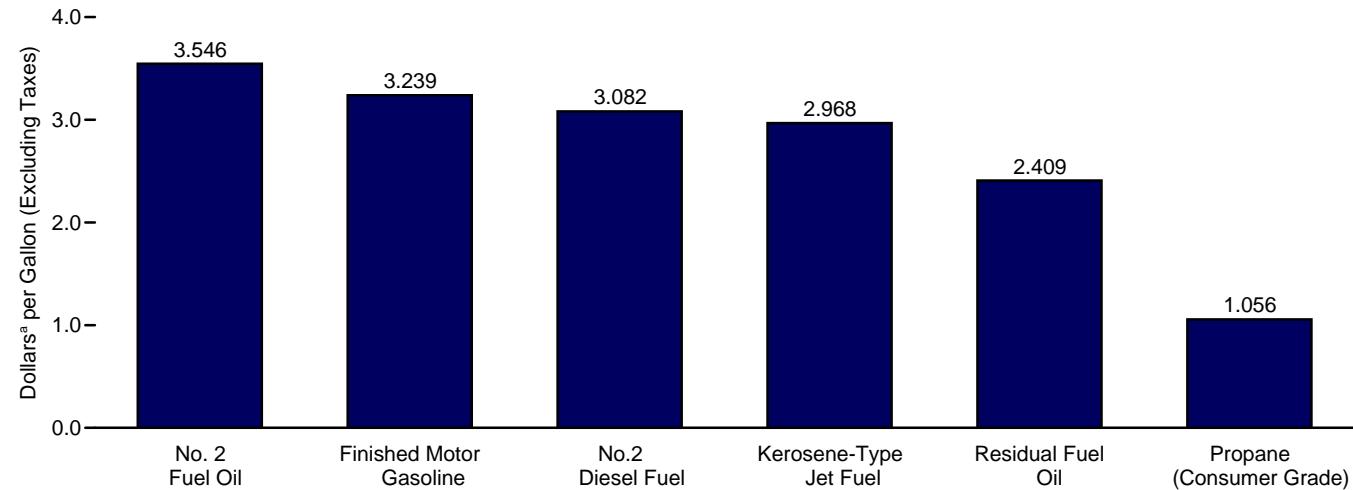
Crude Oil Prices, 1949–2013



Composite Refiner Acquisition Cost, Monthly



Refiner Prices to End Users: Selected Products, May 2014



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

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

Sources: Tables 9.1, 9.5, and 9.7.

**Table 9.1 Crude Oil Price Summary**  
(Dollars<sup>a</sup> per Barrel)

	Domestic First Purchase Price <sup>c</sup>	F.O.B. Cost of Imports <sup>d</sup>	Landed Cost of Imports <sup>e</sup>	Refiner Acquisition Cost <sup>b</sup>		
				Domestic	Imported	Composite
1950 Average .....	2.51	NA	NA	NA	NA	NA
1955 Average .....	2.77	NA	NA	NA	NA	NA
1960 Average .....	2.88	NA	NA	NA	NA	NA
1965 Average .....	2.86	NA	NA	NA	NA	NA
1970 Average .....	3.18	NA	NA	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	R 93.06	R 95.54	102.61	97.04	100.05
April .....	96.47	R 94.72	R 96.17	R 102.42	R 97.30	R 100.07
May .....	R 95.74	R 96.62	R 97.36	R 102.51	R 98.79	R 100.81
June .....	NA	NA	NA	E 105.34	E 101.73	E 103.35

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

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

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

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

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

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<sup>a</sup> per Barrel)

	Selected Countries							Persian Gulf Nations <sup>b</sup>	Total OPEC <sup>c</sup>	Total Non-OPEC <sup>c</sup>
	Angola	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average <sup>d</sup>	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	—	R 92.27	100.67	R 97.19	R 90.59
April	W	R 98.61	R 93.22	R W	99.76	—	R 95.67	99.02	R 99.19	R 91.17
May	W	98.75	95.10	—	100.54	—	96.74	98.72	98.33	95.26

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

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

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

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

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<sup>a</sup> per Barrel)

	Selected Countries								Persian Gulf Nations <sup>b</sup>	Total OPEC <sup>c</sup>	Total Non-OPEC <sup>c</sup>
	Angola	Canada	Colombia	Mexico	Nigeria	Saudi Arabia	United Kingdom	Venezuela			
1973 Average <sup>d</sup> .....	W	5.33	W	—	9.08	5.37	—	5.99	5.91	6.85	5.64
1975 Average .....	11.81	12.84	—	12.61	12.70	12.50	—	12.36	12.64	12.70	12.70
1980 Average .....	34.76	30.11	W	31.77	37.15	29.80	35.68	25.92	30.59	33.56	33.99
1985 Average .....	27.39	25.71	—	25.63	28.96	24.72	28.36	24.43	25.50	26.86	26.53
1990 Average .....	21.51	20.48	22.34	19.64	23.33	21.82	22.65	20.31	20.55	21.23	20.98
1995 Average .....	17.66	16.65	17.45	16.19	18.25	16.84	17.91	14.81	16.78	16.61	16.95
2000 Average .....	29.57	26.69	29.68	26.03	30.04	26.58	29.26	26.05	26.77	27.29	27.80
2001 Average .....	25.13	20.72	25.88	19.37	26.55	20.98	25.32	19.81	20.73	21.52	22.17
2002 Average .....	25.43	22.98	25.28	22.09	26.45	24.77	26.35	21.93	24.13	23.83	23.97
2003 Average .....	30.14	26.76	30.55	25.48	31.07	27.50	30.62	25.70	27.54	27.70	27.68
2004 Average .....	39.62	34.51	39.03	32.25	40.95	37.11	39.28	33.79	36.53	36.84	35.29
2005 Average .....	54.31	44.73	53.42	43.47	57.55	50.31	55.28	47.87	49.68	51.36	47.31
2006 Average .....	64.85	53.90	62.13	53.76	68.26	59.19	67.44	57.37	58.92	61.21	57.14
2007 Average .....	71.27	60.38	70.91	62.31	78.01	70.78	72.47	66.13	69.83	71.14	63.96
2008 Average .....	98.18	90.00	93.43	85.97	104.83	94.75	96.95	90.76	93.59	95.49	90.59
2009 Average .....	61.32	57.60	58.50	57.35	68.01	62.14	63.87	57.78	62.15	61.90	58.58
2010 Average .....	80.61	72.80	74.25	72.86	83.14	79.29	80.29	72.43	78.60	78.28	74.68
2011 Average .....	114.05	89.92	102.57	101.21	116.43	108.83	118.45	100.14	108.01	107.84	98.64
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	R 89.39	R 89.04	R 99.68	R 94.01	R 102.15	—	94.63	R 101.68	R 100.36	R 92.15
April .....	R 108.70	W	91.80	100.91	96.07	W	R 101.67	R W	R 97.39	R 101.31	R 101.35
May .....	W	91.80	100.91	96.07	W	101.90	—	98.55	100.74	100.84	94.96

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

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

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

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

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*, August 2014, Table 22.

**Table 9.4 Retail Motor Gasoline and On-Highway Diesel Fuel Prices**  
(Dollars<sup>a</sup> per Gallon, Including Taxes)

	Platt's / Bureau of Labor Statistics Data				U.S. Energy Information Administration Data			On-Highway Diesel Fuel	
	Motor Gasoline by Grade				Regular Motor Gasoline by Area Type		All Areas		
	Leaded Regular	Unleaded Regular	Unleaded Premium <sup>b</sup>	All Grades <sup>c</sup>	Conventional Gasoline Areas <sup>d</sup>	Reformulated Gasoline Areas <sup>e</sup>			
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	

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

<sup>b</sup> The 1981 average (available in Web file) is based on September through December data only.

<sup>c</sup> Also includes grades of motor gasoline not shown separately.

<sup>d</sup> Any area that does not require the sale of reformulated gasoline.

<sup>e</sup> "Reformulated Gasoline Areas" are ozone nonattainment areas designated by the U.S. Environmental Protection Agency that require the use of reformulated gasoline (RFG). Areas are reclassified each time a shift in or out of an RFG program occurs due to federal or state regulations.

NA=Not available. --=Not applicable.

Notes: • See Note 5, "Motor Gasoline Prices," at end of section. • See "Motor Gasoline Grades," "Motor Gasoline, Conventional," "Motor Gasoline, Oxygenated," and "Motor Gasoline, Reformulated" in Glossary. • Geographic coverage: for columns 1–4, current coverage is 85 urban areas; for columns 5–7, coverage is the 50 states and the District of Columbia; for column 8, coverage is the 48 contiguous

states and the District of Columbia.

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

Sources: • **Motor Gasoline by Grade, Monthly Data: October 1973 forward**—U.S. Department of Labor, Bureau of Labor Statistics (BLS), *U.S. City Average Gasoline Prices*. • **Motor Gasoline by Grade, Annual Data: 1949–1973**—*Platt's Oil Price Handbook and Oilmanac*, 1974, 51st Edition. 1974 forward—calculated by the U.S. Energy Information Administration (EIA) as simple averages of the BLS monthly data. • **Regular Motor Gasoline by Area Type**: EIA, calculated as simple averages of weighted weekly estimates from "Weekly U.S. Retail Gasoline Prices, Regular Grade." • **On-Highway Diesel Fuel**: EIA, calculated as simple averages of weighted weekly estimates from "Weekly Retail On-Highway Diesel Prices."

**Table 9.5 Refiner Prices of Residual Fuel Oil**(Dollars<sup>a</sup> per Gallon, Excluding Taxes)

	Residual Fuel Oil Sulfur Content Less Than or Equal to 1 Percent		Residual Fuel Oil Sulfur Content Greater Than 1 Percent		Average	
	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users	Sales for Resale	Sales to End Users
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
<b>2012 January .....</b>	2.591	2.965	2.480	2.452	2.512	2.620
February .....	2.739	3.070	2.632	2.556	2.654	2.705
March .....	2.921	3.159	2.717	2.601	2.772	2.784
April .....	2.805	3.201	2.624	2.596	2.670	2.731
May .....	2.589	3.170	2.501	2.652	2.527	2.784
June .....	2.275	3.083	2.186	2.179	2.211	2.476
July .....	2.271	2.926	2.224	2.221	2.234	2.406
August .....	2.586	3.041	2.457	2.442	2.483	2.579
September .....	2.558	2.970	2.491	2.473	2.501	2.582
October .....	2.464	2.969	2.393	2.382	2.409	2.496
November .....	2.385	2.895	2.283	2.346	2.300	2.492
December .....	2.341	2.814	2.248	2.275	2.268	2.431
<b>Average .....</b>	<b>2.548</b>	<b>3.025</b>	<b>2.429</b>	<b>2.433</b>	<b>2.457</b>	<b>2.592</b>
<b>2013 January .....</b>	2.530	2.874	2.328	2.333	2.388	2.475
February .....	2.571	3.017	2.388	2.402	2.415	2.578
March .....	2.479	2.949	2.294	2.320	2.346	2.517
April .....	2.354	2.875	2.214	2.238	2.246	2.354
May .....	2.316	2.839	2.213	2.421	2.240	2.507
June .....	2.285	2.785	2.214	2.385	2.234	2.454
July .....	2.282	2.768	2.225	2.280	2.242	2.384
August .....	2.331	2.759	2.258	2.411	2.277	2.500
September .....	2.359	2.839	2.265	2.412	2.286	2.513
October .....	2.338	NA	2.232	2.364	2.255	2.532
November .....	2.296	NA	2.190	2.328	2.224	2.492
December .....	2.315	NA	2.177	2.353	2.209	2.458
<b>Average .....</b>	<b>2.363</b>	<b>2.883</b>	<b>2.249</b>	<b>2.353</b>	<b>2.278</b>	<b>2.482</b>
<b>2014 January .....</b>	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	R 2.149	R 2.323	R 2.226	R 2.464
May .....	2.350	NA	2.198	2.300	2.267	2.409

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

R=Revised. NA=Not available.

Notes: • Sales for resale are those made to purchasers other than ultimate consumers. Sales to end users are those made directly to ultimate consumers, including bulk consumers (such as agriculture, industry, and electric utilities) and commercial consumers. • Values for the current month are preliminary. • Through 1982, prices are U.S. Energy Information Administration (EIA)

estimates. See Note 6, "Historical Petroleum Prices," at end of section.

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

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (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*, August 2014, Table 16.

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

	Finished Motor Gasoline <sup>b</sup>	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average .....	0.434	0.537	0.386	0.404	0.369	0.365	0.237
1980 Average .....	.941	1.128	.868	.864	.803	.801	.415
1985 Average .....	.835	1.130	.794	.874	.776	.772	.398
1990 Average .....	.786	1.063	.773	.839	.697	.694	.386
1995 Average .....	.626	.975	.539	.580	.511	.538	.344
2000 Average .....	.963	1.330	.880	.969	.886	.898	.595
2001 Average .....	.886	1.256	.763	.821	.756	.784	.540
2002 Average .....	.828	1.146	.716	.752	.694	.724	.431
2003 Average .....	1.002	1.288	.871	.955	.881	.883	.607
2004 Average .....	1.288	1.627	1.208	1.271	1.125	1.187	.751
2005 Average .....	1.670	2.076	1.723	1.757	1.623	1.737	.933
2006 Average .....	1.969	2.490	1.961	2.007	1.834	2.012	1.031
2007 Average .....	2.182	2.758	2.171	2.249	2.072	2.203	1.194
2008 Average .....	2.586	3.342	3.020	2.851	2.745	2.994	1.437
2009 Average .....	1.767	2.480	1.719	1.844	1.657	1.713	.921
2010 Average .....	2.165	2.874	2.185	2.299	2.147	2.214	1.212
2011 Average .....	2.867	3.739	3.014	3.065	2.907	3.034	1.467
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	R 3.940	2.911	2.938	R 2.911	R 3.027	R 1.121
May .....	2.951	3.881	2.931	2.939	2.889	2.987	1.056

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

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

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*, August 2014, Table 4.

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

	Finished Motor Gasoline <sup>b</sup>	Finished Aviation Gasoline	Kerosene-Type Jet Fuel	Kerosene	No. 2 Fuel Oil	No. 2 Diesel Fuel	Propane (Consumer Grade)
1978 Average .....	0.484	0.516	0.387	0.421	0.400	0.377	0.335
1980 Average .....	1.035	1.084	.868	.902	.788	.818	.482
1985 Average .....	.912	1.201	.796	1.030	.849	.789	.717
1990 Average .....	.883	1.120	.766	.923	.734	.725	.745
1995 Average .....	.765	1.005	.540	.589	.562	.560	.492
2000 Average .....	1.106	1.306	.899	1.123	.927	.935	.603
2001 Average .....	1.032	1.323	.775	1.045	.829	.842	.506
2002 Average .....	.947	1.288	.721	.990	.737	.762	.419
2003 Average .....	1.156	1.493	.872	1.224	.933	.944	.577
2004 Average .....	1.435	1.819	1.207	1.160	1.173	1.243	.839
2005 Average .....	1.829	2.231	1.735	1.957	1.705	1.786	1.089
2006 Average .....	2.128	2.682	1.998	2.244	1.982	2.096	1.358
2007 Average .....	2.345	2.849	2.165	2.263	2.241	2.267	1.489
2008 Average .....	2.775	3.273	3.052	3.283	2.986	3.150	1.892
2009 Average .....	1.888	2.442	1.704	2.675	1.962	1.834	1.220
2010 Average .....	2.301	3.028	2.201	3.063	2.462	2.314	1.481
2011 Average .....	3.050	3.803	3.054	3.616	3.193	3.117	1.709
2012 January .....	2.914	3.732	3.087	3.848	3.345	3.093	1.655
February .....	3.087	W	3.206	3.874	3.495	3.224	1.518
March .....	3.389	4.133	3.337	3.919	3.522	3.378	1.470
April .....	3.405	4.313	3.283	3.916	3.509	3.342	1.352
May .....	3.289	W	3.100	3.741	3.258	3.163	1.080
June .....	3.061	W	2.768	3.753	2.982	2.912	.902
July .....	2.981	W	2.856	3.612	3.041	2.989	.972
August .....	3.248	4.091	3.123	3.575	3.256	3.265	.916
September .....	3.357	4.262	3.283	3.771	3.361	3.367	.932
October .....	3.261	4.064	3.211	3.864	3.486	3.364	.980
November .....	2.994	3.561	3.045	3.854	3.403	3.206	.926
December .....	2.828	3.599	3.008	3.789	3.321	3.115	.840
Average .....	3.154	3.971	3.104	3.843	3.358	3.202	1.139
2013 January .....	2.850	W	3.117	3.790	3.341	3.129	.891
February .....	3.221	4.060	3.294	3.887	3.498	3.339	.925
March .....	3.233	4.022	3.070	3.869	3.314	3.204	.943
April .....	3.102	3.860	2.922	3.836	3.217	3.090	.971
May .....	3.188	3.900	2.787	3.786	3.222	3.058	.953
June .....	3.184	4.191	2.813	3.634	3.172	3.028	.876
July .....	3.146	4.224	2.908	3.840	3.244	3.099	.935
August .....	3.097	4.298	3.002	3.707	3.314	3.169	1.074
September .....	3.059	3.982	3.040	3.849	3.327	3.184	1.115
October .....	2.893	3.653	2.931	3.852	NA	3.085	1.169
November .....	2.759	3.674	2.883	3.847	NA	3.030	1.222
December .....	2.759	3.678	3.008	W	3.578	3.055	1.322
Average .....	3.049	3.932	2.979	3.842	3.335	3.122	1.028
2014 January .....	2.816	W	2.987	W	3.591	3.024	1.457
February .....	2.913	4.142	2.994	W	3.687	3.139	1.513
March .....	3.104	W	2.942	4.067	3.621	3.115	1.137
April .....	3.214	W	2.931	4.108	3.572	3.109	1.122
May .....	3.239	W	2.968	4.056	3.546	3.082	1.056

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

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

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

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

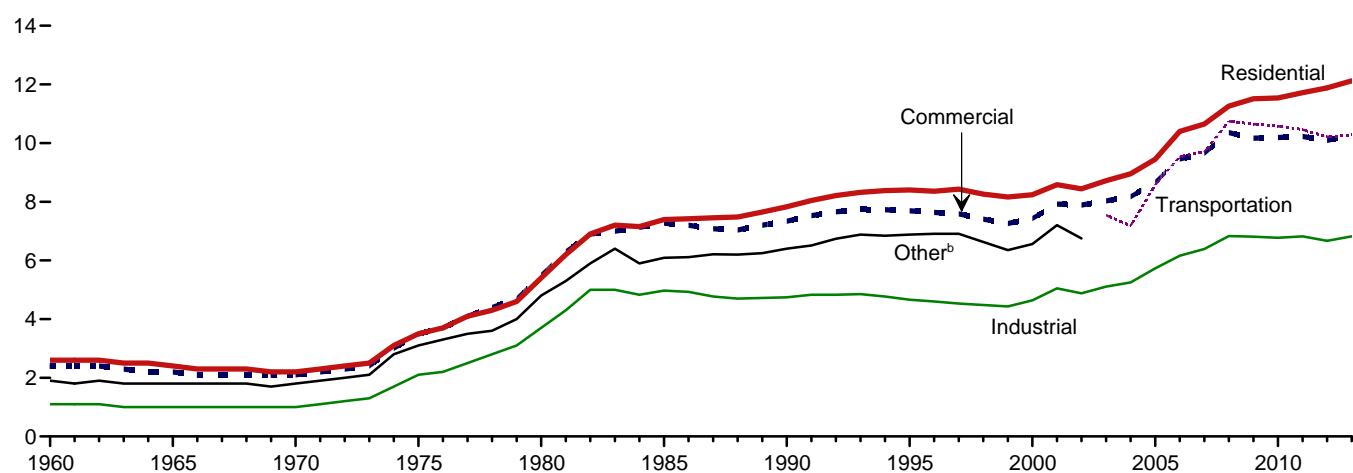
Information Administration (EIA) estimates. See Note 6, "Historical Petroleum Prices," at end of section. • Geographic coverage is the 50 states and the District of Columbia.

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

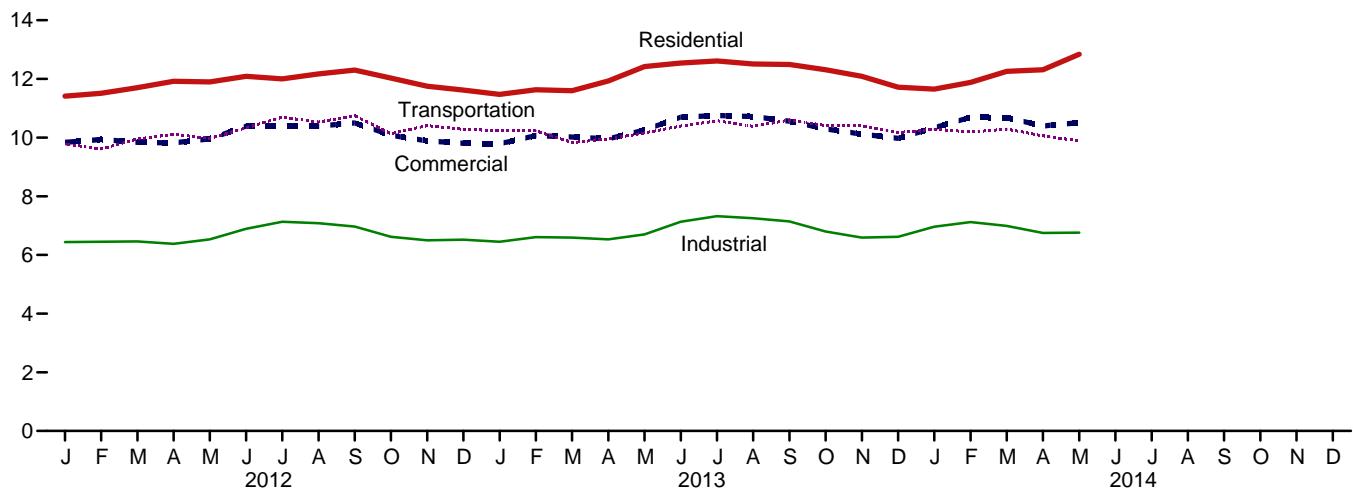
Sources: • **1978–2007:** EIA, *Petroleum Marketing Annual* 2007, Table 2. • **2008 forward:** EIA, *Petroleum Marketing Monthly*, August 2014, Table 2.

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

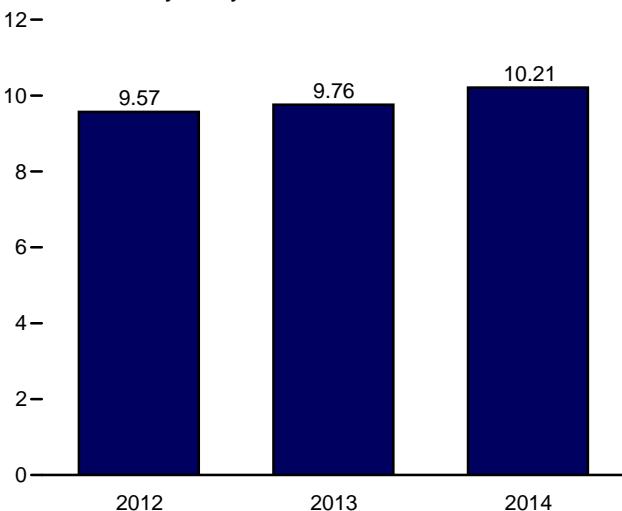
By Sector, 1960–2013



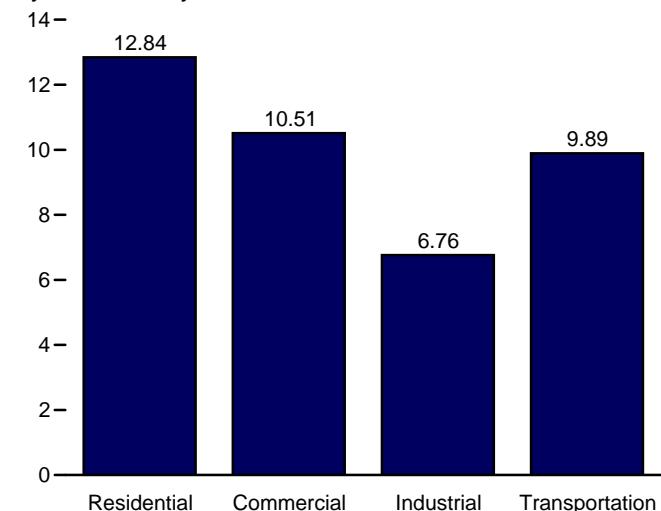
By Sector, Monthly



Total, January–May



By Sector, May 2014



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

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

Note: Includes taxes.

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

Source: Table 9.8.

**Table 9.8 Average Retail Prices of Electricity**  
(Cents<sup>a</sup> per Kilowatthour, Including Taxes)

	Residential	Commercial <sup>b</sup>	Industrial <sup>c</sup>	Transportation <sup>d</sup>	Other <sup>e</sup>	Total
1960 Average .....	2.60	2.40	1.10	NA	1.90	1.80
1965 Average .....	2.40	2.20	1.00	NA	1.80	1.70
1970 Average .....	2.20	2.10	1.00	NA	1.80	1.70
1975 Average .....	3.50	3.50	2.10	NA	3.10	2.90
1980 Average .....	5.40	5.50	3.70	NA	4.80	4.70
1985 Average .....	7.39	7.27	4.97	NA	6.09	6.44
1990 Average .....	7.83	7.34	4.74	NA	6.40	6.57
1995 Average .....	8.40	7.69	4.66	NA	6.88	6.89
2000 Average .....	8.24	7.43	4.64	NA	6.56	6.81
2001 Average .....	8.58	7.92	5.05	NA	7.20	7.29
2002 Average .....	8.44	7.89	4.88	NA	6.75	7.20
2003 Average .....	8.72	8.03	5.11	7.54	--	7.44
2004 Average .....	8.95	8.17	5.25	7.18	--	7.61
2005 Average .....	9.45	8.67	5.73	8.57	--	8.14
2006 Average .....	10.40	9.46	6.16	9.54	--	8.90
2007 Average .....	10.65	9.65	6.39	9.70	--	9.13
2008 Average .....	11.26	10.36	6.83	10.74	--	9.74
2009 Average .....	11.51	10.17	6.81	10.65	--	9.82
2010 Average .....	11.54	10.19	6.77	10.57	--	9.83
2011 Average .....	11.72	10.23	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 .....	11.47	9.79	6.45	10.24	--	9.66
February .....	11.63	10.07	6.61	10.23	--	9.79
March .....	11.60	10.02	6.59	9.83	--	9.71
April .....	11.93	9.96	6.53	9.95	--	9.67
May .....	12.42	10.26	6.70	10.16	--	9.95
June .....	12.54	10.70	7.13	10.39	--	10.47
July .....	12.61	10.76	7.32	10.57	--	10.70
August .....	12.51	10.72	7.25	10.38	--	10.59
September .....	12.49	10.56	7.14	10.60	--	10.43
October .....	12.31	10.30	6.80	10.41	--	10.01
November .....	12.09	10.12	6.59	10.40	--	9.83
December .....	11.72	9.98	6.62	10.17	--	9.88
Average .....	12.12	10.29	6.82	10.28	--	10.08
 2014 January .....	11.65	10.34	6.96	10.29	--	10.13
February .....	11.88	10.70	7.12	10.19	--	10.35
March .....	12.26	10.68	6.99	10.29	--	10.32
April .....	12.31	10.40	6.75	10.06	--	10.01
May .....	12.84	10.51	6.76	9.89	--	10.21
5-Month Average .....	12.12	10.52	6.91	10.15	--	10.21
 2013 5-Month Average .....	11.78	10.02	6.58	10.08	--	9.76
2012 5-Month Average .....	11.67	9.88	6.45	9.88	--	9.57

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

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

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

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

<sup>e</sup> Public street and highway lighting, interdepartmental sales, other sales to public authorities, agriculture and irrigation, and transportation including railroads and railways.

NA=Not available. --=Not applicable.

Notes: • Beginning in 2003, the category "Other" has been replaced by "Transportation," and the categories "Commercial" and "Industrial" have been redefined. • Prices are calculated by dividing revenue by sales. Revenue may not correspond to sales for a particular month because of energy service provider billing and accounting procedures. That lack of correspondence could result in uncharacteristic increases or decreases in the monthly prices. • Prices include state and local taxes, energy or demand charges, customer service charges, environmental surcharges, franchise fees, fuel adjustments, and other miscellaneous charges applied to end-use customers during normal billing operations. Prices do not include deferred charges, credits, or other adjustments, such as fuel or revenue from purchased power, from previous reporting periods. • Through 1979, data are for Classes A and B privately owned electric utilities only.

(Class A utilities are those with operating revenues of \$2.5 million or more; Class B utilities are those with operating revenues between \$1 million and \$2.5 million.) For 1980–1982, data are for selected Class A utilities whose electric operating revenues were \$100 million or more during the previous year. For 1983, data are for a selected sample of electric utilities. Beginning in 1984, data are for a census of electric utilities. Beginning in 1996, data also include energy service providers selling to retail customers. • See Note 7, "Electricity Retail Prices," at end of section for plant coverage, and for information on preliminary and final values.

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

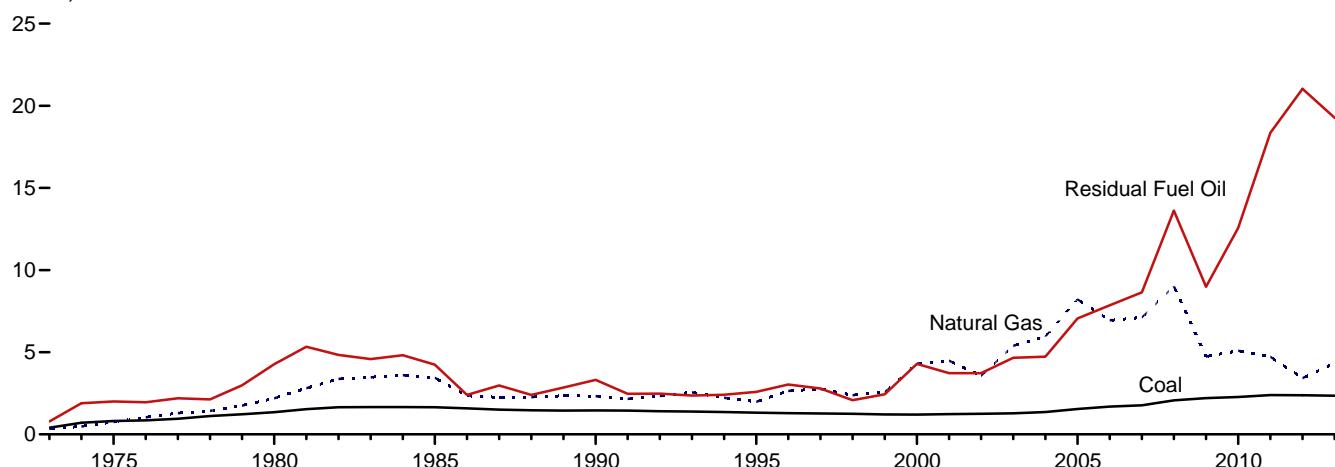
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (Excel and CSV files) for all available annual data beginning in 1960 and monthly data beginning in 1976.

Sources: • **1960–September 1977:** Federal Power Commission, Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • **October 1977–February 1980:** Federal Energy Regulatory Commission (FERC), Form FPC-5, "Monthly Statement of Electric Operating Revenues and Income." • **March 1980–1982:** FERC, Form FERC-5, "Electric Utility Company Monthly Statement."

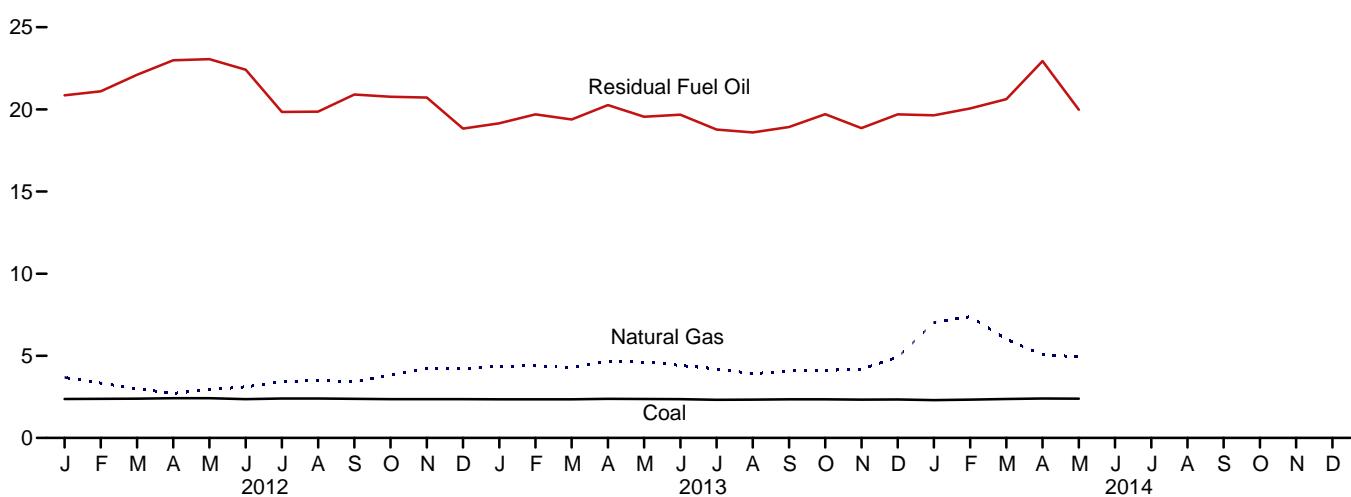
• 1983: U.S. Energy Information Administration (EIA), Form EIA-826, "Electric Utility Company Monthly Statement." • **1984–2010:** EIA, Form EIA-861, "Annual Electric Power Industry Report." • **2011 forward:** EIA, *Electric Power Monthly*, July 2014, Table 5.3.

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

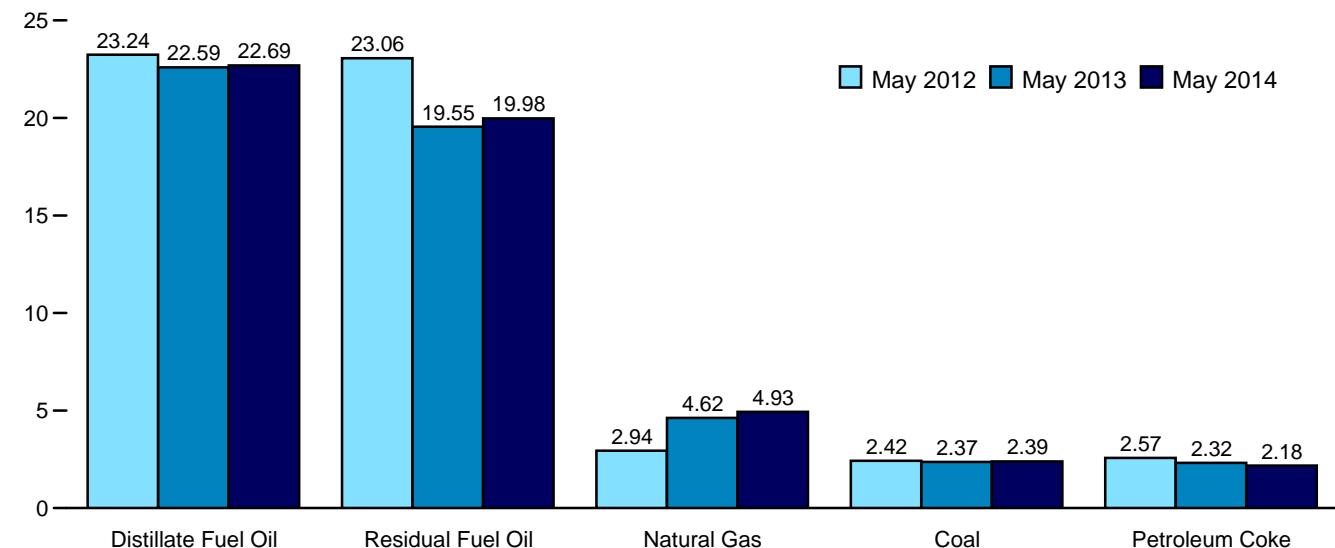
Costs, 1973–2013



Costs, Monthly



By Fuel Type



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

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

**Table 9.9 Cost of Fossil-Fuel Receipts at Electric Generating Plants**  
(Dollars<sup>a</sup> per Million Btu, Including Taxes)

	Coal	Petroleum				Natural Gas <sup>e</sup>	All Fossil Fuels <sup>f</sup>
		Residual Fuel Oil <sup>b</sup>	Distillate Fuel Oil <sup>c</sup>	Petroleum Coke	Total <sup>d</sup>		
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 <sup>g</sup> .....	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 .....	<b>2.38</b>	<b>21.03</b>	<b>23.49</b>	<b>2.24</b>	<b>12.48</b>	<b>3.42</b>	<b>2.83</b>
2013 January .....	2.35	19.15	22.93	2.02	12.50	4.38	3.09
February .....	2.35	19.70	23.82	W	W	4.39	W
March .....	2.35	19.39	23.85	W	W	4.29	W
April .....	2.38	20.26	22.92	2.26	9.73	4.67	3.16
May .....	2.37	19.55	22.59	2.32	10.81	4.62	3.16
June .....	2.36	19.68	22.37	2.39	10.11	4.42	3.15
July .....	2.32	18.77	23.11	2.27	11.44	4.20	3.12
August .....	2.33	18.60	23.16	2.23	11.81	3.91	3.00
September .....	2.35	18.93	23.50	2.15	10.14	4.08	3.02
October .....	2.35	19.71	22.84	2.11	11.28	4.11	3.00
November .....	2.33	18.86	22.74	1.98	12.24	4.19	3.01
December .....	2.34	19.70	23.21	1.99	10.96	4.91	3.28
Average .....	<b>2.35</b>	<b>19.27</b>	<b>23.05</b>	<b>2.16</b>	<b>11.56</b>	<b>4.33</b>	<b>3.10</b>
2014 January .....	2.30	19.64	23.12	1.73	16.65	7.03	4.09
February .....	2.33	20.06	23.96	W	W	7.39	W
March .....	2.37	20.62	23.82	2.00	12.69	6.00	3.53
April .....	2.40	22.94	22.82	2.11	10.66	5.07	3.26
May .....	2.39	19.98	22.69	2.18	9.88	4.93	3.26
5-Month Average ....	<b>2.36</b>	<b>20.41</b>	<b>23.37</b>	<b>2.02</b>	<b>13.86</b>	<b>6.08</b>	<b>3.65</b>
2013 5-Month Average ....	<b>2.36</b>	<b>19.53</b>	<b>23.17</b>	<b>2.16</b>	<b>12.17</b>	<b>4.47</b>	<b>3.12</b>
2012 5-Month Average ....	<b>2.40</b>	<b>21.90</b>	<b>23.77</b>	<b>2.26</b>	<b>12.97</b>	<b>3.12</b>	<b>2.73</b>

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

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

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

<sup>d</sup> For all years, includes residual fuel oil and distillate fuel oil. For 1990 forward, also includes petroleum coke. For 1973–2012, also includes jet fuel, kerosene, and waste oil. For 1983–2012, also includes other petroleum, such as propane and refined motor oil.

<sup>e</sup> Natural gas, plus a small amount of supplemental gaseous fuels. For 1973–2000, data also include a small amount of blast furnace gas and other gases derived from fossil fuels.

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

<sup>g</sup> Through 2001, data are for electric utilities only. Beginning in 2002, data also include independent power producers, and electric generating plants in the

commercial and industrial sectors.

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

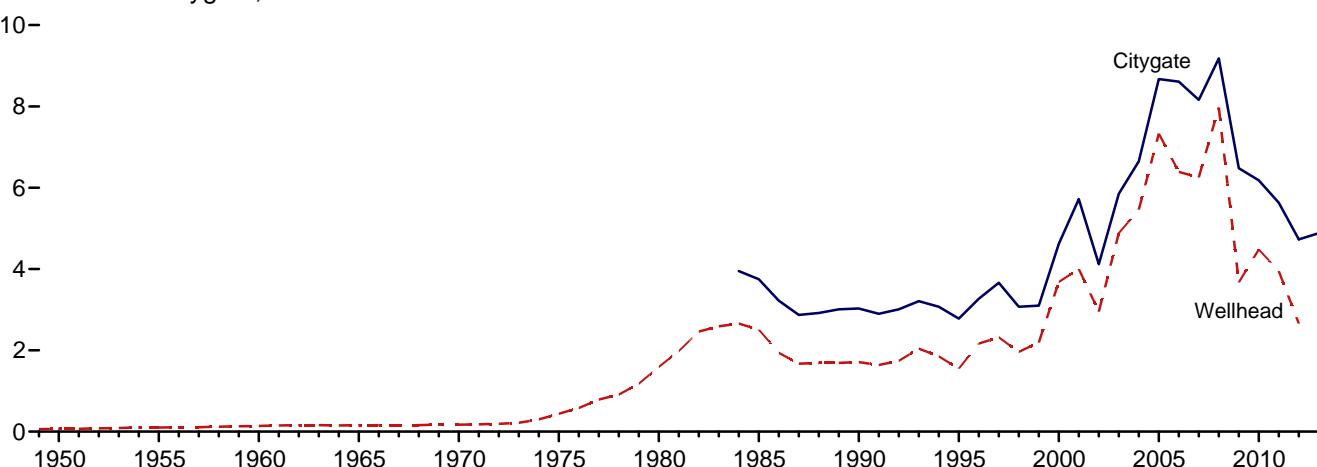
Notes: • Receipts are purchases of fuel. • Yearly costs are averages of monthly values, weighted by quantities in Btu. • For this table, there are several breaks in the data series related to what plants and fuels are covered. Beginning in 2013, data cover all regulated generating plants; plus unregulated plants whose total fossil-fueled nameplate generating capacity is 50 megawatts or more for coal, and 200 megawatts or more for natural gas, residual fuel oil, distillate fuel oil, and petroleum coke. For data coverage before 2013, see EIA, *Electric Power Monthly*, Appendix C, Form EIA-923 notes, "Receipts and cost and quality of fossil fuels" section. • Geographic coverage is the 50 states and the District of Columbia.

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

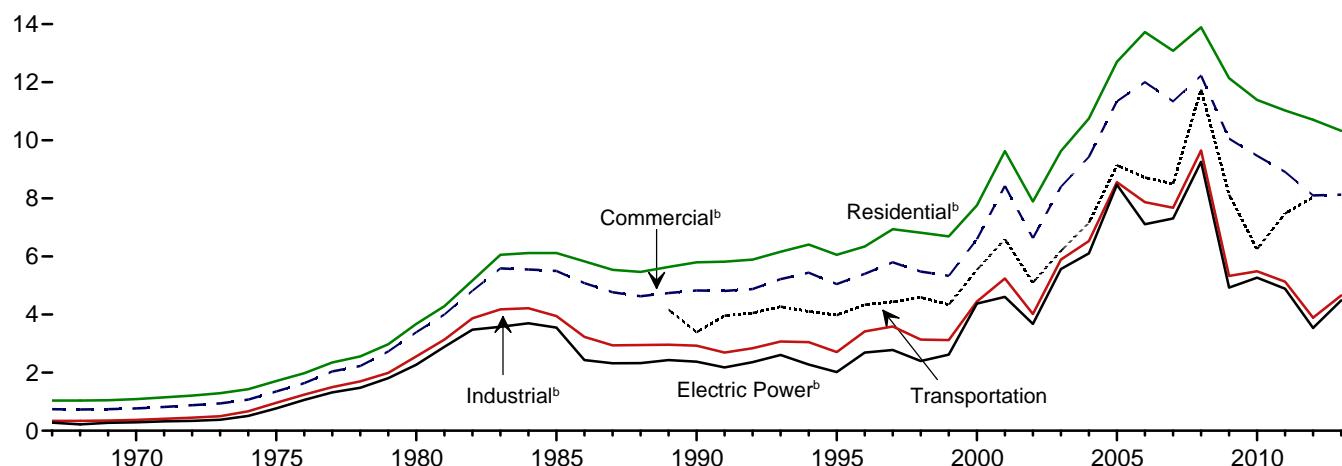
Sources: See end of section.

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

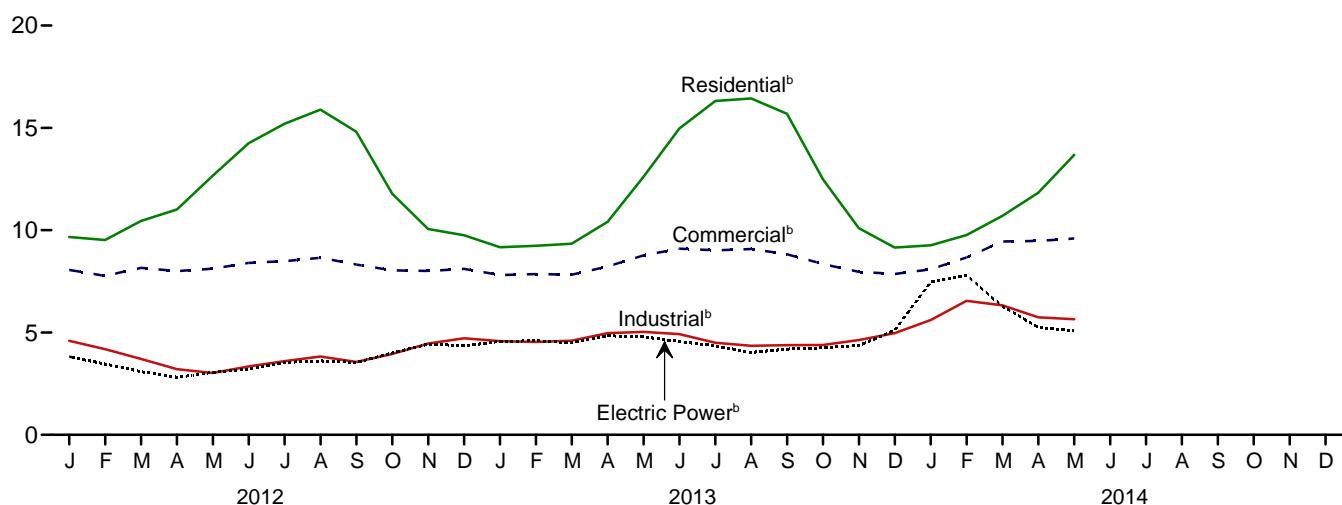
Wellhead and Citygate, 1949–2013



Consuming Sectors, 1967–2013



Consuming Sectors, Monthly



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

<sup>b</sup>Includes taxes.

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

Source: Table 9.10.

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

	Wellhead Price <sup>f</sup>	City-gate Price <sup>g</sup>	Consuming Sectors <sup>b</sup>									
			Residential		Commercial <sup>c</sup>		Industrial <sup>d</sup>		Transportation		Electric Power <sup>e</sup>	
			Price <sup>h</sup>	Percentage of Sector <sup>i</sup>	Price <sup>h</sup>	Percentage of Sector <sup>i</sup>	Price <sup>h</sup>	Percentage of Sector <sup>i</sup>	Vehicle Fuel <sup>j</sup> Price <sup>h</sup>	Price <sup>h</sup>	Percentage of Sector <sup>i,k</sup>	
1950 Average .....	0.07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1955 Average .....	.10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1960 Average .....	.14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1965 Average .....	.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1970 Average .....	.17	NA	1.09	NA	.77	NA	.37	NA	NA	.29	NA	
1975 Average .....	.44	NA	1.71	NA	1.35	NA	.96	NA	NA	.77	96.1	
1980 Average .....	1.59	NA	3.68	NA	3.39	NA	2.56	NA	NA	2.27	96.9	
1985 Average .....	2.51	3.75	6.12	NA	5.50	NA	3.95	68.8	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	2.38	76.8	
1995 Average .....	1.55	2.78	6.06	99.0	5.05	76.7	2.71	24.5	3.98	2.02	71.4	
2000 Average .....	3.68	4.62	7.76	92.6	6.59	63.9	4.45	19.8	5.54	4.38	50.5	
2001 Average .....	4.00	5.72	9.63	92.4	8.43	66.0	5.24	20.8	6.60	4.61	40.2	
2002 Average .....	2.95	4.12	7.89	97.9	6.63	77.4	4.02	22.7	5.10	<sup>e</sup> 3.68	83.9	
2003 Average .....	4.88	5.85	9.63	97.5	8.40	78.2	5.89	22.1	6.19	5.57	91.2	
2004 Average .....	5.46	6.65	10.75	97.7	9.43	78.0	6.53	23.6	7.16	6.11	89.8	
2005 Average .....	7.33	8.67	12.70	98.1	11.34	82.1	8.56	24.0	9.14	8.47	91.3	
2006 Average .....	6.39	8.61	13.73	98.1	12.00	80.8	7.87	23.4	8.72	7.11	93.4	
2007 Average .....	6.25	8.16	13.08	98.0	11.34	80.4	7.68	22.2	8.50	7.31	92.2	
2008 Average .....	7.97	9.18	13.89	97.5	12.23	79.7	9.65	20.4	11.75	9.26	101.1	
2009 Average .....	3.67	6.48	12.14	97.4	10.06	77.8	5.33	18.8	8.13	4.93	101.1	
2010 Average .....	4.48	6.18	11.39	97.4	9.47	77.5	5.49	18.0	6.25	5.27	100.8	
2011 Average .....	3.95	5.63	11.03	96.3	8.91	67.3	5.13	16.3	7.48	4.89	101.2	
2012 January .....	E 2.89	4.85	9.67	95.8	8.06	71.5	4.59	16.0	NA	3.82	95.0	
February .....	E 2.46	4.73	9.52	95.8	7.77	70.1	4.19	16.2	NA	3.46	95.3	
March .....	E 2.25	4.84	10.45	95.8	8.16	68.2	3.71	15.9	NA	3.09	95.2	
April .....	E 1.89	4.19	11.01	94.8	8.00	62.9	3.21	15.5	NA	2.81	96.4	
May .....	E 1.94	4.30	12.66	95.0	8.12	59.2	3.02	15.5	NA	3.05	96.0	
June .....	E 2.54	4.63	14.25	95.1	8.40	59.2	3.34	15.5	NA	3.21	95.8	
July .....	E 2.59	4.88	15.20	95.1	8.49	58.0	3.60	16.0	NA	3.54	95.8	
August .....	E 2.86	5.13	15.89	94.5	8.65	56.0	3.83	16.5	NA	3.61	95.2	
September .....	E 2.71	4.76	14.81	94.4	8.32	56.5	3.56	16.4	NA	3.54	96.0	
October .....	E 3.03	4.65	11.78	94.4	8.03	59.8	3.95	16.3	NA	4.00	95.9	
November .....	E 3.35	4.79	10.06	94.7	8.01	65.1	4.46	16.8	NA	4.43	94.3	
December .....	E 3.35	4.79	9.75	95.8	8.11	68.6	4.72	17.3	NA	4.35	94.4	
Average .....	E 2.66	4.73	10.71	95.3	8.10	65.2	3.89	16.2	8.04	3.54	95.5	
2013 January .....	NA	4.52	9.17	96.0	7.81	70.8	4.58	17.3	NA	4.56	95.2	
February .....	NA	4.56	9.24	95.6	7.85	70.2	4.54	17.2	NA	4.59	94.5	
March .....	NA	4.75	9.34	95.5	7.82	69.3	4.60	17.0	NA	4.50	94.9	
April .....	NA	5.16	10.41	95.1	8.23	66.6	4.97	16.9	NA	4.84	95.3	
May .....	NA	5.54	12.61	95.2	8.77	63.1	5.03	16.4	NA	4.79	95.4	
June .....	NA	5.74	14.97	94.9	9.10	59.1	4.92	16.3	NA	4.56	95.1	
July .....	NA	5.51	16.31	94.8	9.02	57.6	4.50	16.0	NA	4.34	94.6	
August .....	NA	5.23	16.44	94.8	9.08	56.9	4.35	16.1	NA	4.03	94.6	
September .....	NA	5.20	15.69	94.9	8.82	57.3	4.38	16.6	NA	4.19	95.1	
October .....	NA	4.87	12.48	95.2	8.35	61.2	4.39	16.9	NA	4.26	94.9	
November .....	NA	4.77	10.10	95.5	7.96	66.1	4.63	17.2	NA	4.36	93.9	
December .....	NA	4.91	9.15	95.7	7.86	69.8	4.97	17.4	NA	5.11	94.9	
Average .....	NA	4.88	10.33	95.5	8.13	66.4	4.66	16.8	NA	4.49	94.9	
2014 January .....	NA	5.58	9.26	95.7	8.09	71.1	5.61	16.5	NA	7.46	95.1	
February .....	NA	6.31	9.76	95.0	8.67	70.9	6.55	17.0	NA	7.78	93.2	
March .....	NA	6.56	10.70	95.1	9.45	69.5	R 6.33	16.9	NA	6.28	94.9	
April .....	NA	R 5.63	11.83	95.0	9.47	65.5	R 5.74	R 16.0	NA	5.25	95.4	
May .....	NA	5.82	13.68	95.0	9.60	61.0	5.65	16.0	NA	5.08	94.7	
5-Month Average ....	NA	6.01	10.33	95.2	8.86	68.9	5.99	16.5	NA	6.37	94.7	
2013 5-Month Average ....	NA	4.75	9.66	95.6	7.98	68.8	4.73	17.0	NA	4.66	95.1	
2012 5-Month Average ....	E 2.29	4.68	10.15	95.6	8.00	68.0	3.78	15.8	NA	3.23	95.6	

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

<sup>b</sup> See Note 8, "Natural Gas Prices," at end of section.

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

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

<sup>e</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 2001, data are for electric utilities only; beginning in 2002, data also include independent power producers.

<sup>f</sup> See "Natural Gas Wellhead Price" in Glossary.

<sup>g</sup> See "Citygate" in Glossary.

<sup>h</sup> Includes taxes.

<sup>i</sup> The percentage of the sector's consumption in Table 4.3 for which price data are available. For details on how the percentages are derived, see Table 9.10 sources at end of section.

<sup>j</sup> Much of the natural gas delivered for vehicle fuel represents deliveries to fueling stations that are used primarily or exclusively by fleet vehicles. Thus, the prices are often those associated with the cost of gas in the operation of fleet vehicles.

<sup>k</sup> Percentages exceed 100 percent when reported natural gas receipts are greater than reported natural gas consumption—this can occur when combined-heat-and-power plants report fuel receipts related to non-electric generating activities.

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

Notes: • Prices are for natural gas, plus a small amount of supplemental gaseous fuels. • Prices are intended to include all taxes. See Note 8, "Natural Gas Prices," at end of section. • Wellhead annual and year-to-date prices are simple averages of the monthly prices; all other annual and year-to-date prices are volume-weighted averages of the monthly prices. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#prices> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1976.

Sources: See end of section.

## Energy Prices

**Note 1. Crude Oil Refinery Acquisition Costs.** Beginning with January 1981, refiner acquisition costs of crude oil are from data collected on U.S. Energy Information Administration (EIA) Form EIA-14, "Refiners' Monthly Cost Report." Those costs were previously published from data collected on Economic Regulatory Administration (ERA) Form ERA-49, "Domestic Crude Oil Entitlements Program Refiners Monthly Report." Form ERA-49 was discontinued with the decontrol of crude oil on January 28, 1981. Crude oil purchases and costs are defined for Form EIA-14 in accordance with conventions used for Form ERA-49. The respondents for the two forms are also essentially the same. However, due to possible different interpretations of the filing requirements and a different method for handling prior period adjustments, care must be taken when comparing the data collected on the two forms.

The refiner acquisition cost of crude oil is the average price paid by refiners for crude oil booked into their refineries in accordance with accounting procedures generally accepted and consistently and historically applied by the refiners concerned. Domestic crude oil is that oil produced in the United States or from the outer continental shelf as defined in 43 USC Section 1331. Imported crude oil is either that oil reported on Form ERA-51, "Transfer Pricing Report," or any crude oil that is not domestic oil. The composite cost is the weighted average of domestic and imported crude oil costs.

Crude oil costs and volumes reported on Form ERA-49 excluded unfinished oils but included the Strategic Petroleum Reserve (SPR). Crude oil costs and volumes reported on Federal Energy Administration (FEA) Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report," included unfinished oils but excluded SPR. Imported averages derived from Form ERA-49 exclude oil purchased for SPR, whereas the composite averages derived from Form ERA-49 include SPR. None of the prices derived from Form EIA-14 include either unfinished oils or SPR.

**Note 2. Crude Oil Domestic First Purchase Prices.** The average domestic first purchase price represents the average price at which all domestic crude oil is purchased. Crude oil domestic first purchase prices were derived as follows: for 1949–1973, weighted average domestic first purchase values as reported by state agencies and calculated by the Bureau of Mines; for 1974 and 1975, weighted averages of a sample survey of major first purchasers' purchases; for 1976 forward, weighted averages of all first purchasers' purchases. The data series was previously called "Actual Domestic Wellhead Price."

**Note 3. Crude Oil F.O.B. Costs.** F.O.B. literally means "Free on Board." It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.

**Note 4. Crude Oil Landed Costs.** The landed cost of imported crude oil from selected countries does not represent the total cost of all imported crude. Prior to April 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude oil from countries that export only small amounts to the United States were also excluded. Beginning in April 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

**Note 5. Motor Gasoline Prices.** Several different series of motor gasoline prices are published in this section. U.S. city average retail prices of motor gasoline by grade are calculated monthly by the Bureau of Labor Statistics during the development of the Consumer Price Index (CPI). These prices include all federal, state, and local taxes paid at the time of sale. Prior to 1977, prices were collected in 56 urban areas. From 1978 forward, prices are collected from a new sample of service stations in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those providing all types of service (i.e., full-, mini-, and self-serve).

Regular motor gasoline prices by area type are determined by EIA in a weekly survey of retail motor gasoline outlets (Form EIA-878, "Motor Gasoline Price Survey"). Prices include all federal, state, and local taxes paid at the time of sale. A representative sample of outlets by geographic area and size is randomly selected from a sampling frame of approximately 115,000 retail motor gasoline outlets. Monthly and annual prices are simple averages of weighted weekly estimates from "Weekly U.S. Retail Gasoline Prices, Regular Grade." For more information on the survey methodology, see EIA, *Weekly Petroleum Status Report*, Appendix B, "Weekly Petroleum Price Surveys" section.

Refiner prices of finished motor gasoline for resale and to end users are determined by EIA in a monthly survey of refiners and gas plant operators (Form EIA-782A). The prices do not include any federal, state, or local taxes paid at the time of sale. Estimates of prices prior to January 1983 are based on Form FEA-P302-M-1/EIA-460, "Petroleum Industry Monthly Report for Product Prices," and also exclude all federal, state, or local taxes paid at the time of sale. Sales for resale are those made to purchasers who are other-than-ultimate consumers. Sales to end users are sales made directly to the consumer of the product, including bulk consumers (such as agriculture, industry, and utilities) and residential and commercial consumers.

**Note 6. Historical Petroleum Prices.** Starting in January 1983, Form EIA-782, "Monthly Petroleum Product Sales Report," replaced 10 previous surveys. Every attempt was made to continue the most important price series. However, prices published through December 1982 and those

published since January 1983 do not necessarily form continuous data series due to changes in survey forms, definitions, instructions, populations, samples, processing systems, and statistical procedures. To provide historical data, continuous series were generated for annual data 1978–1982 and for monthly data 1981 and 1982 by estimating the prices that would have been published had Form EIA-782 survey and system been in operation at that time. This form of estimation was performed after detailed adjustment was made for product and sales type matching and for discontinuity due to other factors. An important difference between the previous and present prices is the distinction between wholesale and resale and between retail and end user. The resale category continues to include sales among resellers. However, sales to bulk consumers, such as utility, industrial, and commercial accounts previously included in the wholesale category, are now counted as made to end users. The end-user category continues to include retail sales through company-owned and operated outlets but also includes sales to the bulk consumers such as agriculture, industry, and electric utilities. Additional information may be found in "Estimated Historic Time Series for the EIA-782," a feature article by Paula Weir, printed in the December 1983 [3] *Petroleum Marketing Monthly*, published by EIA.

**Note 7. Electricity Retail Prices.** Average annual retail prices of electricity have the following plant coverage: Through 1979, annual data are for Classes A and B privately owned electric utilities only. For 1980–1982, annual data are for selected Class A utilities whose electric operating revenues were \$100 million or more during the previous year. For 1983, annual data are for a selected sample of electric utilities. Beginning in 1984, data are for a census of electric utilities. Beginning in 1996, annual data also include energy service providers selling to retail customers.

Average monthly retail prices of electricity have the following plant coverage: Through 1985, monthly data are derived from selected privately owned electric utilities and, therefore, are not national averages. Beginning in 1986, monthly data are based on a sample of publicly and privately owned electric utilities. Beginning in 1996, monthly data also include energy service providers selling to retail customers.

Preliminary monthly data are from Form EIA-826, "Monthly Electric Sales and Revenue Report With State Distributions Report," which is a monthly collection of data from approximately 450 of the largest publicly and privately owned electric utilities as well as a census of energy service providers with retail sales in deregulated states; a model is then applied to the collected data to estimate for the entire universe of U.S. electric utilities. Preliminary annual data are the sum of the monthly revenues divided by the sum of the monthly sales. When final annual data become available each year from Form EIA-861, "Annual Electric Power Industry Report," their ratios

to the preliminary Form EIA-826 values are used to derive adjusted final monthly values.

**Note 8. Natural Gas Prices.** Natural gas prices are intended to include all taxes. Instructions on the data collection forms specifically direct that all federal, state, and local taxes, surcharges, and/or adjustments billed to consumers are to be included. However, sales and other taxes itemized on more than 3,000 consumers' bills are sometimes excluded by the reporting utilities. Delivered-to-consumers prices for 1987 forward represent natural gas delivered and sold to residential, commercial, industrial, vehicle fuel, and electric power consumers. They do not include the price of natural gas delivered on behalf of third parties to residential, commercial, industrial, and vehicle fuel customers except for certain states in the residential and commercial sectors for 2002 forward. Volumes of natural gas delivered on behalf of third parties are included in the consumption data shown in Table 4.3. Additional information is available in EIA, *Natural Gas Monthly*, Appendix C.

## Table 9.1 Sources

### Domestic First Purchase Price

1949–1976: U.S. Department of the Interior (DOI), Bureau of Mines (BOM), *Minerals Yearbook*, "Crude Petroleum and Petroleum Products" chapter.

1977: Federal Energy Administration, based on Form FEA-P124, "Domestic Crude Oil Purchaser's Monthly Report."

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

2010 forward: EIA, *Petroleum Marketing Monthly*, August 2014, Table 1.

### F.O.B. and Landed Cost of Imports

October 1973–September 1977: Federal Energy Administration, Form FEA-F701-M-0, "Transfer Pricing Report."

October–December 1977: EIA, Form FEA-F701-M-0, "Transfer Pricing Report."

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

2010 forward: EIA, *Petroleum Marketing Monthly*, August 2014, Table 1.

### Refiner Acquisition Cost

1968–1973: EIA estimates. The cost of domestic crude oil was derived by adding estimated transportation costs to the reported average domestic first purchase price. The cost of imported crude oil was derived by adding an estimated ocean transport cost based on the published "Average Freight Rate Assessment" to the average "Free Alongside Ship" value published by the U.S. Bureau of the Census.

1974–1976: DOI, BOM, *Minerals Yearbook*, "Crude Petroleum and Petroleum Products" chapter.

1977: January–September, FEA, based on Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report."

October–December, EIA, based on Form FEA-P110-M-1, "Refiners' Monthly Cost Allocation Report."

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

2010 forward: EIA, *Petroleum Marketing Monthly*, August 2014, Table 1.

### Table 9.2 Sources

October 1973–September 1977: Federal Energy Administration, Form FEA-F701-M-0, “Transfer Pricing Report.”  
October 1977–December 1977: U.S. Energy Information Administration (EIA), Form FEA-F701-M-0, “Transfer Pricing Report.”  
1978–2007: EIA, *Petroleum Marketing Annual 2007*, Table 21.  
2008 forward: EIA, *Petroleum Marketing Monthly*, August 2014, 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*, July 2014, Table 4.1; and Form EIA-923, “Power Plant Operations Report.”

### Table 9.10 Sources

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

1949–2007: U.S. Energy Information Administration (EIA), *Natural Gas Annual (NGA)*, annual reports and unpublished revisions.

2008 forward: EIA, *Natural Gas Monthly (NGM)*, July 2014, Table 3.

#### Vehicle Fuel Price

1989 forward: EIA, NGA, annual reports.

#### Electric Power Sector Price

1967–1972: EIA, NGA, annual reports.

1973–1998: EIA, NGA 2000, Table 96.

1999–2002: EIA, NGM, October 2004, Table 4.

2003–2007: Federal Energy Regulatory Commission, Form FERC-423, “Monthly Report of Cost and Quality of Fuels for Electric Utility Plants,” and EIA, Form EIA-423 “Monthly Cost and Quality of Fuels for Electric Plants Report.”

2008 forward: Form EIA-923, “Power Plant Operations Report.”

#### Percentage of Residential Sector

1989–2011: EIA, Form EIA-176, “Annual Report of Natural and Supplemental Gas Supply and Disposition.”

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

#### Percentage of Commercial Sector

1987–2007: 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.

2008 forward: EIA, NGM, July 2014, Table 3.

#### Percentage of Industrial Sector

1982–2007: 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.

2008 forward: EIA, NGM, July 2014, Table 3.

#### Percentage of Electric Power Sector

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

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

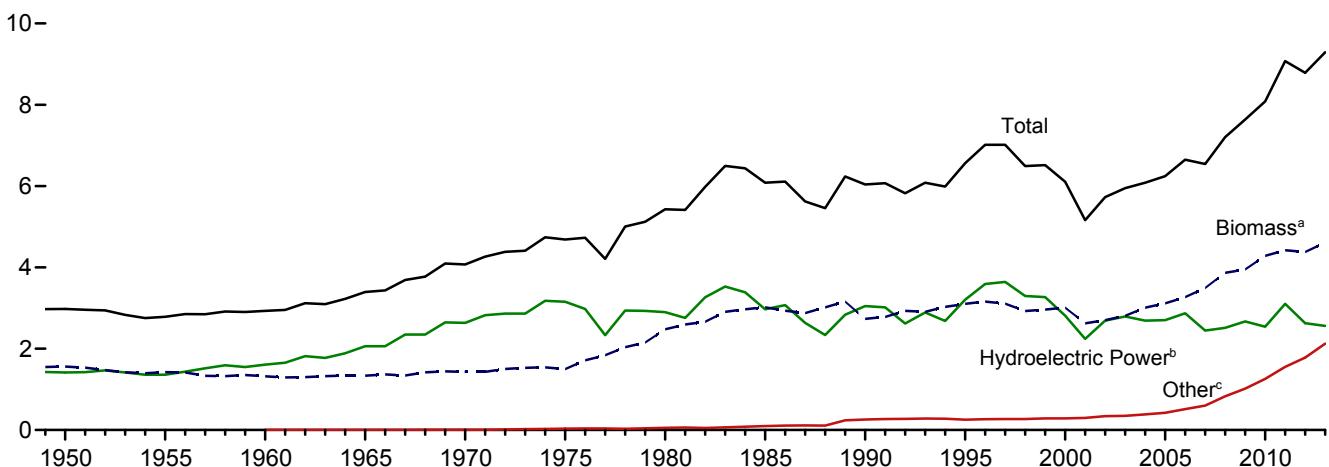
2008 forward: Calculated by EIA as the quantity of natural gas receipts by electric utilities and independent power producers reported on Form EIA-923, “Power Plant Operations Report,” divided by the quantity of natural gas consumed by the electric power sector (see MER, Table 7.4b).

## **10. Renewable Energy**

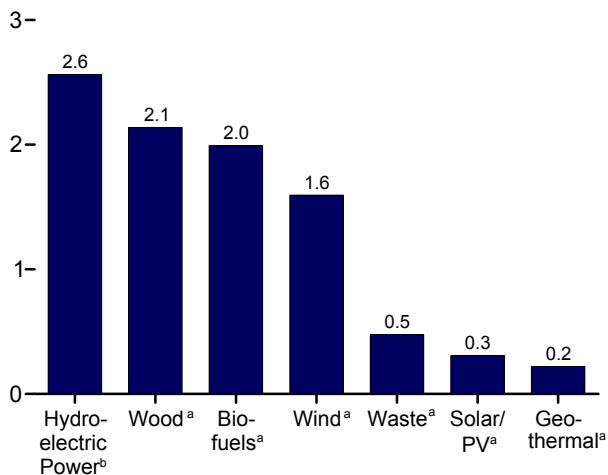
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**Figure 10.1 Renewable Energy Consumption**  
(Quadrillion Btu)

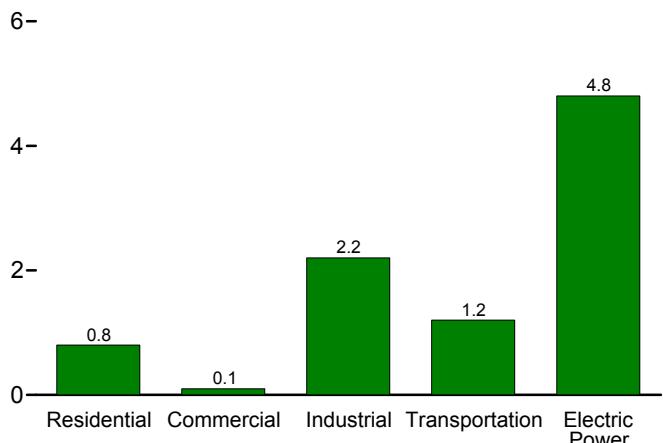
Total and Major Sources, 1949–2013



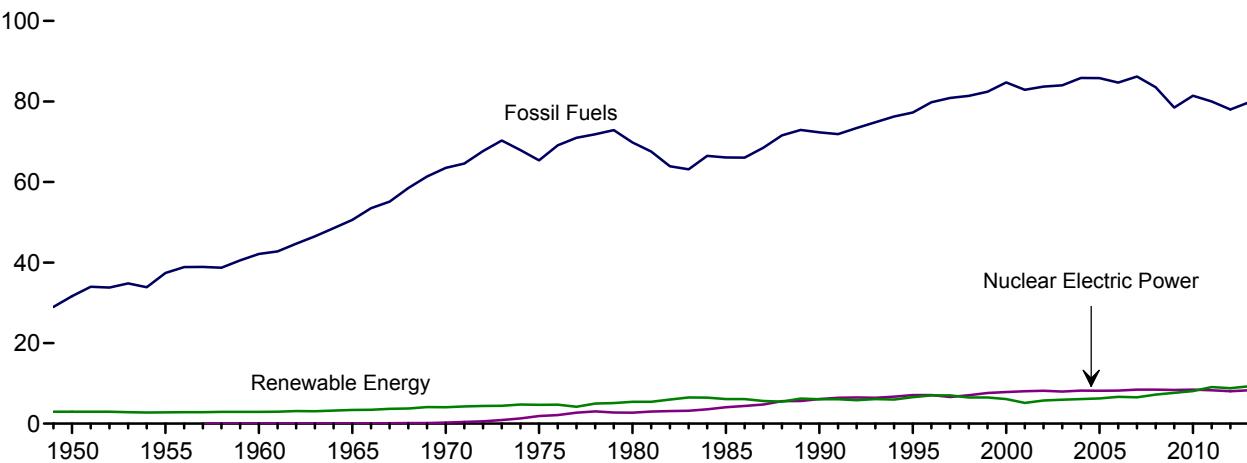
By Source, 2013



By Sector, 2013



Compared With Other Resources, 1949–2013



<sup>a</sup> See Table 10.1 for definition.

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

<sup>c</sup> Geothermal, solar/PV, and wind.

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

	Production <sup>a</sup>			Consumption									Total Renew- able Energy	
	Biomass		Total Renew- able Energy <sup>d</sup>	Hydro- electric Power <sup>e</sup>	Geo- thermal <sup>f</sup>	Solar/ PV <sup>g</sup>	Wind <sup>h</sup>	Biomass						
	Bio- fuels <sup>b</sup>	Total <sup>c</sup>	Wood <sup>i</sup>	Waste <sup>j</sup>	Bio- fuels <sup>k</sup>	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	376	795	239	19	22	139	183	41	151	375	794		
February .....	139	340	706	195	17	21	132	164	36	140	340	707		
March .....	161	381	770	197	19	25	149	180	40	161	382	771		
April .....	162	366	809	236	18	25	165	166	38	163	367	810		
May .....	171	386	857	272	18	26	155	175	40	171	386	857		
June .....	169	385	821	260	18	27	131	176	40	170	386	822		
July .....	172	402	813	259	19	27	106	190	41	169	399	810		
August .....	168	392	737	207	19	28	91	184	40	166	390	734		
September .....	164	377	695	161	18	27	111	175	38	167	380	698		
October .....	178	397	739	165	19	28	131	178	40	180	398	740		
November .....	178	396	758	169	18	25	151	179	39	172	390	752		
December .....	187	417	799	203	19	26	134	187	43	184	414	795		
Total .....	2,001	4,614	9,298	2,561	221	307	1,595	2,138	476	1,993	4,607	9,291		
2014 January .....	172	395	819	206	19	29	171	183	40	165	388	812		
February .....	158	359	702	166	17	27	133	166	35	155	356	699		
March .....	175	396	849	231	18	34	169	182	40	166	387	840		
April .....	173	386	857	239	18	36	178	175	38	170	383	854		
May .....	181	400	857	252	19	39	148	181	38	180	399	856		
5-Month Total ....	858	1,936	4,085	1,092	91	166	800	887	191	836	1,913	4,062		
2013 5-Month Total ....	785	1,848	3,937	1,138	92	119	740	869	194	787	1,850	3,938		
2012 5-Month Total ....	848	1,861	3,828	1,182	86	89	609	823	190	802	1,814	3,781		

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

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

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

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

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

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

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

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

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

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

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

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

Notes: • Most data for the residential, commercial, industrial, and transportation sectors are estimates. See notes and sources for Tables 10.2a and 10.2b. • See Note, "Renewable Energy Production and Consumption," at end of section.

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

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

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

Sources: Tables 10.2a–10.4.

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

	Residential Sector				Commercial Sector <sup>a</sup>											
	Geo-thermal <sup>b</sup>	Solar/ PV <sup>c</sup>	Biomass	Total	Hydro- electric Power <sup>e</sup>	Geo- thermal <sup>b</sup>	Solar/ PV <sup>f</sup>	Wind <sup>g</sup>	Biomass				Total	Total		
			Wood <sup>d</sup>						Wood <sup>d</sup>	Waste <sup>h</sup>	Fuel Ethanol <sup>i</sup>					
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	109	131			
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	4	(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	46	3	119	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			
5-Month Total ....	16	104	240	361	(s)	8	1	(s)	29	19	1	49	59			
2013 5-Month Total ....	16	91	240	347	(s)	8	1	(s)	29	19	1	50	59			
2012 5-Month Total ....	16	77	174	268	(s)	8	(s)	(s)	25	19	1	45	54			

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

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

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

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

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

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

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

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

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

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

Notes: • Data are estimates, except for commercial sector solar/PV, hydroelectric power, wind, and waste. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

Sources: See end of section.

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

	Industrial Sector <sup>a</sup>										Transportation Sector		
	Hydro-electric Power <sup>b</sup>	Geo-thermal <sup>c</sup>	Solar/PV <sup>d</sup>	Wind <sup>e</sup>	Biomass					Total	Biomass		
					Wood <sup>f</sup>	Waste <sup>g</sup>	Fuel Ethanol <sup>h</sup>	Losses and Co-products <sup>i</sup>	Total		Fuel Ethanol <sup>j</sup>	Bio-diesel	Total
1950 Total .....	69	NA	NA	NA	532	NA	NA	NA	532	602	NA	NA	NA
1955 Total .....	38	NA	NA	NA	631	NA	NA	NA	631	669	NA	NA	NA
1960 Total .....	39	NA	NA	NA	680	NA	NA	NA	680	719	NA	NA	NA
1965 Total .....	33	NA	NA	NA	855	NA	NA	NA	855	888	NA	NA	NA
1970 Total .....	34	NA	NA	NA	1,019	NA	NA	NA	1,019	1,053	NA	NA	NA
1975 Total .....	32	NA	NA	NA	1,063	NA	NA	NA	1,063	1,096	NA	NA	NA
1980 Total .....	33	NA	NA	NA	1,600	NA	NA	NA	1,600	1,633	NA	NA	NA
1985 Total .....	33	NA	NA	NA	1,645	230	1	42	1,918	1,951	50	NA	50
1990 Total .....	31	2	—	—	1,442	192	1	49	1,684	1,717	60	NA	60
1995 Total .....	55	3	—	—	1,652	195	2	86	1,934	1,992	112	NA	112
2000 Total .....	42	4	—	—	1,636	145	1	99	1,881	1,928	135	NA	135
2001 Total .....	33	5	—	—	1,443	129	3	108	1,681	1,719	141	1	142
2002 Total .....	39	5	—	—	1,396	146	3	130	1,676	1,720	168	2	170
2003 Total .....	43	3	—	—	1,363	142	4	169	1,679	1,725	228	2	230
2004 Total .....	33	4	—	—	1,476	132	6	203	1,817	1,853	286	3	290
2005 Total .....	32	4	—	—	1,452	148	7	230	1,837	1,873	327	12	339
2006 Total .....	29	4	—	—	1,472	130	10	285	1,897	1,930	442	33	475
2007 Total .....	16	5	—	—	1,413	145	10	377	1,944	1,965	557	45	602
2008 Total .....	17	5	—	—	1,339	143	12	532	2,026	2,047	786	39	825
2009 Total .....	18	4	—	—	1,178	154	13	617	1,963	1,985	894	41	935
2010 Total .....	16	4	(s)	(s)	1,273	168	17	742	2,201	2,221	1,041	33	1,075
2011 Total .....	17	4	(s)	(s)	1,309	165	17	771	2,261	2,283	1,045	113	1,158
2012 January .....	3	(s)	(s)	(s)	115	13	1	67	196	199	82	6	87
February .....	2	(s)	(s)	(s)	108	13	1	61	184	186	82	8	89
March .....	2	(s)	(s)	(s)	109	14	1	63	188	191	88	11	99
April .....	2	(s)	(s)	(s)	105	13	1	61	180	182	86	12	98
May .....	2	(s)	(s)	(s)	111	13	1	64	188	191	92	12	104
June .....	2	(s)	(s)	(s)	109	12	1	61	183	185	90	12	102
July .....	1	(s)	(s)	(s)	113	13	1	58	186	187	88	10	98
August .....	1	(s)	(s)	(s)	115	13	1	60	189	191	95	11	106
September .....	2	(s)	(s)	(s)	112	12	1	56	181	183	83	9	92
October .....	2	(s)	(s)	(s)	113	14	1	57	186	188	91	8	100
November .....	2	(s)	(s)	(s)	113	14	1	57	185	188	83	9	92
December .....	2	(s)	(s)	(s)	117	15	1	59	192	194	86	6	92
Total .....	22	4	(s)	(s)	1,339	159	16	724	2,238	2,265	1,045	114	1,159
2013 January .....	3	(s)	(s)	(s)	111	15	1	57	184	188	83	9	92
February .....	3	(s)	(s)	(s)	99	13	1	52	166	169	78	9	87
March .....	3	(s)	(s)	(s)	108	14	1	59	182	186	89	12	101
April .....	2	(s)	(s)	(s)	100	14	1	59	175	177	90	12	102
May .....	3	(s)	(s)	(s)	104	14	1	63	182	186	94	13	107
June .....	3	(s)	(s)	(s)	106	14	1	62	183	186	92	15	106
July .....	3	(s)	(s)	(s)	116	15	1	62	193	197	91	15	105
August .....	2	(s)	(s)	(s)	110	15	1	61	186	189	90	13	103
September .....	2	(s)	(s)	(s)	103	14	1	59	178	180	88	18	106
October .....	2	(s)	(s)	(s)	105	15	1	65	186	189	93	21	114
November .....	2	(s)	(s)	(s)	107	14	1	64	187	189	89	16	106
December .....	3	(s)	(s)	(s)	111	15	1	68	196	199	92	22	114
Total .....	32	4	(s)	(s)	1,281	171	16	730	2,198	2,235	1,069	175	1,244
2014 January .....	3	(s)	(s)	(s)	105	15	1	65	186	190	87	11	98
February .....	2	(s)	(s)	(s)	96	13	1	58	168	171	82	13	95
March .....	2	(s)	(s)	(s)	104	14	1	65	184	187	87	13	100
April .....	2	(s)	(s)	(s)	104	14	1	64	184	186	91	13	104
May .....	2	(s)	(s)	(s)	107	14	1	67	189	192	94	17	111
5-Month Total ....	11	2	(s)	(s)	516	70	7	319	912	925	442	67	508
2013 5-Month Total ....	15	2	(s)	(s)	523	70	7	290	890	906	434	55	489
2012 5-Month Total ....	11	2	(s)	(s)	548	66	7	316	936	949	430	48	478

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

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

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

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

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

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

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

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

consumed by the industrial sector.

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

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

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

Notes: • Data are estimates, except for industrial sector hydroelectric power in 1949–1978 and 1989 forward, solar/PV, and wind. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

Sources: See end of section.

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

	Hydro-electric Power <sup>a</sup>	Geo-thermal <sup>b</sup>	Solar/PV <sup>c</sup>	Wind <sup>d</sup>	Biomass			Total
					Wood <sup>e</sup>	Waste <sup>f</sup>	Total	
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 <sup>g</sup> .....	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
<b>2012 January .....</b>	217	12	1	130	17	22	39	398
February .....	191	11	1	105	16	20	36	344
March .....	244	12	2	133	16	22	37	429
April .....	248	12	3	121	13	21	33	417
May .....	271	12	4	119	14	22	36	442
June .....	252	12	5	114	16	22	38	421
July .....	251	13	5	84	18	23	40	392
August .....	218	12	4	81	18	23	40	355
September .....	166	12	4	84	16	21	38	304
October .....	155	13	4	120	15	22	38	330
November .....	176	13	3	111	15	23	38	341
December .....	217	13	3	138	16	24	40	412
<b>Total .....</b>	<b>2,606</b>	<b>148</b>	<b>40</b>	<b>1,339</b>	<b>190</b>	<b>262</b>	<b>453</b>	<b>4,586</b>
<b>2013 January .....</b>	236	14	3	139	17	22	38	430
February .....	192	12	4	132	15	19	34	375
March .....	194	14	6	149	17	22	39	401
April .....	233	13	7	164	12	21	33	450
May .....	269	13	8	155	16	22	38	481
June .....	257	13	9	131	17	22	39	449
July .....	256	13	8	106	19	22	41	425
August .....	204	13	9	91	20	21	41	359
September .....	159	13	9	111	18	21	39	331
October .....	163	14	9	130	18	22	39	355
November .....	167	12	7	151	19	21	40	377
December .....	200	14	7	134	20	24	44	398
<b>Total .....</b>	<b>2,529</b>	<b>157</b>	<b>85</b>	<b>1,595</b>	<b>207</b>	<b>258</b>	<b>465</b>	<b>4,831</b>
<b>2014 January .....</b>	202	13	7	171	22	21	43	437
February .....	163	12	8	133	20	18	39	355
March .....	229	13	13	169	22	21	44	467
April .....	237	13	15	178	18	21	38	481
May .....	250	13	17	148	19	21	40	468
<b>5-Month Total ....</b>	<b>1,081</b>	<b>64</b>	<b>60</b>	<b>799</b>	<b>102</b>	<b>102</b>	<b>204</b>	<b>2,209</b>
<b>2013 5-Month Total ....</b>	<b>1,123</b>	<b>65</b>	<b>28</b>	<b>739</b>	<b>77</b>	<b>105</b>	<b>182</b>	<b>2,137</b>
<b>2012 5-Month Total ....</b>	<b>1,171</b>	<b>60</b>	<b>11</b>	<b>608</b>	<b>75</b>	<b>106</b>	<b>181</b>	<b>2,032</b>

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

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

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

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

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

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

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

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

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

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

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

**Table 10.3 Fuel Ethanol Overview**

	Feedstock <sup>a</sup>	Losses and Co-products <sup>b</sup>	Denaturant <sup>c</sup>	Production <sup>d</sup>			Trade <sup>e</sup>	Stocks <sup>d,f</sup>	Stock Change <sup>d,g</sup>	Consumption <sup>d</sup>			Consumption Minus Denaturant <sup>h</sup>
				TBtu	TBtu	Mbbl	Mbbl	MMgal	TBtu	Mbbl	Mbbl	MMgal	TBtu
1981 Total .....	13	6	40	1,978	83	7	NA	NA	NA	1,978	83	7	7
1985 Total .....	93	42	294	14,693	617	52	NA	NA	NA	14,693	617	52	51
1990 Total .....	111	49	356	17,802	748	63	NA	NA	NA	17,802	748	63	62
1995 Total .....	198	86	647	32,325	1,358	115	387	2,186	-207	32,919	1,383	117	114
2000 Total .....	233	99	773	38,627	1,622	138	116	3,400	-624	39,367	1,653	140	137
2001 Total .....	253	108	841	42,028	1,765	150	315	4,298	898	41,445	1,741	148	144
2002 Total .....	307	130	1,019	50,956	2,140	182	306	6,200	1,902	49,360	2,073	176	171
2003 Total .....	400	169	1,335	66,772	2,804	238	292	5,978	-222	67,286	2,826	240	233
2004 Total .....	484	203	1,621	81,058	3,404	289	3,542	6,002	24	84,576	3,552	301	293
2005 Total .....	552	230	1,859	92,961	3,904	331	3,234	5,563	-439	96,634	4,059	344	335
2006 Total .....	688	285	2,326	116,294	4,884	414	17,408	8,760	3,197	130,505	5,481	465	453
2007 Total .....	914	376	3,105	155,263	6,521	553	10,457	10,535	1,775	163,945	6,886	584	569
2008 Total .....	1,300	531	4,433	221,637	9,309	790	12,610	14,226	3,691	230,556	9,683	821	800
2009 Total .....	1,517	616	5,688	260,424	10,938	928	4,720	16,594	2,368	262,776	11,037	936	910
2010 Total .....	1,839	742	6,506	316,617	13,298	1,127	-9,115	17,941	1,347	306,155	12,858	1,090	1,061
2011 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 .....	144	57	504	24,935	1,047	89	-546	20,558	i -119	24,508	1,029	87	85
February .....	130	52	462	22,645	951	81	-727	19,580	-978	22,896	962	81	79
March .....	148	59	511	25,681	1,079	91	-264	18,941	-639	26,056	1,094	93	90
April .....	148	59	515	25,662	1,078	91	-559	17,645	-1,296	26,399	1,109	94	92
May .....	157	62	537	27,197	1,142	97	-535	16,810	-835	27,497	1,155	98	95
June .....	154	61	509	26,722	1,122	95	-170	16,395	-415	26,967	1,133	96	94
July .....	155	62	519	26,923	1,131	96	428	17,127	732	26,619	1,118	95	92
August .....	152	60	495	26,320	1,105	94	-52	16,971	-156	26,424	1,110	94	92
September .....	147	59	499	25,564	1,074	91	-584	16,040	-931	25,911	1,088	92	90
October .....	161	64	538	27,995	1,176	100	-1,042	15,771	-269	27,222	1,143	97	94
November .....	161	64	532	27,915	1,172	99	-1,922	15,572	-199	26,192	1,100	93	91
December .....	170	68	563	29,405	1,235	105	-1,535	16,419	847	27,023	1,135	96	94
Total .....	1,827	728	6,184	316,964	13,312	1,128	-7,508	16,419	-4,258	313,714	13,176	1,117	1,089
2014 January .....	163	65	551	28,344	1,190	101	-2,044	17,086	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
5-Month Total ...	800	319	2,682	138,737	5,827	494	-7,500	18,117	1,698	129,539	5,441	461	450
2013 5-Month Total ...	727	289	2,529	126,120	5,297	449	-2,631	16,810	-3,867	127,356	5,349	453	442
2012 5-Month Total ...	791	315	2,648	137,195	5,762	488	-7,704	21,635	3,397	126,094	5,296	449	438

<sup>a</sup> Total corn and other biomass inputs to the production of undenatured ethanol used for fuel ethanol.

<sup>b</sup> 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.

<sup>c</sup> The amount of denaturant in fuel ethanol produced.

<sup>d</sup> Includes denaturant.

<sup>e</sup> 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.

<sup>f</sup> Stocks are at end of period.

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

<sup>h</sup> 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.

<sup>i</sup> Derived from the preliminary 2012 stocks value (20,677 thousand barrels), not the final 2012 value (20,350 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 <sup>a</sup>	Losses and Co-products <sup>b</sup>	Production			Trade			Stocks <sup>d</sup>	Stock Change <sup>e</sup>	Balancing Item <sup>f</sup>	Consumption		
						Imports	Exports	Net Imports <sup>c</sup>						
			TBtu	TBtu	Mbbl	MMgal	TBtu	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	Mbbl	MMgal
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	9,1,035	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)	1,578	66	8	30	16	14	2,110	<sup>h</sup> -58	0	1,651	69	9
February .....	9	(s)	1,611	68	9	52	59	-7	2,109	-2	0	1,606	67	9
March .....	13	(s)	2,332	98	12	406	185	221	2,434	325	0	2,228	94	12
April .....	14	(s)	2,532	106	14	304	371	-67	2,625	191	0	2,274	95	12
May .....	14	(s)	2,635	111	14	385	554	-169	2,635	9	0	2,457	103	13
June .....	15	(s)	2,685	113	14	682	587	95	2,709	74	0	2,706	114	15
July .....	17	(s)	3,045	128	16	338	426	-88	2,956	247	0	2,710	114	15
August .....	17	(s)	3,055	128	16	364	687	-323	3,210	254	0	2,478	104	13
September .....	16	(s)	3,021	127	16	683	380	303	3,166	-44	0	3,368	141	18
October .....	17	(s)	3,136	132	17	1,101	536	565	2,994	-172	0	3,873	163	21
November .....	17	(s)	3,041	128	16	1,387	303	1,084	4,058	1,064	0	3,060	129	16
December .....	17	(s)	3,217	135	17	1,765	375	1,390	4,509	451	0	4,156	175	22
Total .....	173	2	31,887	1,339	171	7,497	4,477	3,020	4,509	2,340	0	32,567	1,368	175
2013 5-Month Total ....	58	1	10,688	449	57	1,177	1,185	-8	2,635	466	0	10,215	429	55
2012 5-Month Total ....	57	1	10,553	443	57	252	1,122	-870	2,710	698	0	8,984	377	48

<sup>a</sup> Total vegetable oil and other biomass inputs to the production of biodiesel.

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

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

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

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

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

<sup>g</sup> Derived from the final 2010 stocks value for bulk terminals and biodiesel production plants (977 thousand barrels), not the final 2010 value for bulk terminals only (672 thousand barrels) that is shown under "Stocks."

<sup>h</sup> Derived from the preliminary 2012 stocks value (2,169 thousand barrels), not the final 2012 value (2,083 thousand barrels) that is shown under "Stocks."

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

Notes: • Mbbl = thousand barrels. MMgal = million U.S. gallons. TBtu = trillion Btu.

• Biodiesel data in thousand barrels are converted to million gallons by multiplying by 0.042, and are converted to Btu by multiplying by 5,359 million Btu per barrel (the approximate heat content of biodiesel—see Table A3).

• Through 2000, data are not available. Beginning in 2001, data not from U.S. Energy Information Administration (EIA) surveys are estimates. 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).

2009–2012: 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.

2013 and 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."

2009–2012: EIA, PSA, annual reports, Table 1, data for net production of fuel ethanol at renewable fuels and oxygenate plants.

2013 and 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**

1992–2012: EIA, PSA, annual reports, Table 1.

2013 and 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).

2009–2012: EIA, PSA, annual reports, Table 1. Calculated as fuel ethanol refinery and blender net inputs minus fuel ethanol adjustments.

2013 and 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 and 2012: EIA, *Petroleum Supply Annual (PSA)*, annual reports, Table 1, data for renewable fuels except fuel ethanol.

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

2013 and 2014: EIA, PSM, monthly reports, Tables 37 and 49, data for biomass-based diesel fuel.

### Stocks and Stock Change

2009–2012: EIA, PSA, annual reports, Table 1, data for renewable fuels except fuel ethanol.

2013 and 2014: EIA, PSM, monthly reports, Table 1, data for renewable fuels except fuel ethanol.

### Balancing Item

2009 forward: Calculated as biodiesel consumption and biodiesel stock change minus biodiesel production and biodiesel net imports.

### Consumption

2001–2008: Calculated as biodiesel production plus biodiesel net imports.

January and February 2009: EIA, PSA, Table 1, data for refinery and blender net inputs of renewable fuels except fuel ethanol.

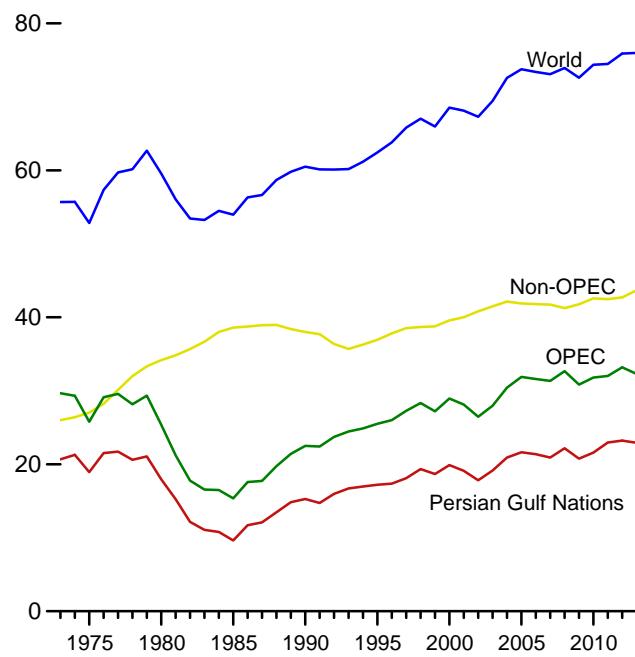
March 2009 forward: Calculated as biodiesel production plus biodiesel net imports minus biodiesel stock change.

## **11. International Petroleum**

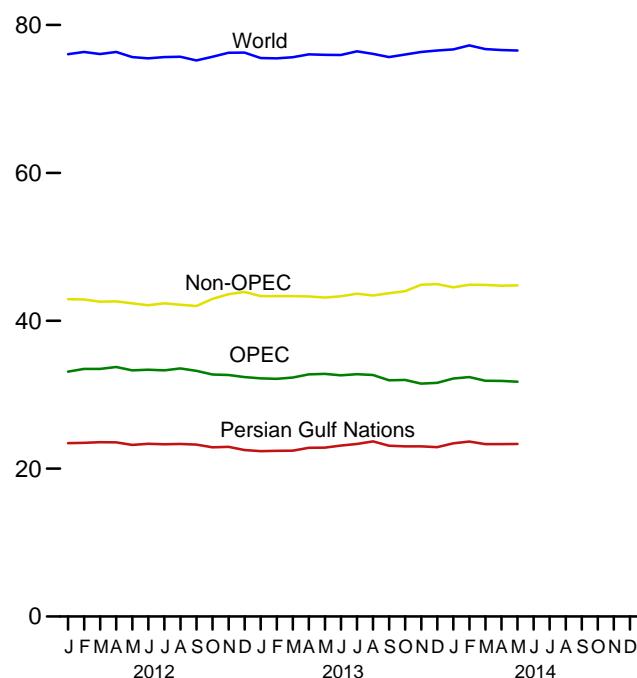
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**Figure 11.1a World Crude Oil Production Overview**  
(Million Barrels per Day)

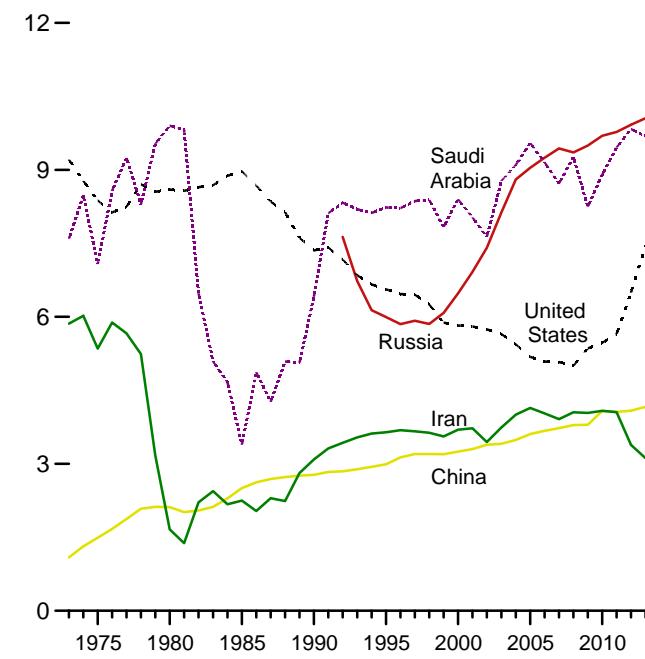
World Production, 1973–2013



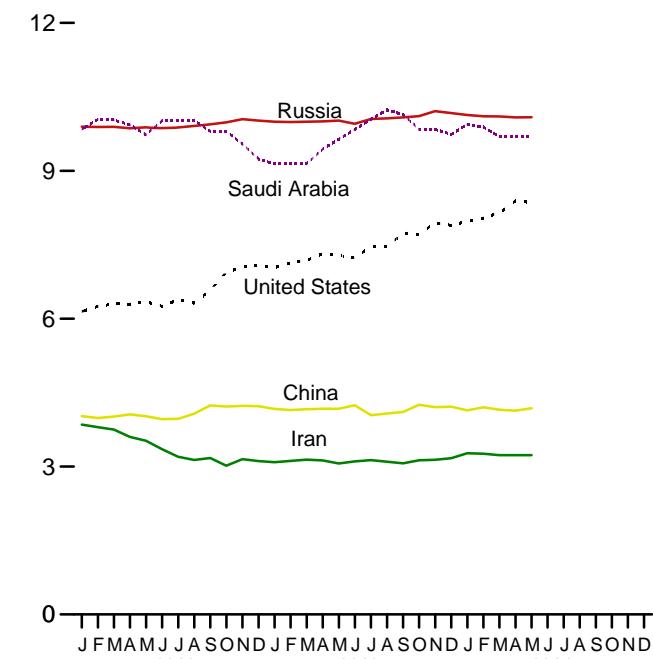
World Production, Monthly



Selected Producers, 1973–2013



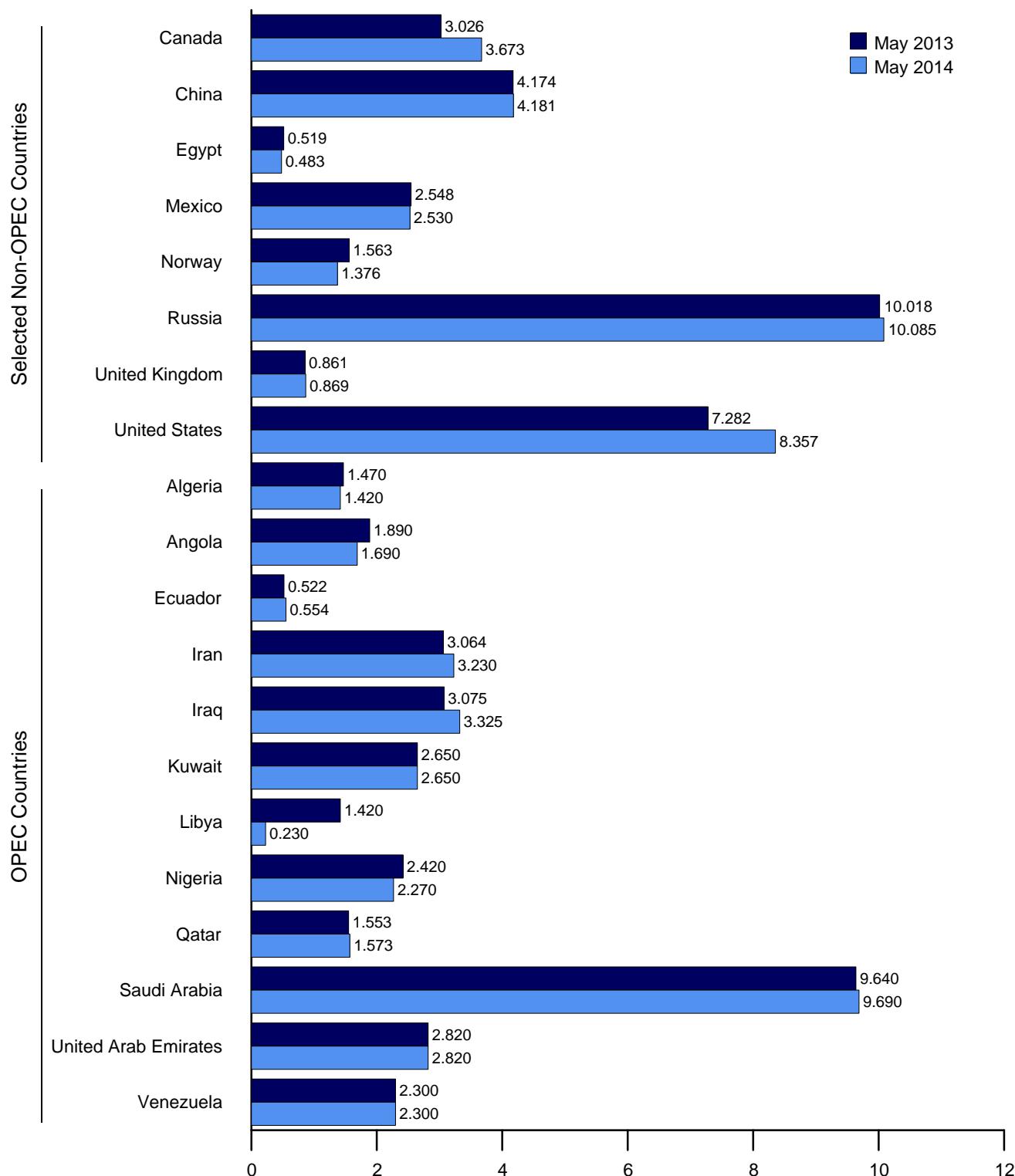
Selected Producers, Monthly



Notes: • OPEC is the Organization of the Petroleum Exporting Countries. • The Persian Gulf Nations are Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates. Production from the Neutral Zone between Kuwait and Saudi Arabia is included in "Persian 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 <sup>a</sup>	Libya	Nigeria	Qatar	Saudi Arabia <sup>a</sup>	United Arab Emirates	Venezuela	Total OPEC <sup>b</sup>
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	1,946	505	4,050	2,375	2,586	1,736	2,165	1,198	9,261	2,681	2,464	32,672
2009 Average .....	1,585	1,867	486	4,037	2,391	2,350	1,650	2,208	1,279	8,250	2,413	2,319	30,834
2010 Average .....	1,540	1,899	486	4,080	2,399	2,300	1,650	2,455	1,459	8,900	2,415	2,216	31,799
2011 Average .....	1,540	1,746	500	4,054	2,626	2,530	465	2,550	1,571	9,458	2,679	2,300	32,019
2012 January .....	1,550	1,850	504	3,850	2,675	2,650	1,000	2,520	1,660	9,840	2,720	2,300	33,119
February .....	1,550	1,900	503	3,800	2,575	2,650	1,200	2,580	1,660	10,040	2,720	2,300	33,478
March .....	1,550	1,750	499	3,750	2,725	2,640	1,350	2,520	1,560	10,030	2,820	2,300	33,494
April .....	1,550	1,850	500	3,600	2,965	2,640	1,400	2,640	1,550	9,930	2,820	2,300	33,745
May .....	1,550	1,800	498	3,525	2,925	2,640	1,400	2,580	1,520	9,730	2,820	2,300	33,288
June .....	1,544	1,750	502	3,350	2,975	2,630	1,400	2,580	1,515	10,020	2,820	2,300	33,386
July .....	1,546	1,700	508	3,200	3,075	2,625	1,400	2,580	1,526	10,015	2,820	2,300	33,295
August .....	1,548	1,800	512	3,134	3,175	2,625	1,450	2,640	1,526	10,015	2,820	2,300	33,545
September .....	1,550	1,700	506	3,173	3,275	2,610	1,500	2,460	1,526	9,800	2,820	2,300	33,220
October .....	1,482	1,750	503	3,018	3,075	2,610	1,500	2,340	1,526	9,800	2,820	2,300	32,724
November .....	1,483	1,730	504	3,150	3,225	2,650	1,450	2,280	1,526	9,540	2,820	2,300	32,658
December .....	1,485	1,750	503	3,110	3,125	2,650	1,350	2,520	1,526	9,240	2,820	2,300	32,379
Average .....	1,532	1,777	504	3,387	2,983	2,635	1,367	2,520	1,551	9,832	2,804	2,300	33,192
2013 January .....	1,470	1,840	505	3,088	3,075	2,650	1,350	2,410	1,553	9,140	2,820	2,300	32,201
February .....	1,470	1,790	506	3,115	3,075	2,650	1,400	2,320	1,553	9,140	2,820	2,300	32,139
March .....	1,470	1,890	504	3,139	3,075	2,650	1,350	2,420	1,553	9,140	2,820	2,300	32,311
April .....	1,470	1,855	516	3,124	3,175	2,650	1,450	2,400	1,553	9,440	2,820	2,300	32,753
May .....	1,470	1,890	522	3,064	3,075	2,650	1,420	2,420	1,553	9,640	2,820	2,300	32,824
June .....	1,470	1,870	524	3,105	3,100	2,650	1,130	2,260	1,553	9,840	2,820	2,300	32,622
July .....	1,470	1,790	530	3,130	3,100	2,650	1,000	2,390	1,553	10,040	2,820	2,300	32,773
August .....	1,470	1,770	537	3,097	3,275	2,650	590	2,370	1,553	10,240	2,820	2,300	32,672
September .....	1,470	1,810	535	3,065	2,825	2,650	360	2,420	1,553	10,140	2,820	2,300	31,948
October .....	1,470	1,800	540	3,127	2,975	2,650	550	2,370	1,553	9,840	2,820	2,300	31,995
November .....	1,370	1,820	545	3,136	2,975	2,650	220	2,270	1,553	9,840	2,820	2,300	31,499
December .....	1,470	1,840	548	3,169	2,925	2,650	230	2,350	1,553	9,740	2,820	2,300	31,595
Average .....	1,462	1,831	526	3,113	3,054	2,650	918	2,367	1,553	9,685	2,820	2,300	32,280
2014 January .....	1,420	1,690	550	3,270	3,125	2,650	510	2,340	1,563	9,940	2,820	2,300	32,178
February .....	1,420	1,760	551	3,260	3,425	2,650	380	2,370	1,563	9,890	2,820	2,300	32,389
March .....	1,420	1,770	557	3,230	3,325	2,650	250	2,320	1,563	9,690	2,820	2,300	31,895
April .....	1,420	1,770	560	3,230	3,300	2,650	210	2,340	1,573	9,690	2,820	2,300	31,863
May .....	1,420	1,690	554	3,230	3,325	2,650	230	2,270	1,573	9,690	2,820	2,300	31,752
5-Month Average ....	1,420	1,735	554	3,244	3,298	2,650	315	2,327	1,567	9,778	2,820	2,300	32,009
2013 5-Month Average ....	1,470	1,854	511	3,106	3,095	2,650	1,394	2,395	1,553	9,302	2,820	2,300	32,450
2012 5-Month Average ....	1,550	1,829	501	3,704	2,774	2,644	1,270	2,567	1,589	9,912	2,781	2,300	33,422

<sup>a</sup> Except for the period from August 1990 through May 1991, includes about one-half of the production in the Kuwait-Saudi Arabia Neutral Zone. Kuwait Neutral Zone output was discontinued following Iraq's invasion of Kuwait on August 2, 1990, but was resumed in June 1991. In May 2014, Neutral Zone production by both Kuwait and Saudi Arabia totaled about 520 thousand barrels per day. Data for Saudi Arabia include approximately 150 thousand barrels per day from the Abu Safah field produced on behalf of Bahrain.

<sup>b</sup> See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On Tables 11.1a and 11.1b, countries are classified as "OPEC" or "Non-OPEC" in all years based on their status in the most current year. For example, Ecuador rejoined OPEC in 2007, and is thus included in "Total OPEC" for all years; and

Indonesia left OPEC at the end of 2008, and is thus included in "Total Non-OPEC" for all years.

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 <sup>b</sup>	Selected Non-OPEC <sup>a</sup> Producers									Total Non- OPEC <sup>a</sup>	World
		Canada	China	Egypt	Mexico	Norway	Former U.S.S.R.	Russia	United Kingdom	United States		
1973 Average .....	20,668	1,798	1,090	165	465	32	8,324	NA	2	9,208	26,018	55,679
1975 Average .....	18,934	1,430	1,490	235	705	189	9,523	NA	12	8,375	27,039	52,828
1980 Average .....	17,961	1,435	2,114	595	1,936	486	11,706	NA	1,622	8,597	34,175	59,558
1985 Average .....	9,630	1,471	2,505	887	2,745	773	11,585	NA	2,530	8,971	38,598	53,965
1990 Average .....	15,278	1,553	2,774	873	2,553	1,630	10,975	NA	1,820	7,355	37,999	60,497
1995 Average .....	17,208	1,805	2,990	920	2,711	2,766	--	5,995	2,489	6,560	36,934	62,434
1996 Average .....	17,367	1,837	3,131	922	2,944	3,091	--	5,850	2,568	6,465	37,815	63,818
1997 Average .....	18,095	1,922	3,200	856	3,104	3,142	--	5,920	2,518	6,452	38,532	65,806
1998 Average .....	19,337	1,981	3,198	834	3,160	3,011	--	5,854	2,616	6,252	38,685	67,032
1999 Average .....	18,667	1,907	3,195	852	2,998	3,019	--	6,079	2,684	5,881	38,768	65,967
2000 Average .....	19,897	1,977	3,249	768	3,104	3,222	--	6,479	2,275	5,822	39,583	68,527
2001 Average .....	19,114	2,029	3,300	720	3,218	3,226	--	6,917	2,282	5,801	40,003	68,132
2002 Average .....	17,824	2,171	3,390	715	3,263	3,131	--	7,408	2,292	5,744	40,825	67,290
2003 Average .....	19,154	2,306	3,409	713	3,459	3,042	--	8,132	2,093	5,649	41,483	69,460
2004 Average .....	20,906	2,398	3,485	673	3,476	2,954	--	8,805	1,845	5,441	42,155	72,587
2005 Average .....	21,644	2,369	3,609	623	3,423	2,698	--	9,043	1,649	5,181	41,873	73,771
2006 Average .....	21,377	2,525	3,673	535	3,345	2,491	--	9,247	1,490	5,088	41,792	73,398
2007 Average .....	20,904	2,628	3,729	530	3,143	2,270	--	9,437	1,498	5,077	41,730	73,084
2008 Average .....	22,186	2,579	3,790	566	2,839	2,182	--	9,357	1,391	5,000	41,263	73,935
2009 Average .....	20,754	2,579	3,796	587	2,646	2,067	--	9,495	1,328	5,353	41,775	72,609
2010 Average .....	21,589	2,741	4,078	568	2,621	1,869	--	9,694	1,233	5,471	42,579	74,378
2011 Average .....	22,953	2,901	4,059	551	2,600	1,752	--	9,774	1,026	5,652	42,470	74,489
2012 January .....	23,436	3,108	4,022	544	2,566	1,761	--	9,894	1,021	R 6,145	R 42,931	R 76,050
February .....	23,486	3,249	3,986	544	2,591	1,745	--	9,889	1,034	R 6,248	R 42,887	R 76,365
March .....	23,566	3,037	4,015	544	2,600	1,715	--	9,891	977	R 6,302	R 42,578	R 76,072
April .....	23,546	3,155	4,060	541	2,590	1,720	--	9,861	975	R 6,296	R 42,613	R 76,358
May .....	23,201	3,035	4,021	541	2,591	1,699	--	9,882	899	R 6,340	R 42,366	R 75,654
June .....	23,351	3,014	3,963	541	2,588	1,583	--	9,861	950	R 6,254	R 42,106	R 75,491
July .....	23,302	3,114	3,968	538	2,571	1,553	--	9,882	946	R 6,391	R 42,363	R 75,658
August .....	23,336	3,064	4,071	538	2,600	1,570	--	9,907	792	R 6,315	R 42,170	R 75,715
September .....	23,245	3,011	4,242	538	2,602	1,309	--	9,941	601	R 6,574	R 41,990	R 75,211
October .....	22,890	3,173	4,217	535	2,584	1,549	--	9,984	682	R 6,943	R 42,972	R 75,696
November .....	22,952	3,271	4,232	535	2,622	1,517	--	10,048	864	R 7,045	R 43,590	R 76,248
December .....	22,512	3,427	4,224	535	2,606	1,558	--	10,018	923	R 7,083	R 43,898	R 76,278
Average .....	23,233	3,138	4,085	539	2,593	1,607	--	9,922	888	R 6,495	R 42,706	R 75,898
2013 January .....	22,374	3,329	4,168	531	2,602	1,545	--	9,995	825	RE 7,036	R 43,329	R 75,531
February .....	22,401	3,259	4,146	528	2,595	1,502	--	9,990	823	RE 7,132	R 43,340	R 75,479
March .....	22,425	3,429	4,164	525	2,555	1,498	--	9,995	812	RE 7,177	R 43,338	R 75,650
April .....	22,810	3,237	4,174	522	2,557	1,567	--	10,002	830	RE 7,319	R 43,281	R 76,034
May .....	22,850	3,026	4,174	519	2,548	1,563	--	10,018	861	RE 7,282	R 43,146	R 75,970
June .....	23,116	3,146	4,244	516	2,559	1,386	--	9,955	781	RE 7,235	R 43,319	R 75,942
July .....	23,341	3,306	4,043	513	2,522	1,648	--	10,052	792	RE 7,462	R 43,660	R 76,433
August .....	23,683	3,471	4,075	510	2,554	1,546	--	10,064	630	RE 7,455	R 43,429	R 76,100
September .....	23,101	3,352	4,107	507	2,563	1,395	--	10,082	744	RE 7,743	R 43,713	R 75,661
October .....	23,013	3,335	4,255	504	2,580	1,477	--	10,109	732	RE 7,711	R 44,006	R 76,001
November .....	23,022	3,468	4,205	501	2,553	1,613	--	10,209	833	RE 7,948	R 44,859	R 76,358
December .....	22,905	3,524	4,215	498	2,557	1,611	--	10,170	955	RE 7,893	R 44,948	R 76,543
Average .....	22,923	3,324	4,164	514	2,562	1,530	--	10,054	801	RE 7,451	R 43,699	R 75,979
2014 January .....	23,416	3,477	4,141	495	2,545	1,633	--	10,131	R 827	RE 7,973	R 44,520	R 76,698
February .....	23,656	3,508	4,201	492	2,541	1,621	--	10,106	R 930	RE 8,043	R 44,858	R 77,247
March .....	23,326	3,595	4,154	R 489	2,511	1,586	--	10,103	R 910	RE 8,146	R 44,857	R 76,752
April .....	23,311	3,474	4,132	R 486	2,518	1,603	--	10,083	R 820	RE 8,393	R 44,748	R 76,612
May .....	23,336	3,673	4,181	483	2,530	1,376	--	10,085	869	E 8,357	44,787	76,540
5-Month Average ....	23,405	3,547	4,161	489	2,529	1,562	--	10,102	870	E 8,184	44,752	76,761
2013 5-Month Average ....	22,574	3,256	4,166	525	2,571	1,535	--	10,000	830	E 7,189	43,286	75,736
2012 5-Month Average ....	23,446	3,115	4,021	543	2,588	1,728	--	9,883	980	E 6,266	42,672	76,095

<sup>a</sup> See "Organization of the Petroleum Exporting Countries (OPEC)" in Glossary. On Tables 11.1a and 11.1b, countries are classified as "OPEC" or "Non-OPEC" in all years based on their status in the most current year. For example, Ecuador rejoined OPEC in 2007, and is thus included in "Total OPEC" for all years; and Indonesia left OPEC at the end of 2008, and is thus included in "Total Non-OPEC" for all years.

<sup>b</sup> Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia, United Arab Emirates, and the Neutral Zone (between Kuwait and Saudi Arabia).

R=Revised. NA=Not available. --=Not applicable. E=Estimate.

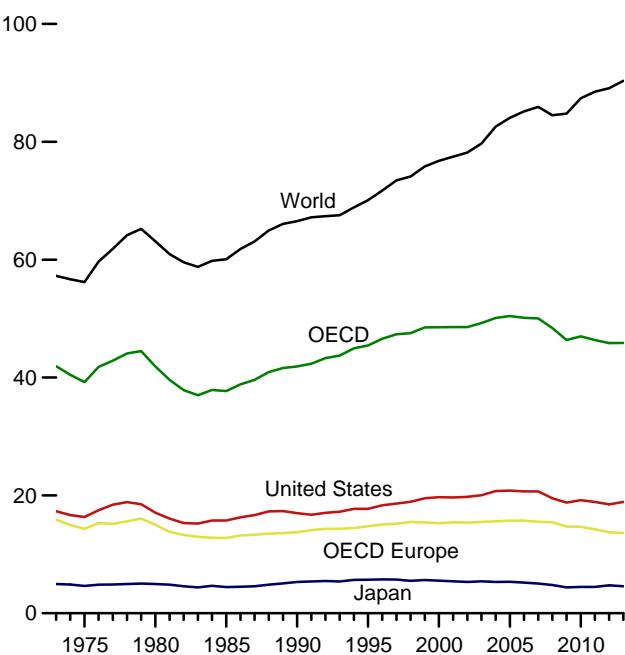
Notes: • Data are for crude oil and lease condensate; they exclude natural gas plant liquids. • Monthly data are often preliminary figures and may not average to the annual totals because of rounding or because updates to the preliminary monthly data are not available. • Data for countries may not sum to World totals due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> (Excel and CSV files) for all available annual and monthly data beginning in 1973.

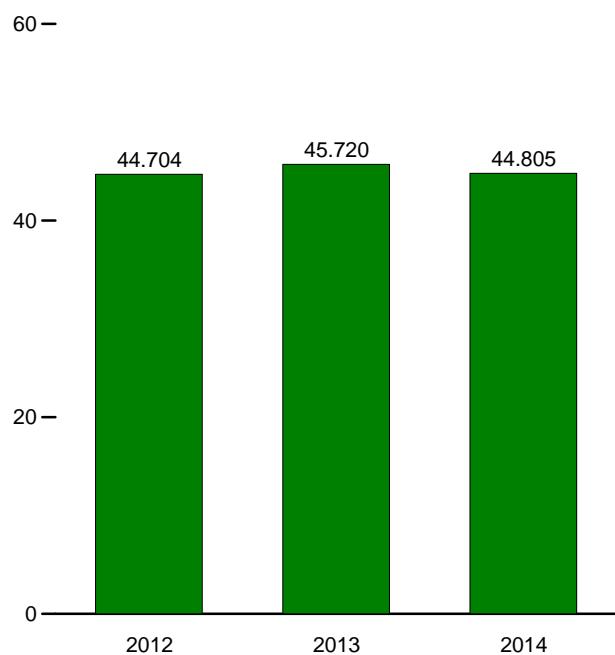
Sources: See end of section.

**Figure 11.2 Petroleum Consumption in OECD Countries**  
(Million Barrels per Day)

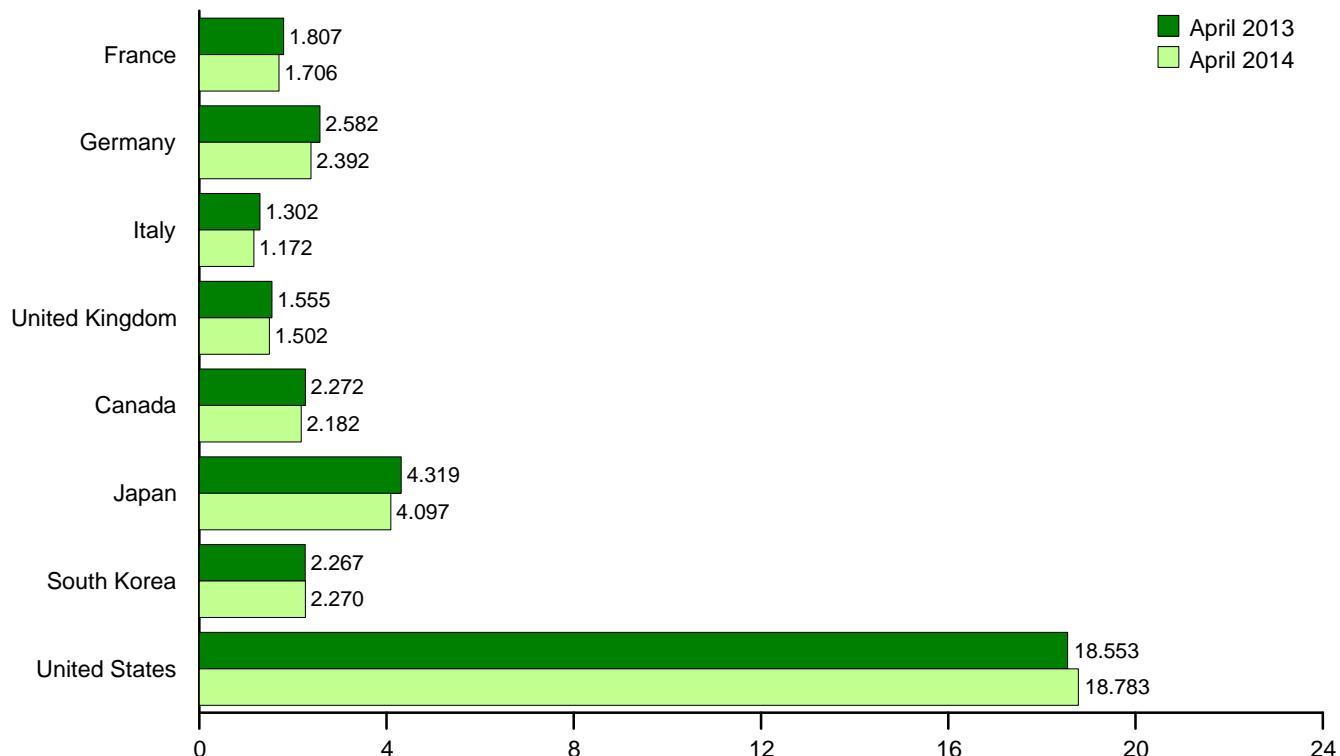
Overview, 1973–2013



OECD Total, April



By Selected OECD Country



Note: OECD is the Organization for Economic Cooperation and Development. Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>. Source: Table 11.2.

**Table 11.2 Petroleum Consumption in OECD Countries**  
(Thousand Barrels per Day)

	France	Germany <sup>a</sup>	Italy	United Kingdom	OECD Europe <sup>b</sup>	Canada	Japan	South Korea	United States	Other OECD <sup>c</sup>	OECD <sup>d</sup>	World
1973 Average .....	2,601	3,324	2,068	2,341	15,879	1,729	4,949	281	17,308	1,768	41,913	57,237
1975 Average .....	2,252	2,957	1,855	1,911	14,314	1,779	4,621	311	16,322	1,885	39,232	56,198
1980 Average .....	2,256	3,082	1,934	1,725	14,995	1,873	4,960	537	17,056	2,449	41,870	63,113
1985 Average .....	1,753	2,651	1,705	1,617	12,772	1,514	4,436	552	15,726	2,699	37,699	60,083
1990 Average .....	1,826	2,682	1,868	1,776	13,762	1,722	5,315	1,048	16,988	3,040	41,875	66,533
1995 Average .....	1,920	2,882	1,942	1,816	14,762	1,799	5,693	2,008	17,725	3,452	45,439	70,099
1996 Average .....	1,949	2,922	1,920	1,852	15,055	1,853	5,739	2,101	18,309	3,509	46,566	71,714
1997 Average .....	1,969	2,917	1,934	1,810	15,195	1,940	5,702	2,255	18,620	3,629	47,342	73,464
1998 Average .....	2,043	2,923	1,943	1,792	15,500	1,931	5,507	1,917	18,917	3,757	47,529	74,117
1999 Average .....	2,031	2,836	1,891	1,811	15,409	2,016	5,642	2,084	19,519	3,844	48,514	75,833
2000 Average .....	2,000	2,767	1,854	1,765	15,272	2,014	5,515	2,135	19,701	3,902	48,539	76,784
2001 Average .....	2,054	2,807	1,832	1,747	15,442	2,043	5,412	2,132	19,649	3,892	48,570	77,476
2002 Average .....	1,985	2,710	1,870	1,739	15,379	2,065	5,319	2,149	19,761	3,877	48,551	78,173
2003 Average .....	2,001	2,662	1,860	1,759	15,486	2,191	5,428	2,175	20,034	3,920	49,234	79,714
2004 Average .....	2,009	2,649	1,829	1,785	15,589	2,282	5,319	2,155	20,731	4,021	50,096	82,579
2005 Average .....	1,991	2,621	1,781	1,820	15,704	2,315	5,328	2,191	20,802	4,100	50,441	84,085
2006 Average .....	1,991	2,639	1,777	1,806	15,708	2,229	5,197	2,180	20,687	4,135	50,137	85,148
2007 Average .....	1,979	2,416	1,729	1,753	15,528	2,283	5,037	2,241	20,680	4,256	50,025	85,932
2008 Average .....	1,945	2,542	1,667	1,726	15,436	2,225	4,798	2,142	19,498	4,294	48,393	84,513
2009 Average .....	1,868	2,453	1,544	1,637	14,692	2,163	4,390	2,188	18,771	4,169	46,374	84,784
2010 Average .....	1,833	2,470	1,544	1,621	14,664	2,265	4,455	2,269	19,180	4,154	46,986	87,378
2011 Average .....	1,792	2,397	1,494	1,584	14,252	2,266	4,471	2,258	18,882	4,224	46,353	88,503
2012 January .....	1,746	2,135	1,305	1,424	12,978	2,116	5,161	2,398	18,304	4,174	45,130	NA
February .....	1,951	2,567	1,351	1,548	14,459	2,190	5,547	2,444	18,643	4,352	47,635	NA
March .....	1,726	2,263	1,358	1,598	13,684	2,244	5,149	2,186	18,164	4,388	45,814	NA
April .....	1,688	2,291	1,337	1,584	13,616	2,171	4,378	2,132	18,211	4,197	44,704	NA
May .....	1,673	2,351	1,346	1,502	13,632	2,313	4,371	2,214	18,589	4,288	45,406	NA
June .....	1,782	2,521	1,411	1,510	14,141	2,170	4,114	2,337	18,857	4,311	45,930	NA
July .....	1,801	2,496	1,422	1,491	14,024	2,300	4,373	2,228	18,515	4,277	45,717	NA
August .....	1,665	2,333	1,370	1,460	13,686	2,429	4,631	2,267	19,156	4,380	46,549	NA
September .....	1,727	2,388	1,358	1,509	13,755	2,279	4,445	2,298	18,092	4,160	45,028	NA
October .....	1,809	2,573	1,399	1,406	14,185	2,314	4,424	2,232	18,705	4,415	46,274	NA
November .....	1,710	2,549	1,299	1,490	13,814	2,457	4,641	2,456	18,528	4,441	46,336	NA
December .....	1,613	2,212	1,277	1,516	12,982	2,346	5,494	2,432	18,120	4,378	45,753	NA
Average .....	1,740	2,388	1,353	1,503	13,742	2,278	4,726	2,301	18,490	4,314	45,851	89,094
2013 January .....	1,684	2,234	1,230	1,457	12,884	2,310	5,196	2,402	18,646	R 4,179	R 45,618	NA
February .....	1,813	2,321	1,325	1,533	13,451	2,287	5,315	2,387	18,659	R 4,266	R 46,365	NA
March .....	1,746	2,342	1,284	1,504	R 13,249	2,256	4,760	2,159	18,476	R 4,146	R 45,047	NA
April .....	1,807	2,582	1,302	1,555	R 14,013	2,272	4,319	2,267	18,553	R 4,295	R 45,720	NA
May .....	1,737	2,458	1,268	1,489	R 13,685	2,348	4,116	2,256	18,551	R 4,218	R 45,174	NA
June .....	1,716	2,492	1,272	1,593	R 13,725	2,312	3,892	2,301	18,724	R 4,253	R 45,208	NA
July .....	1,858	2,454	1,410	1,496	R 14,162	2,259	4,390	2,245	19,046	R 4,210	R 46,310	NA
August .....	1,694	2,423	1,267	1,522	R 13,822	2,321	4,406	2,306	19,091	R 4,300	46,245	NA
September .....	1,715	2,446	1,322	1,551	R 13,859	R 2,328	4,145	2,216	19,116	R 4,002	45,666	NA
October .....	1,767	2,539	1,381	1,456	14,020	2,257	4,197	2,230	19,273	R 4,231	46,208	NA
November .....	1,626	2,421	1,260	1,545	R 13,552	R 2,402	4,836	2,436	19,413	R 4,151	R 46,789	NA
December .....	1,639	2,155	1,293	1,459	R 13,010	R 2,304	5,223	2,466	19,081	4,205	R 46,288	NA
Average .....	1,733	2,405	1,301	1,513	13,619	R 2,304	4,563	2,305	18,887	R 4,204	R 45,883	R 90,346
2014 January .....	1,610	2,273	1,179	1,423	R 12,648	2,319	5,018	2,344	18,921	R 3,979	45,229	NA
February .....	1,712	2,287	1,213	1,566	R 13,268	2,407	5,266	2,365	18,994	R 4,195	R 46,493	NA
March .....	1,644	2,430	1,177	1,471	R 13,179	R 2,263	4,882	2,319	18,526	R 4,127	R 45,297	NA
April .....	1,706	2,392	1,172	1,502	13,426	2,182	4,097	2,270	18,783	4,048	44,805	NA
4-Month Average ....	1,667	2,347	1,185	1,493	13,124	2,291	4,810	2,324	18,802	4,085	45,436	NA
2013 4-Month Average ....	1,761	2,369	1,284	1,511	13,393	2,281	4,892	2,302	18,582	4,220	45,670	NA
2012 4-Month Average ....	1,776	2,310	1,338	1,538	13,672	2,180	5,056	2,289	18,326	4,277	45,800	NA

<sup>a</sup> Data are for unified Germany, i.e., the former East Germany and West Germany.

<sup>b</sup> "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom; for 1984 forward, Czech Republic, Hungary, Poland, and Slovakia; and, for 2000 forward, Slovenia.

<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories; for 1984 forward, Mexico; and, for 2000 forward, Chile, Estonia, and Israel.

<sup>d</sup> The Organization for Economic Cooperation and Development (OECD) consists of "OECD Europe," Canada, Japan, South Korea, the United States, and "Other OECD."

R=Revised. NA=Not available.

Notes: • Totals may not equal sum of components due to independent

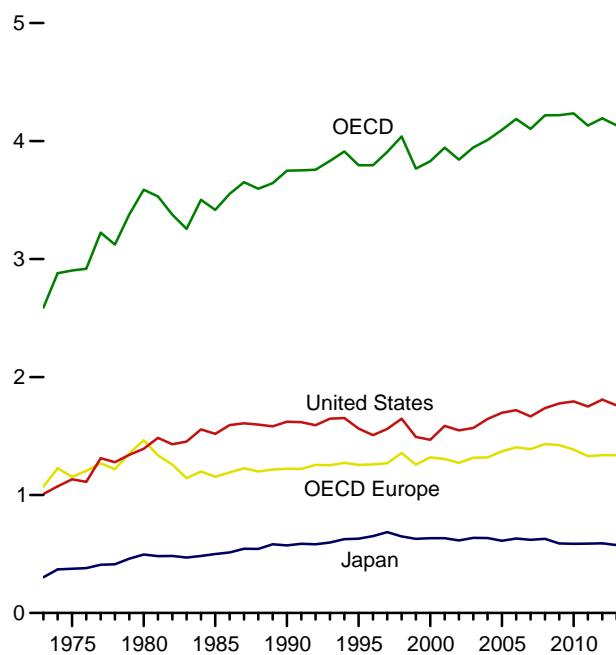
rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> (Excel and CSV files) for all available annual and monthly data beginning in 1973.

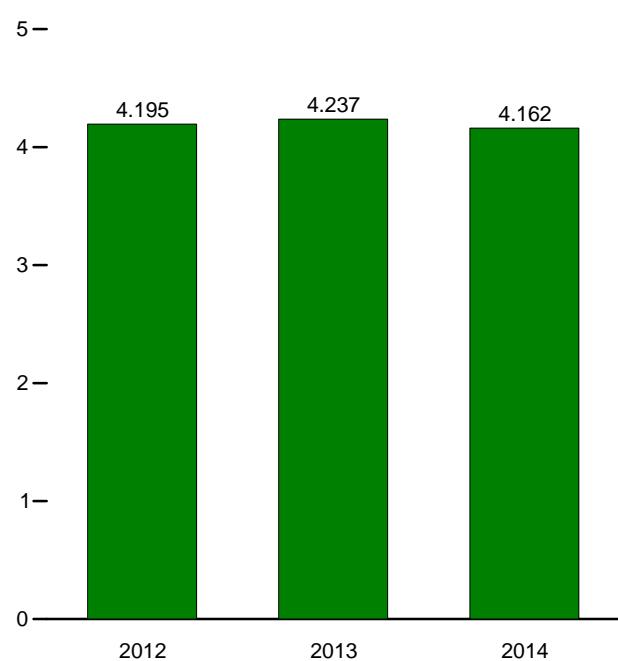
Sources: • **United States:** Table 3.1. • **Chile, East Germany, Former Czechoslovakia, Hungary, Mexico, Poland, South Korea, Non-OECD Countries, U.S. Territories, and World: 1973–1979**—U.S. Energy Information Administration (EIA), International Energy Database. • **Countries Other Than United States: 1980–2008**—EIA, International Energy Statistics (IES). • **OECD Countries, and U.S. Territories: 2009 forward**—EIA, IES. • **World: 2009 forward**—EIA, Short Term Energy Outlook, August 2014, 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)

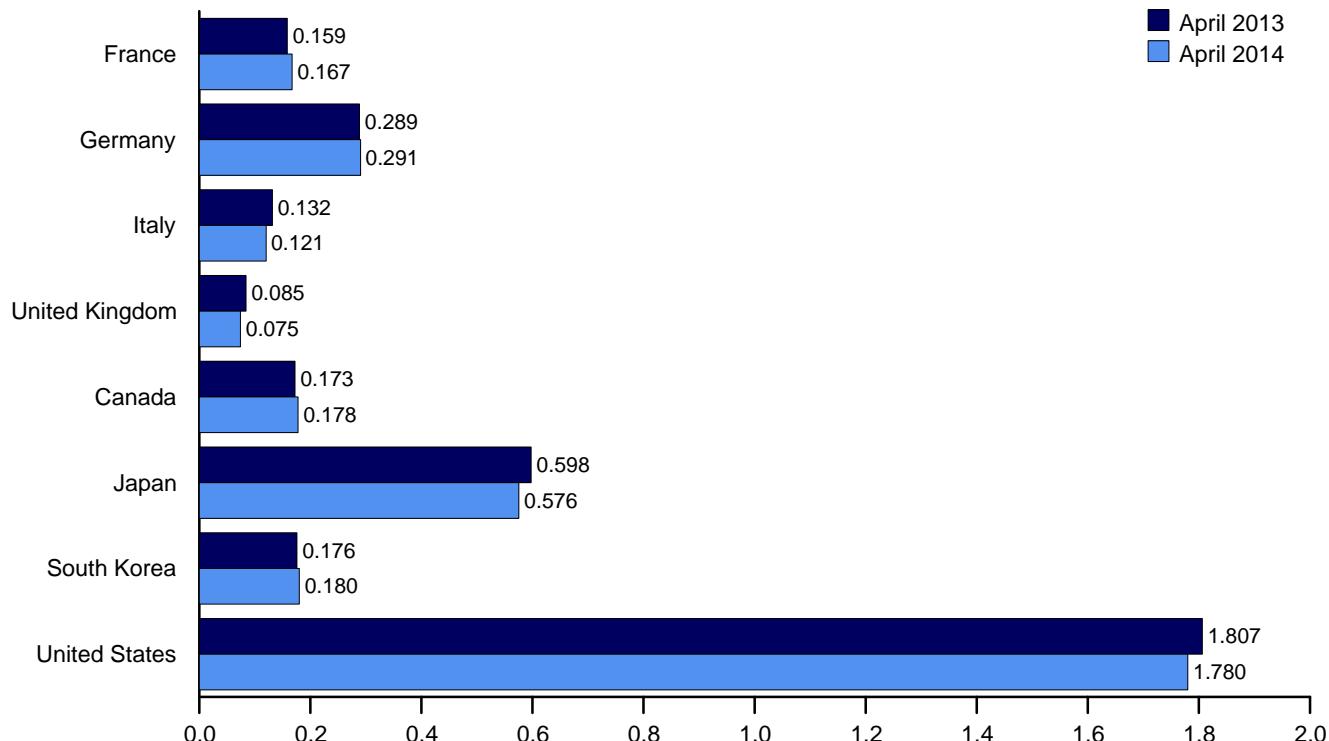
Overview, End of Year, 1973–2013



OECD Stocks, End of Month, April



By Selected OECD Country, End of Month



Note: OECD is the Organization for Economic Cooperation and Development.  
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#international>.  
Source: Table 11.3.

**Table 11.3 Petroleum Stocks in OECD Countries**  
(Million Barrels)

	France	Germany <sup>a</sup>	Italy	United Kingdom	OECD Europe <sup>b</sup>	Canada	Japan	South Korea	United States	Other OECD <sup>c</sup>	OECD <sup>d</sup>
1973 Year .....	201	181	152	156	1,070	140	303	NA	1,008	67	2,588
1975 Year .....	225	187	143	165	1,154	174	375	NA	1,133	67	2,903
1980 Year .....	243	319	170	168	1,464	164	495	NA	1,392	72	3,587
1985 Year .....	139	277	156	131	1,154	112	500	13	1,519	119	3,417
1990 Year .....	143	280	171	103	1,222	143	572	64	1,621	126	3,749
1995 Year .....	155	302	162	101	1,256	132	631	92	1,563	122	3,795
1996 Year .....	154	303	152	103	1,259	127	651	123	1,507	127	3,794
1997 Year .....	161	299	147	100	1,271	144	685	124	1,560	123	3,907
1998 Year .....	169	323	153	104	1,355	139	649	129	1,647	120	4,039
1999 Year .....	160	290	148	101	1,258	141	629	132	1,493	114	3,766
2000 Year .....	170	272	157	100	1,318	143	634	140	1,468	126	3,829
2001 Year .....	165	273	151	113	1,306	154	634	143	1,586	120	3,944
2002 Year .....	170	253	156	104	1,273	155	615	140	1,548	112	3,843
2003 Year .....	179	273	153	100	1,316	165	636	155	1,568	105	3,945
2004 Year .....	177	267	154	101	1,319	154	635	149	1,645	108	4,010
2005 Year .....	185	283	151	95	1,371	168	612	135	1,698	112	4,095
2006 Year .....	182	283	153	103	1,404	169	631	152	1,720	113	4,187
2007 Year .....	180	275	152	92	1,389	163	621	143	1,665	121	4,103
2008 Year .....	179	279	148	93	1,431	162	629	135	1,737	124	4,218
2009 Year .....	175	284	146	89	1,424	157	589	155	1,776	118	4,219
2010 Year .....	168	287	143	83	1,385	184	587	165	1,794	120	4,234
2011 Year .....	165	281	135	80	1,330	178	589	167	1,750	118	4,131
2012 January .....	166	288	138	84	1,359	178	594	164	1,773	121	4,189
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	113	4,178
April .....	163	284	137	85	1,359	170	592	174	1,784	115	4,195
May .....	162	281	137	82	1,338	172	597	183	1,796	117	4,202
June .....	164	280	134	82	1,340	170	601	177	1,810	112	4,210
July .....	163	285	132	80	1,350	173	608	181	1,813	116	4,241
August .....	168	284	138	82	1,367	177	603	179	1,801	114	4,241
September .....	164	283	143	75	1,349	180	606	184	1,819	117	4,254
October .....	160	282	141	75	1,330	175	614	180	1,810	110	4,219
November .....	160	287	138	85	1,345	174	604	177	1,810	106	4,217
December .....	162	287	126	81	1,337	174	591	175	1,808	108	4,193
2013 January .....	162	292	129	86	1,374	172	593	179	1,812	105	4,236
February .....	162	289	130	81	1,376	175	583	176	1,791	110	4,212
March .....	161	291	131	80	1,374	171	591	188	1,793	114	4,232
April .....	159	289	132	85	1,370	173	598	176	1,807	114	4,237
May .....	163	291	121	80	1,342	170	594	177	1,817	111	4,212
June .....	166	288	126	84	1,343	174	588	182	1,818	116	4,221
July .....	166	289	126	83	R 1,357	177	579	189	1,818	114	4,233
August .....	167	288	127	84	1,350	185	579	188	1,821	114	4,236
September .....	166	287	131	82	1,355	183	591	191	1,832	113	4,264
October .....	167	288	130	81	1,352	178	587	190	1,812	114	4,233
November .....	167	287	131	75	1,334	174	587	181	1,792	114	4,181
December .....	167	290	125	78	1,338	170	575	178	1,760	112	4,133
2014 January .....	171	291	127	77	1,359	170	579	178	1,743	112	4,140
February .....	167	296	124	R 77	R 1,353	R 176	576	182	1,743	115	R 4,145
March .....	167	289	122	77	1,342	R 174	586	187	1,753	110	R 4,151
April .....	167	291	121	75	1,335	178	576	180	1,780	112	4,162

<sup>a</sup> Through December 1983, the data for Germany are for the former West Germany only. Beginning with January 1984, the data for Germany are for the unified Germany, i.e., the former East Germany and West Germany.

<sup>b</sup> "OECD Europe" consists of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom; for 1984 forward, Czech Republic, Hungary, Poland, and Slovakia; and, for 2000 forward, Slovenia.

<sup>c</sup> "Other OECD" consists of Australia, New Zealand, and the U.S. Territories; for 1984 forward, Mexico; and, for 2000 forward, Chile, Estonia, and Israel.

<sup>d</sup> The Organization for Economic Cooperation and Development (OECD) consists of "OECD Europe," Canada, Japan, South Korea, the United States, and "Other OECD."

R=Revised. NA=Not available.

Notes: • Stocks are at end of period. • Petroleum stocks include crude oil

(including strategic reserves), unfinished oils, natural gas plant liquids, and refined products. • In the United States in January 1975, 1981, and 1983, numerous respondents were added to bulk terminal and pipeline surveys, thereby affecting subsequent stocks reported. New-basis end-of-year U.S. stocks, in million barrels, would have been 1,121 in 1974, 1,425 in 1980, and 1,461 in 1982. • Totals may not equal sum of components due to independent rounding. • U.S. geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#international> (Excel and CSV files) for all available annual and monthly data beginning in 1973.

Sources: • **United States:** Table 3.4. • **U.S. Territories:** 1983 forward—U.S. Energy Information Administration, International Energy Database. • **All Other Data:** 1973–1982—International Energy Agency (IEA), *Quarterly Oil Statistics and Energy Balances*, various issues. 1983—IEA, *Monthly Oil and Gas Statistics Database*. 1984 forward—IEA, *Monthly Oil Data Service*, August 12, 2014.

# International Petroleum

## Tables 11.1a and 11.1b Sources

### United States

Table 3.1.

### All Other Countries and World, Annual Data

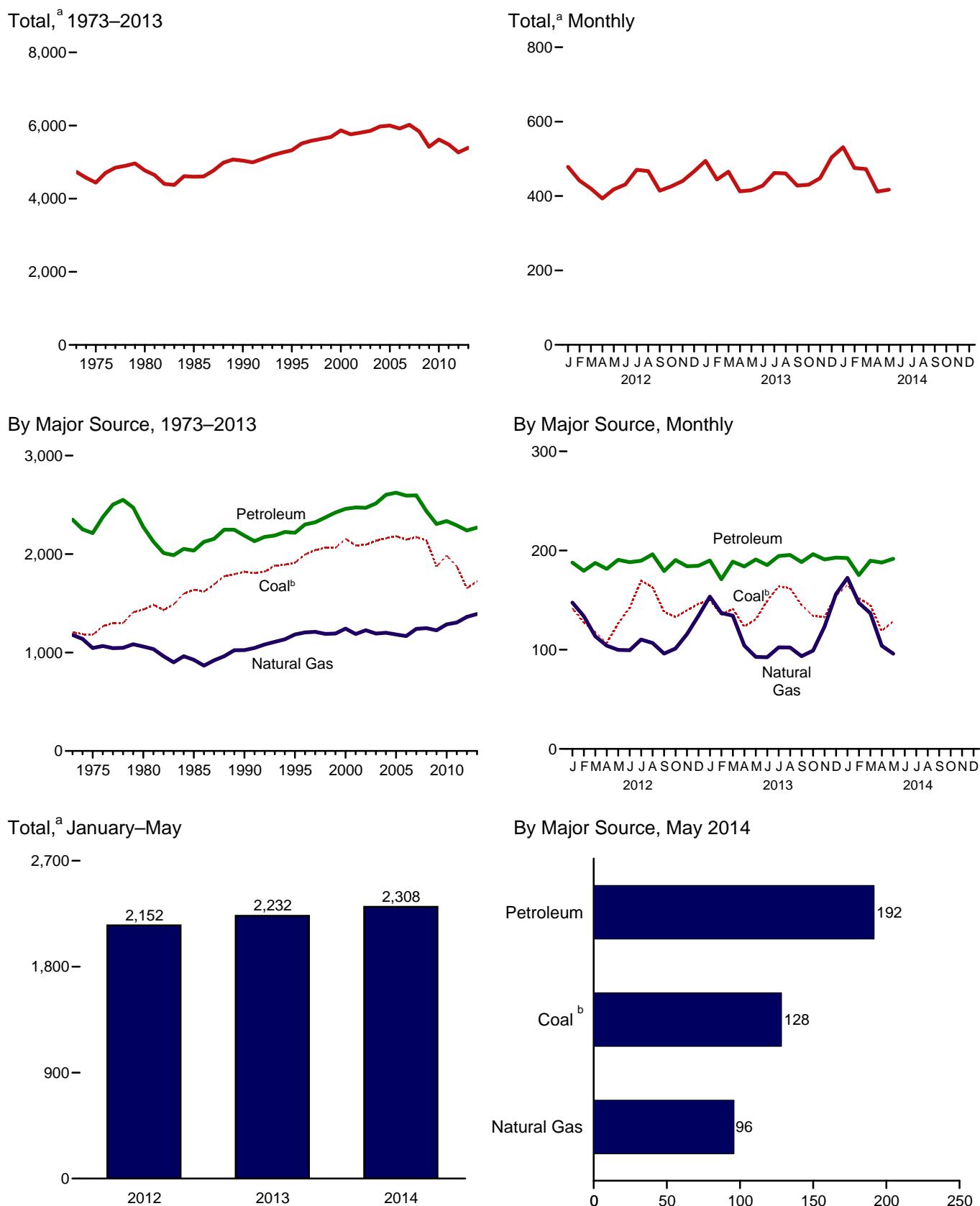
1973–1979: U.S. Energy Information Administration (EIA),  
*International Energy Annual 1981*, Table 8.  
1980 forward: EIA, International Energy Database, August  
2014.

### 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, August  
2014.

## **12. Environment**

**Figure 12.1 Carbon Dioxide Emissions From Energy Consumption by Source**  
 (Million Metric Tons of Carbon Dioxide)



<sup>a</sup> Excludes emissions from biomass energy consumption.

<sup>b</sup> Includes coal coke net imports.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#environment>.  
 Source: Table 12.1.

**Table 12.1 Carbon Dioxide Emissions From Energy Consumption by Source**  
 (Million Metric Tons of Carbon Dioxide<sup>a</sup>)

	Coal <sup>b</sup>	Natural Gas <sup>c</sup>	Petroleum											Total <sup>h,i</sup>
			Aviation Gasoline	Distillate Fuel Oil <sup>d</sup>	Jet Fuel	Kerosene	LPG <sup>e</sup>	Lubricants	Motor Gasoline <sup>f</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>g</sup>	Total	
1973 Total .....	1,207	1,178	6	480	155	32	92	13	911	54	508	100	2,350	4,735
1975 Total .....	1,181	1,046	5	443	146	24	82	11	911	51	443	97	2,212	4,439
1980 Total .....	1,436	1,061	4	446	156	24	87	13	900	49	453	142	2,275	4,771
1985 Total .....	1,638	926	3	445	178	17	87	12	930	54	216	93	2,036	4,600
1990 Total .....	1,821	1,024	3	470	223	6	67	13	988	70	220	127	2,187	5,039
1995 Total .....	1,913	1,183	3	498	222	8	80	13	1,044	76	152	121	2,216	5,323
1996 Total .....	1,995	1,204	3	525	232	9	86	12	1,063	79	152	139	2,300	5,510
1997 Total .....	2,040	1,210	3	534	234	10	87	13	1,075	80	142	145	2,323	5,584
1998 Total .....	2,064	1,189	2	538	238	12	82	14	1,107	93	158	128	2,372	5,635
1999 Total .....	2,062	1,193	3	555	245	11	90	14	1,127	96	148	133	2,422	5,688
2000 Total .....	2,155	1,243	3	580	254	10	97	14	1,135	86	163	118	2,459	5,868
2001 Total .....	2,088	1,188	2	598	243	11	88	13	1,151	89	144	135	2,474	5,761
2002 Total .....	2,095	1,227	2	587	237	6	91	12	1,183	96	125	130	2,470	5,804
2003 Total .....	2,136	1,193	2	610	231	8	87	11	1,188	96	138	142	2,514	5,855
2004 Total .....	2,160	1,200	2	632	240	10	87	12	1,214	107	155	144	2,603	5,975
2005 Total .....	2,182	1,183	2	640	246	10	84	12	1,214	106	165	143	2,623	5,999
2006 Total .....	2,147	1,167	2	648	240	8	80	11	1,224	106	122	152	2,593	5,919
2007 Total .....	2,172	1,241	2	652	238	5	83	12	1,227	100	128	150	2,596	6,021
2008 Total .....	2,140	1,248	2	615	226	2	79	11	1,165	93	110	132	2,436	5,835
2009 Total .....	1,876	1,225	2	564	204	3	78	10	1,156	87	90	112	2,305	5,417
2010 Total .....	1,986	1,286	2	590	210	3	79	11	1,145	81	93	122	2,336	5,619
2011 Total .....	1,876	1,305	2	604	209	2	78	10	1,112	78	79	117	2,291	5,483
2012 January .....	142	148	(s)	51	16	(s)	8	1	88	7	7	9	188	478
February .....	127	134	(s)	48	16	(s)	7	1	87	5	5	10	180	442
March .....	118	114	(s)	49	17	(s)	7	1	93	6	6	9	188	420
April .....	107	104	(s)	47	16	(s)	6	1	91	6	6	8	181	393
May .....	127	100	(s)	49	18	(s)	6	1	97	7	5	8	191	418
June .....	142	100	(s)	47	19	(s)	6	1	94	7	5	10	188	431
July .....	170	110	(s)	47	18	(s)	6	1	95	6	7	10	190	471
August .....	163	107	(s)	49	18	(s)	6	1	99	8	6	10	196	467
September .....	138	96	(s)	47	17	(s)	6	1	90	7	5	7	179	414
October .....	133	101	(s)	51	17	(s)	7	1	94	6	5	11	190	426
November .....	140	116	(s)	49	17	(s)	7	1	89	7	5	11	184	440
December .....	146	134	(s)	46	17	(s)	8	1	91	7	3	12	185	466
Total .....	1,653	1,362	2	580	206	1	81	9	1,106	78	65	113	2,240	5,267
2013 January .....	150	154	(s)	53	16	(s)	9	1	89	7	5	9	190	495
February .....	135	137	(s)	47	15	(s)	8	1	82	5	4	9	171	444
March .....	141	134	(s)	49	17	(s)	8	1	93	6	6	8	189	465
April .....	123	104	(s)	49	17	(s)	7	1	91	5	4	10	184	412
May .....	131	93	(s)	49	18	(s)	6	1	97	7	3	11	191	416
June .....	149	92	(s)	46	17	(s)	6	1	93	7	4	10	185	428
July .....	164	102	(s)	46	19	(s)	6	1	98	7	5	12	194	462
August .....	162	102	(s)	48	19	(s)	6	1	98	8	6	9	195	461
September .....	145	94	(s)	47	17	(s)	6	1	93	7	5	12	188	428
October .....	134	99	(s)	53	18	(s)	8	1	95	6	5	11	196	431
November .....	133	123	(s)	49	17	(s)	8	1	91	8	5	13	191	448
December .....	154	156	(s)	51	18	(s)	9	1	93	6	3	12	193	504
Total .....	1,722	1,391	2	589	208	1	87	10	1,114	76	56	126	2,269	5,393
2014 January .....	165	172	(s)	56	17	(s)	10	1	88	8	4	9	192	531
February .....	152	147	(s)	49	15	(s)	7	1	85	5	3	10	175	475
March .....	145	137	(s)	53	18	(s)	7	1	94	4	3	9	190	473
April .....	119	104	(s)	50	17	(s)	6	1	94	6	4	10	188	412
May .....	128	96	(s)	51	17	(s)	5	1	97	7	3	9	192	417
5-Month Total ....	710	657	1	259	85	(s)	35	4	457	30	18	47	937	2,308
2013 5-Month Total ....	681	622	1	248	83	(s)	38	4	452	29	23	48	925	2,232
2012 5-Month Total ....	621	599	1	244	83	1	34	4	456	32	29	44	927	2,152

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Includes coal coke net imports.

<sup>c</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>d</sup> Distillate fuel oil, excluding biodiesel.

<sup>e</sup> Liquefied petroleum gases.

<sup>f</sup> Finished motor gasoline, excluding fuel ethanol.

<sup>g</sup> Aviation gasoline blending components, crude oil, motor gasoline blending components, pentanes plus, petrochemical feedstocks, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products.

<sup>h</sup> Includes electric power sector use of geothermal energy and non-biomass waste. See Table 12.6.

<sup>i</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

(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.

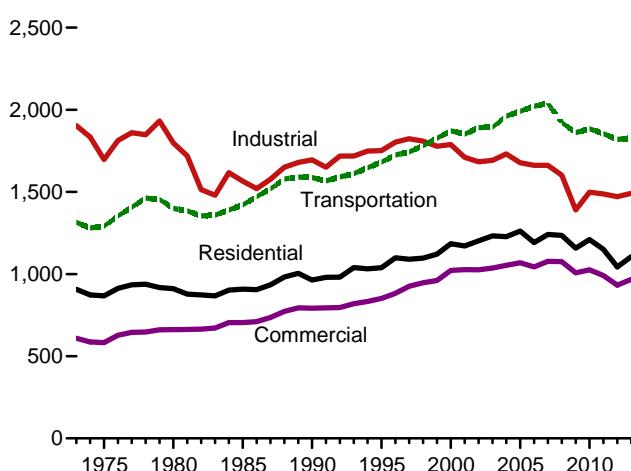
• See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Data exclude emissions from biomass energy consumption. See Table 12.7 and Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Totals may not equal sum of components 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.

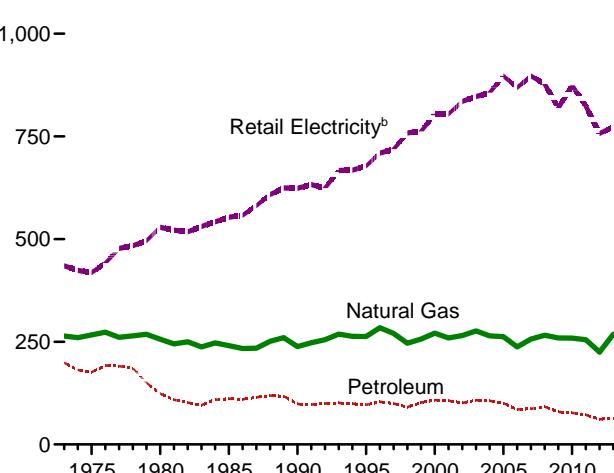
Sources: See end of section.

**Figure 12.2 Carbon Dioxide Emissions From Energy Consumption by Sector**  
 (Million Metric Tons of Carbon Dioxide)

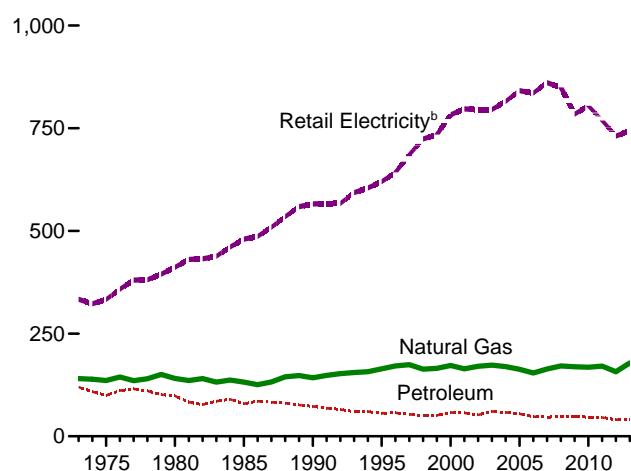
Total<sup>a</sup> by End-Use Sector,<sup>b</sup> 1973–2013



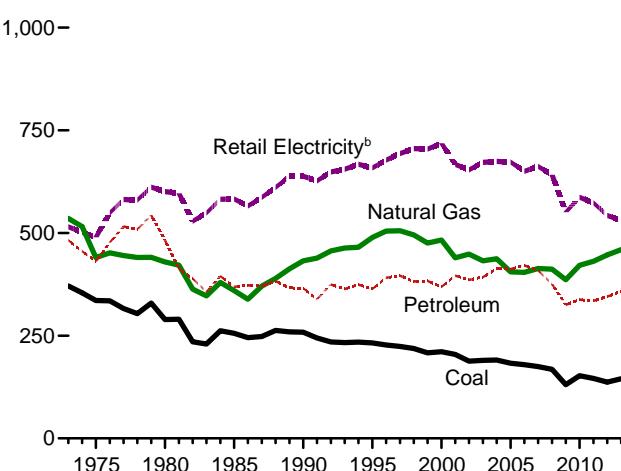
Residential Sector by Major Source, 1973–2013



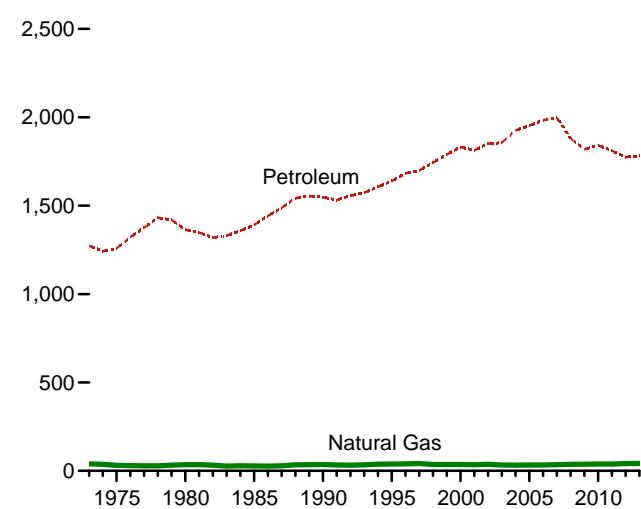
Commercial Sector by Major Source, 1973–2013



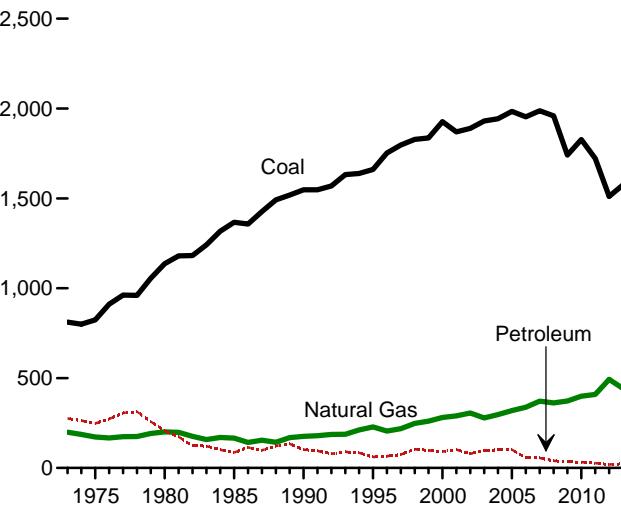
Industrial Sector by Major Source, 1973–2013



Transportation Sector by Major Source, 1973–2013



Electric Power Sector by Major Source, 1973–2013



<sup>a</sup> Excludes emissions from biomass energy consumption.

<sup>b</sup> Emissions from energy consumption in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of

total electricity retail sales.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#environment>.  
 Sources: Tables 12.2–12.6.

**Table 12.2 Carbon Dioxide Emissions From Energy Consumption: Residential Sector**  
 (Million Metric Tons of Carbon Dioxide<sup>a</sup>)

	Coal	Natural Gas <sup>b</sup>	Petroleum				Retail Electricity <sup>e</sup>	Total <sup>f</sup>
			Distillate Fuel Oil <sup>c</sup>	Kerosene	LPG <sup>d</sup>	Total		
1973 Total .....	9	264	147	16	36	199	435	907
1975 Total .....	6	266	132	12	32	176	419	867
1980 Total .....	3	256	96	8	20	124	529	911
1985 Total .....	4	241	80	11	20	111	553	909
1990 Total .....	3	238	72	5	22	98	624	963
1995 Total .....	2	263	66	5	25	96	678	1,039
1996 Total .....	2	284	68	6	30	104	710	1,099
1997 Total .....	2	270	64	7	29	99	719	1,090
1998 Total .....	1	247	56	8	27	91	759	1,097
1999 Total .....	1	257	61	8	33	102	762	1,122
2000 Total .....	1	271	66	7	35	108	805	1,185
2001 Total .....	1	259	66	7	33	106	805	1,172
2002 Total .....	1	265	63	4	34	101	835	1,203
2003 Total .....	1	276	68	5	34	108	847	1,232
2004 Total .....	1	264	68	6	32	106	856	1,228
2005 Total .....	1	262	62	6	32	101	897	1,261
2006 Total .....	1	237	52	5	28	85	869	1,192
2007 Total .....	1	257	53	3	31	87	897	1,241
2008 Total .....	NA	266	55	2	35	92	878	1,235
2009 Total .....	NA	259	43	2	35	79	819	1,157
2010 Total .....	NA	259	41	2	33	77	875	1,210
2011 Total .....	NA	255	39	1	32	72	824	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	85	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	36	1	25	61	757	1,044
2013 January .....	NA	48	6	(s)	3	8	72	128
February .....	NA	41	5	(s)	2	8	61	110
March .....	NA	36	5	(s)	2	7	62	106
April .....	NA	20	3	(s)	2	6	50	76
May .....	NA	11	2	(s)	2	4	51	66
June .....	NA	7	2	(s)	2	3	67	77
July .....	NA	6	2	(s)	2	4	83	93
August .....	NA	6	2	(s)	2	4	79	89
September .....	NA	6	2	(s)	2	4	67	77
October .....	NA	12	2	(s)	2	4	54	70
November .....	NA	28	3	(s)	2	5	54	88
December .....	NA	47	3	(s)	3	6	74	126
Total .....	NA	268	36	1	27	64	773	1,106
2014 January .....	NA	56	4	(s)	3	7	84	147
February .....	NA	46	4	(s)	2	6	73	126
March .....	NA	38	4	(s)	2	6	63	107
April .....	NA	19	2	(s)	2	4	47	70
May .....	NA	11	2	(s)	2	4	51	66
5-Month Total .....	NA	170	15	(s)	11	26	320	516
2013 5-Month Total .....	NA	156	21	(s)	11	33	297	486
2012 5-Month Total .....	NA	125	17	(s)	11	28	275	428

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Liquefied petroleum gases.

<sup>e</sup> Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

<sup>f</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

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<sup>a</sup>)

	Coal	Natural Gas <sup>b</sup>	Petroleum							Retail Electricity <sup>f</sup>	Total <sup>g</sup>
			Distillate Fuel Oil <sup>c</sup>	Kerosene	LPG <sup>d</sup>	Motor Gasoline <sup>e</sup>	Petroleum Coke	Residual Fuel Oil	Total		
1973 Total .....	15	141	47	5	9	6	NA	52	120	334	609
1975 Total .....	14	136	43	4	8	6	NA	39	100	333	583
1980 Total .....	11	141	38	3	6	8	NA	44	98	412	662
1985 Total .....	13	132	46	2	6	7	NA	18	79	480	704
1990 Total .....	12	142	39	1	6	8	0	18	73	566	793
1995 Total .....	11	164	35	2	7	1	(s)	11	56	620	851
1996 Total .....	12	171	35	2	8	2	(s)	11	57	643	883
1997 Total .....	12	174	32	2	8	3	(s)	9	54	686	926
1998 Total .....	9	164	31	2	7	3	(s)	7	51	724	947
1999 Total .....	10	165	32	2	9	2	(s)	6	51	735	960
2000 Total .....	9	173	36	2	9	3	(s)	7	58	783	1,022
2001 Total .....	9	164	37	2	9	3	(s)	6	57	797	1,027
2002 Total .....	9	170	32	1	9	3	(s)	6	52	795	1,026
2003 Total .....	8	173	36	1	10	4	(s)	9	61	796	1,037
2004 Total .....	10	170	34	1	10	3	(s)	10	58	816	1,054
2005 Total .....	9	163	33	2	8	3	(s)	9	55	842	1,069
2006 Total .....	6	154	29	1	8	3	(s)	6	48	836	1,043
2007 Total .....	7	164	28	1	8	4	(s)	6	47	861	1,078
2008 Total .....	8	171	28	(s)	10	3	(s)	6	47	850	1,076
2009 Total .....	7	169	29	(s)	9	4	(s)	6	47	785	1,008
2010 Total .....	7	168	29	(s)	9	4	(s)	5	46	805	1,026
2011 Total .....	6	171	29	(s)	9	3	(s)	4	46	769	991
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	3	(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	72
June .....	(s)	7	2	(s)	1	(s)	0	(s)	3	66	76
July .....	(s)	7	2	(s)	1	(s)	(s)	(s)	3	76	86
August .....	(s)	7	2	(s)	1	(s)	(s)	(s)	3	73	84
September .....	(s)	8	2	(s)	1	(s)	(s)	(s)	3	63	74
October .....	(s)	12	2	(s)	1	(s)	(s)	(s)	3	61	76
November .....	(s)	17	2	(s)	1	(s)	(s)	(s)	3	59	79
December .....	(s)	21	2	(s)	1	(s)	(s)	(s)	4	59	84
Total .....	4	157	26	(s)	9	3	(s)	2	40	731	933
2013 January .....	(s)	26	4	(s)	1	(s)	(s)	(s)	6	59	91
February .....	(s)	23	4	(s)	1	(s)	(s)	(s)	5	54	83
March .....	(s)	21	3	(s)	1	(s)	(s)	(s)	5	58	84
April .....	(s)	13	3	(s)	1	(s)	(s)	(s)	4	53	71
May .....	(s)	9	2	(s)	1	(s)	0	(s)	3	59	71
June .....	(s)	7	1	(s)	1	(s)	0	(s)	2	67	77
July .....	(s)	7	1	(s)	1	(s)	(s)	(s)	2	74	84
August .....	(s)	7	2	(s)	1	(s)	(s)	(s)	3	73	84
September .....	(s)	8	2	(s)	1	(s)	(s)	(s)	3	65	76
October .....	(s)	11	1	(s)	1	(s)	(s)	(s)	2	61	75
November .....	(s)	19	2	(s)	1	(s)	(s)	(s)	3	58	80
December .....	(s)	26	2	(s)	1	(s)	(s)	(s)	4	63	92
Total .....	4	179	27	(s)	9	3	(s)	2	41	744	968
2014 January .....	(s)	31	3	(s)	1	(s)	(s)	(s)	4	66	102
February .....	(s)	27	3	(s)	1	(s)	(s)	(s)	4	59	90
March .....	(s)	23	3	(s)	1	(s)	(s)	(s)	4	59	86
April .....	(s)	13	1	(s)	1	(s)	(s)	(s)	2	52	68
May .....	(s)	9	2	(s)	1	(s)	(s)	(s)	3	59	71
5-Month Total .....	2	103	11	(s)	4	1	(s)	1	17	295	418
2013 5-Month Total .....	2	93	16	(s)	4	1	(s)	1	22	283	401
2012 5-Month Total .....	2	79	13	(s)	4	1	(s)	1	19	273	372

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Liquefied petroleum gases.

<sup>e</sup> Finished motor gasoline, excluding fuel ethanol.

<sup>f</sup> Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

<sup>g</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

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<sup>a</sup>)

	Coal	Coal Coke Net Imports	Natural Gas <sup>b</sup>	Petroleum									Retail Elec- tricity <sup>g</sup>	Total <sup>h</sup>
				Distillate Fuel Oil <sup>c</sup>	Kero- sene	LPG <sup>d</sup>	Lubri- cants	Motor Gasoline <sup>e</sup>	Petroleum Coke	Residual Fuel Oil	Other <sup>f</sup>	Total		
1973 Total .....	371	-1	536	106	11	44	7	18	52	144	100	483	515	1,904
1975 Total .....	336	2	440	97	9	39	6	16	51	117	97	431	490	1,697
1980 Total .....	289	-4	429	96	13	61	7	11	48	105	142	483	601	1,798
1985 Total .....	256	-2	360	81	3	59	6	15	54	57	93	369	583	1,566
1990 Total .....	258	1	432	84	1	37	7	13	67	31	127	366	638	1,695
1995 Total .....	233	7	489	82	1	47	7	14	67	25	121	364	659	1,751
1996 Total .....	227	3	505	87	1	48	6	14	71	24	139	391	678	1,803
1997 Total .....	224	5	505	88	1	50	7	15	70	21	145	396	694	1,824
1998 Total .....	219	8	495	88	2	47	7	14	80	16	128	382	706	1,809
1999 Total .....	208	7	475	86	1	47	7	11	85	14	133	383	704	1,778
2000 Total .....	211	7	483	87	1	52	7	11	76	17	118	369	719	1,788
2001 Total .....	204	3	440	95	2	45	6	21	79	14	135	396	667	1,711
2002 Total .....	188	7	448	88	1	47	6	22	79	13	130	386	654	1,683
2003 Total .....	190	6	432	85	2	41	6	23	78	16	142	393	672	1,692
2004 Total .....	191	16	437	88	2	44	6	26	84	18	144	413	675	1,731
2005 Total .....	183	5	405	92	3	42	6	25	81	20	143	412	673	1,678
2006 Total .....	179	7	404	92	2	43	6	26	84	16	152	421	650	1,662
2007 Total .....	175	3	414	92	1	43	6	21	82	13	150	408	662	1,662
2008 Total .....	168	5	412	99	(s)	32	6	17	77	13	132	376	642	1,602
2009 Total .....	131	-3	386	78	(s)	33	5	16	72	8	112	325	551	1,390
2010 Total .....	153	-1	421	85	1	35	6	18	67	6	122	338	587	1,498
2011 Total .....	146	1	431	91	(s)	34	5	17	63	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	121
March .....	12	(s)	38	8	(s)	4	(s)	1	5	(s)	9	29	41	120
April .....	11	1	36	8	(s)	3	(s)	1	6	(s)	8	26	41	115
May .....	11	(s)	36	8	(s)	3	(s)	1	6	(s)	8	28	46	121
June .....	11	(s)	35	7	(s)	3	(s)	1	6	(s)	10	27	47	120
July .....	11	(s)	36	5	(s)	3	(s)	1	6	(s)	10	25	52	124
August .....	11	(s)	36	6	(s)	3	(s)	1	7	(s)	10	28	50	126
September .....	11	(s)	36	7	(s)	3	(s)	1	6	(s)	7	26	45	117
October .....	11	(s)	37	9	(s)	4	(s)	1	5	(s)	11	31	46	125
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 .....	137	(s)	446	94	(s)	45	5	16	69	3	113	345	543	1,471
2013 January .....	12	(s)	41	10	(s)	6	(s)	1	6	(s)	9	33	43	129
February .....	12	(s)	38	7	(s)	5	(s)	1	4	(s)	9	27	40	117
March .....	12	(s)	40	7	(s)	4	(s)	1	5	(s)	8	27	44	122
April .....	12	(s)	37	8	(s)	4	(s)	1	4	(s)	10	27	41	117
May .....	12	(s)	37	8	(s)	3	(s)	1	5	(s)	11	29	44	122
June .....	12	(s)	35	7	(s)	3	(s)	1	6	(s)	10	28	46	121
July .....	12	(s)	37	6	(s)	3	(s)	1	5	(s)	12	28	48	125
August .....	12	(s)	37	6	(s)	3	(s)	1	6	(s)	9	27	49	125
September .....	12	(s)	36	7	(s)	3	(s)	1	6	(s)	12	30	44	122
October .....	13	(s)	38	11	(s)	4	(s)	1	5	(s)	11	33	44	128
November .....	12	(s)	40	9	(s)	4	(s)	1	7	(s)	13	35	43	130
December .....	12	(s)	43	10	(s)	5	(s)	1	4	(s)	12	33	44	132
Total .....	145	-2	460	96	(s)	48	5	17	63	3	126	358	531	1,492
2014 January .....	12	(s)	44	13	(s)	6	(s)	1	7	(s)	9	36	45	136
February .....	12	(s)	40	10	(s)	4	(s)	1	4	(s)	10	30	41	123
March .....	12	(s)	42	10	(s)	4	(s)	1	3	(s)	9	29	43	126
April .....	11	(s)	39	10	(s)	3	(s)	1	5	(s)	10	31	40	120
May .....	11	(s)	38	9	(s)	2	(s)	1	6	(s)	9	29	44	122
5-Month Total ....	58	-1	202	53	(s)	19	2	7	24	1	47	154	213	627
2013 5-Month Total ....	60	(s)	193	40	(s)	21	2	7	24	1	48	143	212	608
2012 5-Month Total ....	58	1	188	44	(s)	19	2	7	28	2	44	144	212	604

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Liquefied petroleum gases.

<sup>e</sup> Finished motor gasoline, excluding fuel ethanol.

<sup>f</sup> Aviation gasoline blending components, crude oil, motor gasoline blending components, pentanes plus, petrochemical feedstocks, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products.

<sup>g</sup> Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

<sup>h</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

(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<sup>a</sup>)

	Coal	Natural Gas <sup>b</sup>	Petroleum								Retail Electricity <sup>f</sup>	Total <sup>g</sup>
			Aviation Gasoline	Distillate Fuel Oil <sup>c</sup>	Jet Fuel	LPG <sup>d</sup>	Lubri-cants	Motor Gasoline <sup>e</sup>	Residual Fuel Oil	Total		
1973 Total .....	(s)	39	6	163	152	3	6	886	57	1,273	2	1,315
1975 Total .....	(s)	32	5	155	145	3	6	889	56	1,258	2	1,292
1980 Total .....	(h)	34	4	204	155	1	6	881	110	1,363	2	1,400
1985 Total .....	(h)	28	3	232	178	2	6	908	62	1,391	3	1,421
1990 Total .....	(h)	36	3	268	223	1	7	967	80	1,548	3	1,588
1995 Total .....	(h)	38	3	307	222	1	6	1,029	72	1,639	3	1,681
1996 Total .....	(h)	39	3	327	232	1	6	1,047	67	1,683	3	1,725
1997 Total .....	(h)	41	3	342	234	1	6	1,057	56	1,699	3	1,744
1998 Total .....	(h)	35	2	352	238	1	7	1,090	53	1,743	3	1,782
1999 Total .....	(h)	36	3	366	245	1	7	1,115	52	1,789	3	1,828
2000 Total .....	(h)	36	3	378	254	1	7	1,121	70	1,833	4	1,872
2001 Total .....	(h)	35	2	387	243	1	6	1,127	46	1,813	4	1,852
2002 Total .....	(h)	37	2	394	237	1	6	1,158	53	1,851	4	1,892
2003 Total .....	(h)	33	2	409	231	1	6	1,161	45	1,856	5	1,893
2004 Total .....	(h)	32	2	434	240	1	6	1,185	58	1,926	5	1,962
2005 Total .....	(h)	33	2	444	246	2	6	1,186	66	1,953	5	1,991
2006 Total .....	(h)	33	2	469	240	2	5	1,194	71	1,984	5	2,022
2007 Total .....	(h)	35	2	472	238	1	6	1,201	78	1,999	5	2,040
2008 Total .....	(h)	37	2	427	226	3	5	1,145	73	1,881	5	1,922
2009 Total .....	(h)	38	2	408	204	2	5	1,136	62	1,819	5	1,862
2010 Total .....	(h)	38	2	429	210	2	5	1,123	70	1,842	5	1,885
2011 Total .....	(h)	39	2	441	209	2	5	1,092	61	1,812	4	1,855
2012 January .....	(h)	4	(s)	32	16	(s)	(s)	87	5	142	(s)	146
February .....	(h)	4	(s)	31	16	(s)	(s)	85	5	137	(s)	142
March .....	(h)	3	(s)	34	17	(s)	(s)	91	5	148	(s)	152
April .....	(h)	3	(s)	35	16	(s)	(s)	90	5	147	(s)	150
May .....	(h)	3	(s)	37	18	(s)	(s)	95	4	154	(s)	157
June .....	(h)	3	(s)	36	19	(s)	(s)	92	4	152	(s)	155
July .....	(h)	3	(s)	37	18	(s)	(s)	94	6	155	(s)	159
August .....	(h)	3	(s)	38	18	(s)	(s)	97	5	158	(s)	162
September .....	(h)	3	(s)	35	17	(s)	(s)	88	5	145	(s)	148
October .....	(h)	3	(s)	37	17	(s)	(s)	92	4	151	(s)	154
November .....	(h)	3	(s)	35	17	(s)	(s)	87	4	143	(s)	147
December .....	(h)	4	(s)	34	17	(s)	(s)	89	2	143	(s)	147
Total .....	(h)	41	2	420	206	2	5	1,087	53	1,774	4	1,819
2013 January .....	(h)	5	(s)	33	16	(s)	(s)	87	4	141	(s)	146
February .....	(h)	4	(s)	30	15	(s)	(s)	81	3	129	(s)	134
March .....	(h)	4	(s)	34	17	(s)	(s)	91	5	148	(s)	153
April .....	(h)	3	(s)	35	17	(s)	(s)	90	3	146	(s)	149
May .....	(h)	3	(s)	37	18	(s)	(s)	95	2	153	(s)	156
June .....	(h)	3	(s)	37	17	(s)	(s)	92	4	150	(s)	153
July .....	(h)	3	(s)	38	19	(s)	(s)	96	4	158	(s)	161
August .....	(h)	3	(s)	38	19	(s)	(s)	97	5	159	(s)	163
September .....	(h)	3	(s)	35	17	(s)	(s)	91	4	149	(s)	152
October .....	(h)	3	(s)	39	18	(s)	(s)	93	4	155	(s)	158
November .....	(h)	4	(s)	35	17	(s)	(s)	90	4	146	(s)	150
December .....	(h)	5	(s)	35	18	(s)	(s)	92	2	148	(s)	153
Total .....	(h)	42	2	426	208	3	5	1,094	45	1,782	4	1,828
2014 January .....	(h)	5	(s)	34	17	(s)	(s)	87	2	140	(s)	146
February .....	(h)	4	(s)	32	15	(s)	(s)	83	2	132	(s)	137
March .....	(h)	4	(s)	36	18	(s)	(s)	92	2	149	(s)	153
April .....	(h)	3	(s)	37	17	(s)	(s)	92	3	150	(s)	153
May .....	(h)	3	(s)	38	17	(s)	(s)	95	3	155	(s)	158
5-Month Total .....	(h)	20	1	176	85	1	2	449	11	726	2	747
2013 5-Month Total .....	(h)	19	1	169	83	1	2	444	18	718	2	738
2012 5-Month Total .....	(h)	18	1	169	83	1	2	448	24	728	2	748

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Liquefied petroleum gases.

<sup>e</sup> Finished motor gasoline, excluding fuel ethanol.

<sup>f</sup> Emissions from energy consumption (for electricity and a small amount of useful thermal output) in the electric power sector are allocated to the end-use sectors in proportion to each sector's share of total electricity retail sales. See Tables 7.6 and 12.6.

<sup>g</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

<sup>h</sup> Beginning in 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

(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<sup>a</sup>)

	Coal	Natural Gas <sup>b</sup>	Petroleum				Geo-thermal	Non-Biomass Waste <sup>d</sup>	Total <sup>e</sup>
			Distillate Fuel Oil <sup>c</sup>	Petroleum Coke	Residual Fuel Oil	Total			
1973 Total .....	812	199	20	2	254	276	NA	NA	1,286
1975 Total .....	824	172	17	(s)	231	248	NA	NA	1,244
1980 Total .....	1,137	200	12	1	194	207	NA	NA	1,544
1985 Total .....	1,367	166	6	1	79	86	NA	NA	1,619
1990 Total .....	1,548	176	7	3	92	102	(s)	6	1,831
1995 Total .....	1,661	228	8	8	45	61	(s)	10	1,960
1996 Total .....	1,752	205	8	8	50	66	(s)	10	2,033
1997 Total .....	1,797	219	8	10	56	75	(s)	10	2,101
1998 Total .....	1,828	248	10	13	82	105	(s)	10	2,192
1999 Total .....	1,836	260	10	11	76	97	(s)	10	2,204
2000 Total .....	1,927	281	13	10	69	91	(s)	10	2,310
2001 Total .....	1,870	290	12	11	79	102	(s)	11	2,273
2002 Total .....	1,890	306	9	18	52	79	(s)	13	2,288
2003 Total .....	1,931	278	12	18	69	98	(s)	11	2,319
2004 Total .....	1,943	297	8	23	69	100	(s)	11	2,352
2005 Total .....	1,984	319	8	25	69	102	(s)	11	2,417
2006 Total .....	1,954	338	5	22	28	56	(s)	12	2,359
2007 Total .....	1,987	372	7	17	31	55	(s)	11	2,426
2008 Total .....	1,959	362	5	16	19	40	(s)	12	2,374
2009 Total .....	1,741	373	5	14	14	34	(s)	11	2,159
2010 Total .....	1,828	399	6	15	12	33	(s)	11	2,271
2011 Total .....	1,723	409	5	15	7	27	(s)	11	2,171
2012 January .....	130	35	(s)	1	1	2	(s)	1	168
February .....	115	35	(s)	1	(s)	2	(s)	1	153
March .....	105	36	(s)	1	(s)	1	(s)	1	144
April .....	95	39	(s)	1	(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)	2	(s)	1	169
Total .....	1,511	493	4	9	6	19	(s)	11	2,035
2013 January .....	137	34	(s)	1	1	2	(s)	1	175
February .....	123	31	(s)	1	1	2	(s)	1	156
March .....	129	33	(s)	1	(s)	2	(s)	1	164
April .....	111	30	(s)	1	(s)	2	(s)	1	144
May .....	118	33	(s)	1	(s)	2	(s)	1	155
June .....	138	40	(s)	1	(s)	2	(s)	1	180
July .....	152	49	(s)	1	1	2	(s)	1	205
August .....	150	49	(s)	1	1	2	(s)	1	202
September .....	133	41	(s)	1	(s)	2	(s)	1	177
October .....	121	35	(s)	1	(s)	2	(s)	1	159
November .....	121	32	(s)	1	(s)	2	(s)	1	156
December .....	141	36	(s)	1	1	2	(s)	1	180
Total .....	1,575	442	4	13	6	23	(s)	11	2,053
2014 January .....	153	36	2	1	2	5	(s)	1	196
February .....	140	30	1	1	1	2	(s)	1	173
March .....	132	30	1	1	1	3	(s)	1	166
April .....	108	30	(s)	1	(s)	2	(s)	1	140
May .....	117	35	(s)	1	(s)	2	(s)	1	155
5-Month Total .....	650	161	4	5	5	14	(s)	5	830
2013 5-Month Total .....	619	161	2	5	3	9	(s)	5	794
2012 5-Month Total .....	560	189	2	4	2	8	(s)	5	761

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Natural gas, excluding supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, excluding biodiesel.

<sup>d</sup> Municipal solid waste from non-biogenic sources, and tire-derived fuels.

<sup>e</sup> Excludes emissions from biomass energy consumption. See Table 12.7.

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<sup>a</sup>)

	By Source					By Sector					
	Wood <sup>b</sup>	Biomass Waste <sup>c</sup>	Fuel Ethanol <sup>d</sup>	Bio-diesel	Total	Residential	Commercial <sup>e</sup>	Industrial <sup>f</sup>	Transportation	Electric Power <sup>g</sup>	Total
1973 Total .....	143	(s)	NA	NA	143	33	1	109	NA	(s)	143
1975 Total .....	140	(s)	NA	NA	141	40	1	100	NA	(s)	141
1980 Total .....	232	(s)	NA	NA	232	80	2	150	NA	(s)	232
1985 Total .....	252	14	3	NA	270	95	2	168	3	1	270
1990 Total .....	208	24	4	NA	237	54	8	147	4	23	237
1995 Total .....	222	30	8	NA	260	49	9	166	8	28	260
1996 Total .....	229	32	6	NA	266	51	10	170	6	30	266
1997 Total .....	222	30	7	NA	259	40	10	172	7	30	259
1998 Total .....	205	30	8	NA	242	36	9	160	8	30	242
1999 Total .....	208	29	8	NA	245	37	9	161	8	30	245
2000 Total .....	212	27	9	NA	248	39	9	161	9	29	248
2001 Total .....	188	33	10	(s)	231	35	9	147	10	31	231
2002 Total .....	187	36	12	(s)	235	36	9	144	12	35	235
2003 Total .....	188	36	16	(s)	240	38	9	141	16	37	240
2004 Total .....	199	35	20	(s)	255	38	10	151	20	36	255
2005 Total .....	200	37	23	1	261	40	10	150	23	37	261
2006 Total .....	197	36	31	2	266	36	9	151	33	38	266
2007 Total .....	196	37	39	3	276	39	9	146	41	39	276
2008 Total .....	193	39	55	3	290	44	10	139	57	40	290
2009 Total .....	181	41	62	3	287	47	10	125	64	41	287
2010 Total .....	186	42	73	2	303	41	10	136	74	42	303
2011 Total .....	189	42	73	8	312	42	11	139	80	40	312
2012 January .....	16	3	6	(s)	26	3	1	12	6	4	26
February .....	15	3	6	1	25	3	1	11	6	3	25
March .....	16	4	6	1	26	3	1	12	7	3	26
April .....	15	3	6	1	25	3	1	11	7	3	25
May .....	16	3	6	1	26	3	1	12	7	3	26
June .....	15	3	6	1	26	3	1	11	7	3	26
July .....	16	4	6	1	27	3	1	12	7	4	27
August .....	16	4	7	1	27	3	1	12	7	4	27
September .....	16	3	6	1	26	3	1	12	6	3	26
October .....	16	4	6	1	26	3	1	12	7	3	26
November .....	16	4	6	1	26	3	1	12	6	3	26
December .....	16	4	6	(s)	27	3	1	12	6	4	27
Total .....	189	42	73	8	312	39	10	141	80	42	312
2013 January .....	17	4	6	1	27	5	1	12	6	4	27
February .....	15	3	5	1	25	4	1	11	6	3	25
March .....	17	4	6	1	28	5	1	11	7	4	28
April .....	16	3	6	1	26	4	1	11	7	3	26
May .....	16	4	7	1	28	5	1	11	7	3	28
June .....	17	4	6	1	28	4	1	11	7	4	28
July .....	18	4	6	1	29	5	1	12	7	4	29
August .....	17	4	6	1	28	5	1	12	7	4	28
September .....	16	3	6	1	27	4	1	11	7	4	27
October .....	17	4	6	2	28	5	1	11	8	4	28
November .....	17	4	6	1	28	4	1	11	7	4	28
December .....	18	4	6	2	29	5	1	12	8	4	29
Total .....	201	43	75	13	331	54	11	137	86	43	331
2014 January .....	17	4	6	1	28	5	1	11	7	4	28
February .....	16	3	6	1	25	4	1	10	7	4	25
March .....	17	4	6	1	28	5	1	11	7	4	28
April .....	16	3	6	1	27	4	1	11	7	4	27
May .....	17	3	7	1	28	5	1	11	8	4	28
5-Month Total .....	83	17	31	5	136	23	5	55	35	19	136
2013 5-Month Total .....	81	18	30	4	133	23	5	56	34	17	133
2012 5-Month Total .....	77	17	30	4	128	16	4	58	33	17	128

<sup>a</sup> Metric tons of carbon dioxide can be converted to metric tons of carbon equivalent by multiplying by 12/44.

<sup>b</sup> Wood and wood-derived fuels.

<sup>c</sup> Municipal solid waste from biogenic sources, landfill gas, sludge waste, agricultural byproducts, and other biomass.

<sup>d</sup> Fuel ethanol minus denaturant.

<sup>e</sup> Commercial sector, including commercial combined-heat-and-power (CHP) and commercial electricity-only plants.

<sup>f</sup> Industrial sector, including industrial combined-heat-and-power (CHP) and industrial electricity-only plants.

<sup>g</sup> The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public.

NA=Not available. (s)=Less than 0.5 million metric tons.

Notes: • Carbon dioxide emissions from biomass energy consumption are excluded from the energy-related carbon dioxide emissions reported in Tables 12.1–12.6. See Note 2, "Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion," at end of section. • Data are estimates. See "Section 12 Methodology and Sources" at end of section. • See "Carbon Dioxide" in Glossary. • See Note 1, "Emissions of Carbon Dioxide and Other Greenhouse Gases," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#environment> (Excel and CSV files) for all available annual and monthly data beginning in 1973.

Sources: See end of section.

## Environment

**Note 1. Emissions of Carbon Dioxide and Other Greenhouse Gases.** Greenhouse gases are those gases—such as water vapor, carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride—that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

Energy-related carbon dioxide emissions account for about 98 percent of U.S. CO<sub>2</sub> emissions. The vast majority of CO<sub>2</sub> emissions come from fossil fuel combustion, with smaller amounts from the nonfuel use of fossil fuels, as well as from electricity generation using geothermal energy and non-biomass waste. Other sources of CO<sub>2</sub> emissions include industrial processes, such as cement and limestone production. Data in the U.S. Energy Information Administration's (EIA) *Monthly Energy Review (MER)* Tables 12.1–12.6 are estimates for U.S. CO<sub>2</sub> emissions from energy consumption, including the nonfuel use of fossil fuels (excluded are estimates for CO<sub>2</sub> emissions from biomass energy consumption, which appear in Table 12.7).

For annual U.S. estimates for emissions of CO<sub>2</sub> from all sources, as well as for emissions of other greenhouse gases, see EIA's *Emissions of Greenhouse Gases Report* at [http://www.eia.gov/environment/emissions/ghg\\_report/](http://www.eia.gov/environment/emissions/ghg_report/).

**Note 2. Accounting for Carbon Dioxide Emissions From Biomass Energy Combustion.** Carbon dioxide (CO<sub>2</sub>) emissions from the combustion of biomass to produce energy are excluded from the energy-related CO<sub>2</sub> emissions reported in MER Tables 12.1–12.6, but appear in Table 12.7. According to current international convention (see the Intergovernmental Panel on Climate Change's "2006 IPCC Guidelines for National Greenhouse Gas Inventories"), carbon released through biomass combustion is excluded from reported energy-related emissions. The release of carbon from biomass combustion is assumed to be balanced by the uptake of carbon when the feedstock is grown, resulting in zero net emissions over some period of time. (This is not to say that biomass energy is carbon-neutral. Energy inputs are required in order to grow, fertilize, and harvest the feedstock and to produce and process the biomass into fuels.)

However, analysts have debated whether increased use of biomass energy may result in a decline in terrestrial carbon stocks, leading to a net positive release of carbon rather than the zero net release assumed by its exclusion from reported energy-related emissions. For example, the clearing of forests for biofuel crops could result in an initial release of carbon that is not fully recaptured in subsequent use of the land for agriculture.

To reflect the potential net emissions, the international convention for greenhouse gas inventories is to report

biomass emissions in the category "agriculture, forestry, and other land use," usually based on estimates of net changes in carbon stocks over time.

This indirect accounting of CO<sub>2</sub> emissions from biomass can potentially lead to confusion in accounting for and understanding the flow of CO<sub>2</sub> emissions within energy and non-energy systems. In recognition of this issue, reporting of CO<sub>2</sub> emissions from biomass combustion alongside other energy-related CO<sub>2</sub> emissions offers an alternative accounting treatment. It is important, however, to avoid misinterpreting emissions from fossil energy and biomass energy sources as necessarily additive. Instead, the combined total of direct CO<sub>2</sub> emissions from biomass and energy-related CO<sub>2</sub> emissions implicitly assumes that none of the carbon emitted was previously or subsequently reabsorbed in terrestrial sinks or that other emissions sources offset any such sequestration.

## Section 12 Methodology and Sources

To estimate carbon dioxide emissions from energy consumption for the *Monthly Energy Review (MER)*, Tables 12.1–12.7, the U.S. Energy Information Administration (EIA) uses the following methodology and sources:

### Step 1. Determine Fuel Consumption

**Coal**—Coal sectoral (residential, commercial, coke plants, other industrial, transportation, electric power) consumption data in thousand short tons are from MER Table 6.2. Coal sectoral consumption data are converted to trillion Btu by multiplying by the coal heat content factors in MER Table A5.

**Coal Coke Net Imports**—Coal coke net imports data in trillion Btu are derived from coal coke imports and exports data in MER Tables 1.4a and 1.4b.

**Natural Gas** (excluding supplemental gaseous fuels)—Natural gas sectoral consumption data in trillion Btu are from MER Tables 2.2–2.6.

**Petroleum**—Total and sectoral consumption (product supplied) data in thousand barrels per day for asphalt and road oil, aviation gasoline, distillate fuel oil, jet fuel, kerosene, liquefied petroleum gases (LPG), lubricants, motor gasoline, petroleum coke, and residual fuel oil are from MER Tables 3.5 and 3.7a–3.7c. For the component products of LPG (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene) and "other petroleum" (aviation gasoline blending components, crude oil, motor gasoline blending components, naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, pentanes plus, special naphthas, still gas, unfinished oils, waxes, and miscellaneous petroleum products), consumption (product supplied) data in thousand barrels per day are from EIA's *Petroleum Supply Annual (PSA)*, *Petroleum Supply Monthly (PSM)*, and earlier

publications (see sources for MER Table 3.5). Petroleum consumption data by product are converted to trillion Btu by multiplying by the petroleum heat content factors in MER Table A1 (Table A3 for motor gasoline).

Biomass—Sectoral consumption data in trillion Btu for wood, biomass waste, fuel ethanol (minus denaturant), and biodiesel are from MER Tables 10.2a–10.2c.

### Step 2. Remove Biofuels From Petroleum

Distillate Fuel Oil—Beginning in 2009, the distillate fuel oil data (for total and transportation sector) in Step 1 include biodiesel, a non-fossil renewable fuel. To remove the biodiesel portion from distillate fuel oil, data in thousand barrels per day for refinery and blender net inputs of renewable diesel fuel (from the PSA/PSM) are converted to trillion Btu by multiplying by the biodiesel heat content factor in MER Table A3, and then subtracted from the distillate fuel oil consumption values.

Motor Gasoline—Beginning in 1993, the motor gasoline data (for total, commercial sector, industrial sector, and transportation sector) in Step 1 include fuel ethanol, a non-fossil renewable fuel. To remove the fuel ethanol portion from motor gasoline, data in trillion Btu for fuel ethanol consumption (from MER Tables 10.2a, 10.2b, and 10.3) are subtracted from the motor gasoline consumption values. (Note that about 2 percent of fuel ethanol is fossil-based petroleum denaturant, to make the fuel ethanol undrinkable. For 1993–2008, petroleum denaturant is double counted in the PSA product supplied statistics, in both the original product category—e.g., pentanes plus—and also in the finished motor gasoline category; for this time period for MER Section 12, petroleum denaturant is removed along with the fuel ethanol from motor gasoline, but left in the original product. Beginning in 2009, petroleum denaturant is counted only in the PSA/PSM product supplied statistics for motor gasoline; for this time period for MER Section 12, petroleum denaturant is left in motor gasoline.)

### Step 3. Remove Carbon Sequestered by Nonfuel Use

The following fuels have industrial nonfuel uses as chemical feedstocks and other products: coal, natural gas, asphalt and road oil, distillate fuel oil, liquefied petroleum gases (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene), lubricants (which have industrial and transportation nonfuel uses), naphthas for petrochemical feedstock use, other oils for petrochemical feedstock use, pentanes plus, petroleum coke, residual fuel oil, special naphthas, still gas, waxes, and miscellaneous petroleum products. In the nonfuel use of these fuels, some of the carbon is sequestered, and is thus subtracted from the fuel consumption values in Steps 1 and 2.

Estimates of annual nonfuel use and associated carbon sequestration are developed by EIA using the methodology

detailed in “Documentation for *Emissions of Greenhouse Gases in the United States 2008*” at [http://www.eia.gov/oiaf/1605/ggrpt/documentation/pdf/0638\(2008\).pdf](http://www.eia.gov/oiaf/1605/ggrpt/documentation/pdf/0638(2008).pdf).

To obtain monthly estimates of nonfuel use and associated carbon sequestration, monthly patterns for industrial consumption and product supplied data series are used. For coal nonfuel use, the monthly pattern for coke plants coal consumption from MER Table 6.2 is used. For natural gas, the monthly pattern for other industrial non-CHP natural gas consumption from MER Table 4.3 is used. For distillate fuel oil, petroleum coke, and residual fuel oil, the monthly patterns for industrial consumption from MER Table 3.7b are used. For the other petroleum products, the monthly patterns for product supplied from the PSA and PSM are used.

### Step 4. Determine Carbon Dioxide Emissions From Energy Consumption

Carbon dioxide (CO<sub>2</sub>) emissions data in million metric tons are calculated by multiplying consumption values in trillion Btu from Steps 1 and 2 (minus the carbon sequestered in nonfuel use in Step 3) by the CO<sub>2</sub> emissions factors at [http://www.eia.gov/oiaf/1605/ggrpt/excel/CO2\\_coeff\\_09\\_v2.xls](http://www.eia.gov/oiaf/1605/ggrpt/excel/CO2_coeff_09_v2.xls). Beginning in 2010, the 2009 factors are used.

Coal—CO<sub>2</sub> emissions for coal are calculated for each sector (residential, commercial, coke plants, other industrial, transportation, electric power). Total coal emissions are the sum of the sectoral coal emissions.

Coal Coke Net Imports—CO<sub>2</sub> emissions for coal coke net imports are calculated.

Natural Gas—CO<sub>2</sub> emissions for natural gas are calculated for each sector (residential, commercial, industrial, transportation, electric power). Total natural gas emissions are the sum of the sectoral natural gas emissions.

Petroleum—CO<sub>2</sub> emissions are calculated for each petroleum product. Total petroleum emissions are the sum of the product emissions. Total LPG emissions are the sum of the emissions for the component products (ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene); residential, commercial, and transportation sector LPG emissions are estimated by multiplying consumption values in trillion Btu from MER Tables 3.8a and 3.8c by the propane emissions factor; industrial sector LPG emissions are estimated as total LPG emissions minus emissions by the other sectors.

Geothermal and Non-Biomass Waste—Annual CO<sub>2</sub> emissions data for geothermal and non-biomass waste are EIA estimates based on Form EIA-923, “Power Plant Operations Report” (and predecessor forms). Monthly estimates are created by dividing the annual data by the number of days in the year and then multiplying by the number of days in the month. (Annual estimates for the current year are set equal to those of the previous year.)

Biomass—CO<sub>2</sub> emissions for wood, biomass waste, fuel ethanol (minus denaturant), and biodiesel are calculated for each sector. Total emissions for each biomass fuel are the sum of the sectoral emissions. The following factors, in million metric tons CO<sub>2</sub> per quadrillion Btu, are used: wood—93.80; biomass waste—90.70; fuel ethanol—68.44; and biodiesel—73.84. For 1973–1988, the biomass portion

of waste in MER Tables 10.2a–10.2c is estimated as 67 percent; for 1989–2000, the biomass portion of waste is estimated as 67 percent in 1989 to 58 percent in 2000, based on the biogenic shares of total municipal solid waste shown in EIA’s “Methodology for Allocating Municipal Solid Waste to Biogenic and Non-Biogenic Energy,” Table 1 at <http://www.eia.gov/totalenergy/data/monthly/pdf/historical/msw.pdf>.

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# Appendix A

## British Thermal Unit Conversion Factors

The thermal conversion factors presented in the following tables can be used to estimate the heat content in British thermal units (Btu) of a given amount of energy measured in physical units, such as barrels or cubic feet. For example, 10 barrels of asphalt has a heat content of approximately 66.36 million Btu (10 barrels x 6.636 million Btu per barrel = 66.36 million Btu).

The heat content rates (i.e., thermal conversion factors) provided in this section represent the gross (or higher or upper) energy content of the fuels. Gross heat content rates are applied in all Btu calculations for the *Monthly Energy Review* and are commonly used in energy calculations in the United States; net (or lower) heat content rates are typically used in European energy calculations. The difference between the two rates is the amount of energy that is consumed to vaporize water that is created during the combustion process. Generally, the difference ranges from 2 percent to 10 percent, depending on the specific fuel and its hydrogen content. Some fuels, such as unseasoned wood, can be more than 40 percent different in their gross

and net heat content rates. See "Heat Content" and "British Thermal Unit (Btu)" in the Glossary for more information.

Thermal conversion factors for hydrocarbon mixes (Table A1) are weighted averages of the thermal conversion factors for each hydrocarbon included in the mix. For example, in calculating the thermal conversion factor for a 60-40 butane-propane mixture, the thermal conversion factor for butane is weighted 1.5 times the thermal conversion factor for propane.

In general, the annual thermal conversion factors presented in Tables A2 through A6 are computed from final annual data or from the best available data and labeled "preliminary." Often, the previous year's factor is used as a preliminary value until data become available to calculate the factor appropriate to the year. The source of each factor is described in the section entitled "Thermal Conversion Factor Source Documentation," which follows Table A6 in this appendix.

**Table A1. Approximate Heat Content of Petroleum Products  
(Million Btu per Barrel)**

Petroleum Product	Heat Content	Petroleum Product	Heat Content
Asphalt	6.636	Pentanes Plus	4.620
Aviation Gasoline	5.048	Petrochemical Feedstocks	
Butane	4.326	Naphtha Less Than 401°F	5.248
Butane-Propane Mixture <sup>a</sup>	4.130	Other Oils Equal to or Greater Than 401°F	5.825
Distillate Fuel Oil <sup>b</sup>	5.825	Still Gas	6.000
Ethane	3.082	Petroleum Coke	6.024
Ethane-Propane Mixture <sup>c</sup>	3.308	Plant Condensate	5.418
Isobutane	3.974	Propane	3.836
Jet Fuel, Kerosene Type	5.670	Residual Fuel Oil	6.287
Jet Fuel, Naphtha Type	5.355	Road Oil	6.636
Kerosene	5.670	Special Naphthas	5.248
Lubricants	6.065	Still Gas	6.000
Motor Gasoline <sup>d</sup>		Unfinished Oils	5.825
Conventional	5.253	Unfractionated Stream	5.418
Reformulated	5.150	Waxes	5.537
Oxygenated	5.150	Miscellaneous	5.796
Natural Gasoline and Isopentane	4.620		

<sup>a</sup> 60 percent butane and 40 percent propane.

<sup>b</sup> Does not include biodiesel. See Table A3 for biodiesel heat contents.

<sup>c</sup> 70 percent ethane and 30 percent propane.

<sup>d</sup> See Table A3 for motor gasoline weighted heat contents beginning in 1994, and for fuel ethanol heat contents.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#appendices>.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

**Table A2. Approximate Heat Content of Petroleum Production, Imports, and Exports**  
 (Million Btu per Barrel)

	Production		Imports			Exports		
	Crude Oil <sup>a</sup>	Natural Gas Plant Liquids	Crude Oil <sup>a</sup>	Petroleum Products	Total	Crude Oil <sup>a</sup>	Petroleum Products	Total
1950 .....	5.800	4.522	5.943	6.263	6.080	5.800	5.751	5.766
1955 .....	5.800	4.406	5.924	6.234	6.040	5.800	5.765	5.768
1960 .....	5.800	4.295	5.911	6.161	6.021	5.800	5.835	5.834
1965 .....	5.800	4.264	5.872	6.123	5.997	5.800	5.742	5.743
1970 .....	5.800	4.146	5.822	6.088	5.985	5.800	5.811	5.810
1975 .....	5.800	3.984	5.821	5.935	5.858	5.800	5.747	5.748
1980 .....	5.800	3.914	5.812	5.748	5.796	5.800	5.841	5.820
1981 .....	5.800	3.930	5.818	5.659	5.775	5.800	5.837	5.821
1982 .....	5.800	3.872	5.826	5.664	5.775	5.800	5.829	5.820
1983 .....	5.800	3.839	5.825	5.677	5.774	5.800	5.800	5.800
1984 .....	5.800	3.812	5.823	5.613	5.745	5.800	5.867	5.850
1985 .....	5.800	3.815	5.832	5.572	5.736	5.800	5.819	5.814
1986 .....	5.800	3.797	5.903	5.624	5.808	5.800	5.839	5.832
1987 .....	5.800	3.804	5.901	5.599	5.820	5.800	5.860	5.858
1988 .....	5.800	3.800	5.900	5.618	5.820	5.800	5.842	5.840
1989 .....	5.800	3.826	5.906	5.641	5.833	5.800	5.869	5.857
1990 .....	5.800	3.822	5.934	5.614	5.849	5.800	5.838	5.833
1991 .....	5.800	3.807	5.948	5.636	5.873	5.800	5.827	5.823
1992 .....	5.800	3.804	5.953	5.623	5.877	5.800	5.774	5.777
1993 .....	5.800	3.801	5.954	5.620	5.883	5.800	5.777	5.779
1994 .....	5.800	3.794	5.950	5.534	5.861	5.800	5.777	5.779
1995 .....	5.800	3.796	5.938	5.483	5.855	5.800	5.740	5.746
1996 .....	5.800	3.777	5.947	5.468	5.847	5.800	5.728	5.736
1997 .....	5.800	3.762	5.954	5.469	5.862	5.800	5.726	5.734
1998 .....	5.800	3.769	5.953	5.462	5.861	5.800	5.710	5.720
1999 .....	5.800	3.744	5.942	5.421	5.840	5.800	5.684	5.699
2000 .....	5.800	3.733	5.959	5.432	5.849	5.800	5.651	5.658
2001 .....	5.800	3.735	5.976	5.443	5.862	5.800	5.751	5.752
2002 .....	5.800	3.729	5.971	5.451	5.863	5.800	5.687	5.688
2003 .....	5.800	3.739	5.970	5.438	5.857	5.800	5.739	5.740
2004 .....	5.800	3.724	5.981	5.475	5.863	5.800	5.753	5.754
2005 .....	5.800	3.724	5.977	5.474	5.845	5.800	5.741	5.743
2006 .....	5.800	3.712	5.980	5.454	5.842	5.800	5.723	5.724
2007 .....	5.800	3.701	5.985	5.503	5.862	5.800	5.749	5.750
2008 .....	5.800	3.706	5.990	5.479	5.866	5.800	5.762	5.762
2009 .....	5.800	3.692	5.988	5.525	5.882	5.800	5.737	5.738
2010 .....	5.800	3.674	5.989	5.557	5.894	5.800	5.670	5.672
2011 .....	5.800	3.672	6.008	5.507	5.896	5.800	5.596	5.599
2012 .....	5.800	3.683	6.165	5.514	6.038	5.800	5.583	5.587
2013 <sup>p</sup> .....	5.800	3.714	6.043	5.490	5.926	5.800	5.507	5.517
2014 <sup>e</sup> .....	5.800	3.714	6.043	5.490	5.926	5.800	5.507	5.517

<sup>a</sup> Includes lease condensate.

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 Biofuels Production**  
(Million Btu per Barrel)

	Total Petroleum <sup>a</sup> Consumption by Sector						Liquefied Petroleum Gases Consumption <sup>f</sup>	Motor Gasoline Consumption <sup>g</sup>	Fuel Ethanol <sup>h</sup>	Fuel Ethanol Feed-stock Factor <sup>i</sup>	Biodiesel	Biodiesel Feed-stock Factor <sup>j</sup>
	Residential	Commercial <sup>b</sup>	Industrial <sup>b</sup>	Transportation <sup>b,c</sup>	Electric Power <sup>d,e</sup>	Total <sup>b,c</sup>						
1950 .....	5.473	5.817	5.953	5.461	6.254	5.649	4.011	5.253	NA	NA	NA	NA
1955 .....	5.469	5.781	5.881	5.407	6.254	5.591	4.011	5.253	NA	NA	NA	NA
1960 .....	5.417	5.781	5.818	5.387	6.267	5.555	4.011	5.253	NA	NA	NA	NA
1965 .....	5.364	5.760	5.748	5.386	6.267	5.532	4.011	5.253	NA	NA	NA	NA
1970 .....	5.260	5.708	5.595	5.393	6.252	5.503	<sup>f</sup> 3.779	5.253	NA	NA	NA	NA
1975 .....	5.253	5.649	5.513	5.392	6.250	5.494	3.715	5.253	NA	NA	NA	NA
1980 .....	5.321	5.751	5.366	5.441	6.254	5.479	3.674	5.253	3.563	6.586	NA	NA
1981 .....	5.283	5.693	5.299	5.433	6.258	5.448	3.643	5.253	3.563	6.502	NA	NA
1982 .....	5.266	5.698	5.247	5.423	6.258	5.415	3.615	5.253	3.563	6.539	NA	NA
1983 .....	5.140	5.591	5.254	5.416	6.255	5.406	3.614	5.253	3.563	6.515	NA	NA
1984 .....	5.307	5.657	5.207	5.418	6.251	5.395	3.599	5.253	3.563	6.492	NA	NA
1985 .....	5.263	5.598	5.199	5.423	6.247	5.387	3.603	5.253	3.563	6.469	NA	NA
1986 .....	5.268	5.632	5.269	5.426	6.257	5.418	3.640	5.253	3.563	6.446	NA	NA
1987 .....	5.239	5.594	5.233	5.429	6.249	5.403	3.659	5.253	3.563	6.423	NA	NA
1988 .....	5.257	5.597	5.228	5.433	6.250	5.410	3.652	5.253	3.563	6.400	NA	NA
1989 .....	5.194	5.549	5.219	5.438	<sup>d</sup> 6.240	5.410	3.683	5.253	3.563	6.377	NA	NA
1990 .....	5.145	5.553	5.253	5.442	6.244	5.411	3.625	5.253	3.563	6.355	NA	NA
1991 .....	5.094	5.528	5.167	5.441	6.246	5.384	3.614	5.253	3.563	6.332	NA	NA
1992 .....	5.124	5.513	5.168	5.443	6.238	5.378	3.624	5.253	3.563	6.309	NA	NA
1993 .....	5.102	<sup>b</sup> 5.505	<sup>b</sup> 5.178	<sup>b</sup> 5.436	6.230	<sup>b</sup> 5.379	3.606	5.253	3.563	6.287	NA	NA
1994 .....	5.098	5.515	5.150	5.424	6.213	5.361	3.635	<sup>g</sup> 5.230	3.563	6.264	NA	NA
1995 .....	5.063	5.478	5.121	5.417	6.188	5.341	3.623	5.215	3.563	6.242	NA	NA
1996 .....	4.998	5.433	5.114	5.420	6.195	5.336	3.613	5.216	3.563	6.220	NA	NA
1997 .....	4.989	5.391	5.120	5.416	6.199	5.336	3.616	5.213	3.563	6.198	NA	NA
1998 .....	4.975	5.365	5.137	5.413	6.210	5.349	3.614	5.212	3.563	6.176	NA	NA
1999 .....	4.902	5.291	5.092	5.413	6.205	5.328	3.616	5.211	3.563	6.167	NA	NA
2000 .....	4.908	5.316	5.057	5.422	6.189	5.326	3.607	5.210	3.563	6.159	NA	NA
2001 .....	4.937	5.325	5.142	5.412	6.199	5.345	3.614	5.210	3.563	6.151	5.359	5.433
2002 .....	4.886	5.293	5.093	5.411	6.173	5.324	3.613	5.208	3.563	6.143	5.359	5.433
2003 .....	4.921	5.316	5.144	5.407	6.182	5.340	3.629	5.207	3.563	6.116	5.359	5.433
2004 .....	4.953	5.328	5.144	5.421	6.192	5.350	3.618	5.215	3.563	6.089	5.359	5.433
2005 .....	4.916	5.364	5.178	5.427	6.188	5.365	3.620	5.218	3.563	6.063	5.359	5.433
2006 .....	4.894	5.310	5.160	5.431	6.143	5.353	3.605	5.218	3.563	6.036	5.359	5.433
2007 .....	4.850	5.298	5.127	5.434	6.151	5.346	3.591	5.219	3.563	6.009	5.359	5.433
2008 .....	4.790	5.186	5.154	5.424	6.123	5.339	3.600	5.218	3.563	5.983	5.359	5.433
2009 .....	4.679	5.249	5.019	<sup>c</sup> 5.414	6.105	<sup>c</sup> 5.301	3.558	5.218	3.563	5.957	5.359	5.433
2010 .....	4.679	5.230	4.985	5.423	6.084	5.297	3.557	5.218	3.561	5.931	5.359	5.433
2011 .....	4.660	5.200	4.964	5.425	6.058	5.286	3.541	5.218	3.560	5.905	5.359	5.433
2012 .....	4.726	5.157	4.913	5.418	6.063	5.274	3.534	5.219	3.560	5.880	5.359	5.433
2013 .....	E 4.706	E 5.131	E 4.896	E 5.417	P 6.058	P 5.265	P 3.555	P 5.219	P 3.559	5.880	5.359	5.433
2014 .....	E 4.706	E 5.131	E 4.896	E 5.417	E 6.058	E 5.265	E 3.555	E 5.219	E 3.559	5.880	5.359	5.433

<sup>a</sup> Petroleum products supplied, including natural gas plant liquids and crude oil burned directly as fuel. Quantity-weighted averages of the petroleum products included in each category are calculated by using heat content values shown in Table A1.

<sup>b</sup> Beginning in 1993, includes fuel ethanol blended into motor gasoline.

<sup>c</sup> Beginning in 2009, includes renewable diesel fuel (including biodiesel) blended into distillate fuel oil.

<sup>d</sup> Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

<sup>e</sup> Electric power sector factors are weighted average heat contents for distillate fuel oil, petroleum coke, and residual fuel oil; they exclude other liquids.

<sup>f</sup> There is a discontinuity in this time series between 1966 and 1967; beginning in 1967, the single constant factor is replaced by a quantity-weighted factor—quantity-weighted averages of the major components of liquefied petroleum gases are calculated by using heat content values shown in Table A1.

<sup>g</sup> There is a discontinuity in this time series between 1993 and 1994; beginning in 1994, the single constant factor is replaced by a quantity-weighted factor—quantity-weighted averages of the major components of motor gasoline, including fuel ethanol, are calculated by using heat content values shown in Table A1.

<sup>h</sup> Includes denaturant (petroleum added to ethanol to make it undrinkable). Fuel ethanol factors are weighted average heat contents for undenatured ethanol (3.539 million Btu per barrel), pentanes plus used as denaturant (4.620 million Btu per barrel), and conventional motor gasoline and motor gasoline blending components used as denaturant (5.253 million Btu per barrel). The factor for 2009 is used as the estimated factor for 1980–2008.

<sup>i</sup> Corn input to the production of undenatured ethanol (million Btu corn per barrel undenatured ethanol), used as the factor to estimate total biomass inputs to the production of undenatured ethanol. Observed ethanol yields (gallons undenatured ethanol per bushel of corn) are 2.5 in 1980, 2.666 in 1998, 2.68 in 2002, and 2.764 in 2009; yields in other years are estimated. Corn is assumed to have a gross heat content of 0.392 million Btu per bushel. Undenatured ethanol is assumed to have a gross heat content of 3.539 million Btu per barrel.

<sup>j</sup> Soybean oil input to the production of biodiesel (million Btu soybean oil per barrel biodiesel), used as the factor to estimate total biomass inputs to the production of biodiesel. It is assumed that 7.65 pounds of soybean oil are needed to produce one gallon of biodiesel, and 5.433 million Btu of soybean oil are needed to produce one barrel of biodiesel. Soybean oil is assumed to have a gross heat content of 16,909 Btu per pound, or 5.483 million Btu per barrel. Biodiesel is assumed to have a gross heat content of 17,253 Btu per pound, or 5.359 million Btu per barrel.

P=Preliminary. E=Estimate. NA=Not available.

Note: The heat content values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web 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 <sup>a</sup>			Imports	Exports
	Marketed	Dry	End-Use Sectors <sup>b</sup>	Electric Power Sector <sup>c</sup>	Total		
1950 .....	1,119	1,035	1,035	1,035	1,035	--	1,035
1955 .....	1,120	1,035	1,035	1,035	1,035	1,035	1,035
1960 .....	1,107	1,035	1,035	1,035	1,035	1,035	1,035
1965 .....	1,101	1,032	1,032	1,032	1,032	1,032	1,032
1970 .....	1,102	1,031	1,031	1,031	1,031	1,031	1,031
1975 .....	1,095	1,021	1,020	1,026	1,021	1,026	1,014
1980 .....	1,098	1,026	1,024	1,035	1,026	1,022	1,013
1981 .....	1,103	1,027	1,025	1,035	1,027	1,014	1,011
1982 .....	1,107	1,028	1,026	1,036	1,028	1,018	1,011
1983 .....	1,115	1,031	1,031	1,030	1,031	1,024	1,010
1984 .....	1,109	1,031	1,030	1,035	1,031	1,005	1,010
1985 .....	1,112	1,032	1,031	1,038	1,032	1,002	1,011
1986 .....	1,110	1,030	1,029	1,034	1,030	997	1,008
1987 .....	1,112	1,031	1,031	1,032	1,031	999	1,011
1988 .....	1,109	1,029	1,029	1,028	1,029	1,002	1,018
1989 .....	1,107	1,031	1,031	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 .....	1,065	1,024	1,025	1,022	1,024	1,025	1,009
2013 .....	E 1,065	E 1,025	E 1,025	P 1,025	E 1,025	E 1,025	E 1,009
2014 .....	E 1,065	E 1,025	E 1,025	E 1,025	E 1,025	E 1,025	E 1,009

<sup>a</sup> Consumption factors are for natural gas, plus a small amount of supplemental gaseous fuels.

<sup>b</sup> Residential, commercial, industrial, and transportation sectors.

<sup>c</sup> Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

P=Preliminary. E=Estimate. --=Not applicable.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#appendices> (Excel and CSV files) for all available annual data beginning in 1949.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

**Table A5. Approximate Heat Content of Coal and Coal Coke**  
(Million Btu per Short Ton)

	Coal									Coal Coke				
	Production <sup>a</sup>	Waste Coal Supplied <sup>b</sup>	Residential and Commercial Sectors <sup>c</sup>	Consumption				Imports	Exports					
				Industrial Sector		Electric Power Sector <sup>e,f</sup>	Total							
				Coke Plants	Other <sup>d</sup>									
1950 .....	25.090	NA	24.461	26.798	24.820	23.937	24.989	25.020	26.788	24.800				
1955 .....	25.201	NA	24.373	26.794	24.821	24.056	24.982	25.000	26.907	24.800				
1960 .....	24.906	NA	24.226	26.791	24.609	23.927	24.713	25.003	26.939	24.800				
1965 .....	24.775	NA	24.028	26.787	24.385	23.780	24.537	25.000	26.973	24.800				
1970 .....	23.842	NA	23.203	26.784	22.983	22.573	23.440	25.000	26.982	24.800				
1975 .....	22.897	NA	22.261	26.782	22.436	21.642	22.506	25.000	26.562	24.800				
1980 .....	22.415	NA	22.543	26.790	22.690	21.295	21.947	25.000	26.384	24.800				
1981 .....	22.308	NA	22.474	26.794	22.585	21.085	21.713	25.000	26.160	24.800				
1982 .....	22.239	NA	22.695	26.797	22.712	21.194	21.674	25.000	26.223	24.800				
1983 .....	22.052	NA	22.775	26.798	22.691	21.133	21.576	25.000	26.291	24.800				
1984 .....	22.010	NA	22.844	26.799	22.543	21.101	21.573	25.000	26.402	24.800				
1985 .....	21.870	NA	22.646	26.798	22.020	20.959	21.366	25.000	26.307	24.800				
1986 .....	21.913	NA	22.947	26.798	22.198	21.084	21.462	25.000	26.292	24.800				
1987 .....	21.922	NA	23.404	26.799	22.381	21.136	21.517	25.000	26.291	24.800				
1988 .....	21.823	NA	23.571	26.799	22.360	20.900	21.328	25.000	26.299	24.800				
1989 .....	21.765	<sup>b</sup> 10.391	23.650	26.800	22.347	<sup>e</sup> 20.898	21.307	25.000	26.160	24.800				
1990 .....	21.822	9.303	23.137	26.799	22.457	20.779	21.197	25.000	26.202	24.800				
1991 .....	21.681	10.758	23.114	26.799	22.460	20.730	21.120	25.000	26.188	24.800				
1992 .....	21.682	10.396	23.105	26.799	22.250	20.709	21.068	25.000	26.161	24.800				
1993 .....	21.418	10.638	22.994	26.800	22.123	20.677	21.010	25.000	26.335	24.800				
1994 .....	21.394	11.097	23.112	26.800	22.068	20.589	20.929	25.000	26.329	24.800				
1995 .....	21.326	11.722	23.118	26.800	21.950	20.543	20.880	25.000	26.180	24.800				
1996 .....	21.322	12.147	23.011	26.800	22.105	20.547	20.870	25.000	26.174	24.800				
1997 .....	21.296	12.158	22.494	26.800	22.172	20.518	20.830	25.000	26.251	24.800				
1998 .....	21.418	12.639	21.620	27.426	23.164	20.516	20.881	25.000	26.800	24.800				
1999 .....	21.070	12.552	23.880	27.426	22.489	20.490	20.818	25.000	26.081	24.800				
2000 .....	21.072	12.360	25.020	27.426	22.433	20.511	20.828	25.000	26.117	24.800				
2001 .....	<sup>a</sup> 20.772	12.169	24.909	27.426	22.622	20.337	20.671	25.000	25.998	24.800				
2002 .....	20.673	12.165	22.962	27.426	22.562	20.238	20.541	25.000	26.062	24.800				
2003 .....	20.499	12.360	22.242	27.425	22.468	20.082	20.387	25.000	25.972	24.800				
2004 .....	20.424	12.266	22.324	27.426	22.473	19.980	20.290	25.000	26.108	24.800				
2005 .....	20.348	12.093	22.342	26.279	22.178	19.988	20.246	25.000	25.494	24.800				
2006 .....	20.310	12.080	22.066	26.271	22.050	19.931	20.181	25.000	25.453	24.800				
2007 .....	20.340	12.090	22.069	26.329	22.371	19.909	20.168	25.000	25.466	24.800				
2008 .....	20.208	12.121	<sup>c</sup> 23.035	26.281	22.304	19.713	19.979	25.000	25.399	24.800				
2009 .....	19.963	12.076	22.852	26.334	21.823	19.521	19.741	25.000	25.633	24.800				
2010 .....	20.173	11.960	22.611	26.295	21.846	19.623	19.870	25.000	25.713	24.800				
2011 .....	20.142	11.604	22.099	26.299	21.568	19.341	19.600	25.000	25.645	24.800				
2012 .....	20.215	11.539	21.300	26.302	21.449	19.211	19.489	23.128	24.551	24.800				
2013 <sup>b</sup> .....	20.187	12.428	21.233	28.705	21.623	19.210	19.548	23.367	24.604	24.800				
2014 <sup>E</sup> .....	20.187	12.428	21.233	28.705	21.623	19.210	19.548	23.367	24.604	24.800				

<sup>a</sup> Beginning in 2001, includes a small amount of refuse recovery (coal recaptured from a refuse mine, and cleaned to reduce the concentration of noncombustible materials).

<sup>b</sup> Waste coal (including fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste) consumed by the electric power and industrial sectors. Beginning in 1989, waste coal supplied is counted as a supply-side item to balance the same amount of waste coal included in "Consumption."

<sup>c</sup> Through 2007, used as the thermal conversion factor for coal consumption by the residential and commercial sectors. Beginning in 2008, used as the thermal conversion factor for coal consumption by the commercial sector only.

<sup>d</sup> Includes transportation. Excludes coal synfuel plants.

<sup>e</sup> Electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only; beginning in 1989, data are for electric utilities and independent power producers.

<sup>f</sup> Electric power sector factors are for anthracite, bituminous coal, subbituminous coal, lignite, waste coal, and, beginning in 1998, coal synfuel.

P=Preliminary. E=Estimate. NA=Not available.

Note: The values in this table are for gross heat contents. See "Heat Content" in Glossary.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#appendices> (Excel and CSV files) for all available annual data beginning in 1949.

Sources: See "Thermal Conversion Factor Source Documentation," which follows Table A6.

**Table A6. Approximate Heat Rates for Electricity, and Heat Content of Electricity**  
(Btu per Kilowatthour)

	Approximate Heat Rates <sup>a</sup> for Electricity Net Generation						Heat Content <sup>j</sup> of Electricity <sup>k</sup>	
	Fossil Fuels <sup>b</sup>				Nuclear <sup>h</sup>	Noncombustible Renewable Energy <sup>g,i</sup>		
	Coal <sup>c</sup>	Petroleum <sup>d</sup>	Natural Gas <sup>e</sup>	Total Fossil Fuels <sup>f,g</sup>				
1950 .....	NA	NA	NA	14,030	--	14,030	3,412	
1955 .....	NA	NA	NA	11,699	--	11,699	3,412	
1960 .....	NA	NA	NA	10,760	11,629	10,760	3,412	
1965 .....	NA	NA	NA	10,453	11,804	10,453	3,412	
1970 .....	NA	NA	NA	10,494	10,977	10,494	3,412	
1975 .....	NA	NA	NA	10,406	11,013	10,406	3,412	
1980 .....	NA	NA	NA	10,388	10,908	10,388	3,412	
1981 .....	NA	NA	NA	10,453	11,030	10,453	3,412	
1982 .....	NA	NA	NA	10,454	11,073	10,454	3,412	
1983 .....	NA	NA	NA	10,520	10,905	10,520	3,412	
1984 .....	NA	NA	NA	10,440	10,843	10,440	3,412	
1985 .....	NA	NA	NA	10,447	10,622	10,447	3,412	
1986 .....	NA	NA	NA	10,446	10,579	10,446	3,412	
1987 .....	NA	NA	NA	10,419	10,442	10,419	3,412	
1988 .....	NA	NA	NA	10,324	10,602	10,324	3,412	
1989 .....	NA	NA	NA	10,432	10,583	10,432	3,412	
1990 .....	NA	NA	NA	10,402	10,582	10,402	3,412	
1991 .....	NA	NA	NA	10,436	10,484	10,436	3,412	
1992 .....	NA	NA	NA	10,342	10,471	10,342	3,412	
1993 .....	NA	NA	NA	10,309	10,504	10,309	3,412	
1994 .....	NA	NA	NA	10,316	10,452	10,316	3,412	
1995 .....	NA	NA	NA	10,312	10,507	10,312	3,412	
1996 .....	NA	NA	NA	10,340	10,503	10,340	3,412	
1997 .....	NA	NA	NA	10,213	10,494	10,213	3,412	
1998 .....	NA	NA	NA	10,197	10,491	10,197	3,412	
1999 .....	NA	NA	NA	10,226	10,450	10,226	3,412	
2000 .....	NA	NA	NA	10,201	10,429	10,201	3,412	
2001 .....	10,378	10,742	10,051	<sup>b</sup> 10,333	10,443	10,333	3,412	
2002 .....	10,314	10,641	9,533	10,173	10,442	10,173	3,412	
2003 .....	10,297	10,610	9,207	10,125	10,422	10,125	3,412	
2004 .....	10,331	10,571	8,647	10,016	10,428	10,016	3,412	
2005 .....	10,373	10,631	8,551	9,999	10,436	9,999	3,412	
2006 .....	10,351	10,809	8,471	9,919	10,435	9,919	3,412	
2007 .....	10,375	10,794	8,403	9,884	10,489	9,884	3,412	
2008 .....	10,378	11,015	8,305	9,854	10,452	9,854	3,412	
2009 .....	10,414	10,923	8,159	9,760	10,459	9,760	3,412	
2010 .....	10,415	10,984	8,185	9,756	10,452	9,756	3,412	
2011 .....	10,444	10,829	8,152	9,716	10,464	9,716	3,412	
2012 .....	10,498	10,991	8,039	9,516	10,479	9,516	3,412	
2013 .....	E 10,498	E 10,991	E 8,039	E 9,516	E 10,479	E 9,516	3,412	
2014 .....	E 10,498	E 10,991	E 8,039	E 9,516	E 10,479	E 9,516	3,412	

<sup>a</sup> The values in columns 1–6 of this table are for net heat rates. See "Heat Rate" in Glossary.

<sup>b</sup> Through 2000, heat rates are for fossil-fueled steam-electric plants at electric utilities. Beginning in 2001, heat rates are for all fossil-fueled plants at electric utilities and electricity-only independent power producers.

<sup>c</sup> Includes anthracite, bituminous coal, subbituminous coal, lignite, and, beginning in 2002, waste coal and coal synfuel.

<sup>d</sup> Includes distillate fuel oil, residual fuel oil, jet fuel, kerosene, petroleum coke, and waste oil.

<sup>e</sup> Includes natural gas and supplemental gaseous fuels.

<sup>f</sup> Includes coal, petroleum, natural gas, and, beginning in 2001, other gases (blast furnace gas, propane gas, and other manufactured and waste gases derived from fossil fuels).

<sup>g</sup> The fossil-fuels heat rate is used as the thermal conversion factor for electricity net generation from noncombustible renewable energy (hydro, geothermal, solar thermal, photovoltaic, and wind) to approximate the quantity of fossil fuels replaced by these sources. Through 2000, also used as the thermal conversion factor for wood and waste electricity net generation at electric utilities; beginning in 2001, Btu data for wood and waste at electric utilities are available from surveys.

<sup>h</sup> Used as the thermal conversion factor for nuclear electricity net generation.

<sup>i</sup> Technology-based geothermal heat rates are no longer used in Btu calculations in this report. For technology-based geothermal heat rates for 1960–2010, see the Annual Energy Review 2010, Table A6.

<sup>j</sup> See "Heat Content" in Glossary.

<sup>k</sup> The value of 3,412 Btu per kilowatthour is a constant. It is used as the thermal conversion factor for electricity retail sales, and electricity imports and exports.

E=Estimate. NA=Not available. --=Not applicable.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#appendices> (Excel and CSV files) for all available annual data beginning in 1949.

Sources: See "Thermal Conversion Factor Source Documentation," which follows this table.

# Thermal Conversion Factor Source Documentation

## Approximate Heat Content of Petroleum and Natural Gas Plant Liquids

**Asphalt.** The U.S. Energy Information Administration (EIA) adopted the thermal conversion factor of 6.636 million British thermal units (Btu) per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Aviation Gasoline.** EIA adopted the thermal conversion factor of 5.048 million Btu per barrel as adopted by the Bureau of Mines from the Texas Eastern Transmission Corporation publication *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics.

**Butane.** EIA adopted the Bureau of Mines thermal conversion factor of 4.326 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Butane-Propane Mixture.** EIA adopted the Bureau of Mines calculation of 4.130 million Btu per barrel based on an assumed mixture of 60 percent butane and 40 percent propane. See **Butane** and **Propane**.

**Crude Oil Exports.** Assumed by EIA to be 5.800 million Btu per barrel or equal to the thermal conversion factor for crude oil produced in the United States. See **Crude Oil Production**.

**Crude Oil Imports.** Calculated annually by EIA as the average of the thermal conversion factors for each type of crude oil imported weighted by the quantities imported. Thermal conversion factors for each type were calculated on a foreign country basis, by determining the average American Petroleum Institute (API) gravity of crude oil imported from each foreign country from Form ERA-60 in 1977 and converting average API gravity to average Btu content by using National Bureau of Standards, Miscellaneous Publication No. 97, *Thermal Properties of Petroleum Products*, 1933.

**Crude Oil Production.** EIA adopted the thermal conversion factor of 5.800 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950.”

**Distillate Fuel Oil.** EIA adopted the Bureau of Mines thermal conversion factor of 5.825 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950.”

**Ethane.** EIA adopted the Bureau of Mines thermal conversion factor of 3.082 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Ethane-Propane Mixture.** EIA calculation of 3.308 million Btu per barrel based on an assumed mixture of 70 percent ethane and 30 percent propane. See **Ethane** and **Propane**.

**Isobutane.** EIA adopted the Bureau of Mines thermal conversion factor of 3.974 million Btu per barrel as published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Jet Fuel, Kerosene-Type.** EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel for “Jet Fuel, Commercial” as published by the Texas Eastern Transmission Corporation in the report *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics.

**Jet Fuel, Naphtha-Type.** EIA adopted the Bureau of Mines thermal conversion factor of 5.355 million Btu per barrel for “Jet Fuel, Military” as published by the Texas Eastern Transmission Corporation in the report *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics.

**Kerosene.** EIA adopted the Bureau of Mines thermal conversion factor of 5.670 million Btu per barrel as reported in a Bureau of Mines internal memorandum, “Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950.”

**Liquefied Petroleum Gases Consumption.** • 1949–1966: U.S. Department of the Interior, Bureau of Mines, Mineral Industry Surveys, “Crude Petroleum and Petroleum Products, 1956,” Table 4 footnote, constant value of 4.011 million Btu per barrel. • 1967 forward: Calculated annually by EIA as the average of the thermal conversion factors for all liquefied petroleum gases consumed (see Table A1) weighted by the quantities consumed. The component products of liquefied petroleum gases are ethane (including ethylene), propane (including propylene), normal butane (including butylene), butane-propane mixtures, ethane-propane mixtures, and isobutane. For 1967–1980, quantities consumed are from EIA, Energy Data Reports, “Petroleum Statement, Annual,” Table 1. For 1981 forward, quantities consumed are from EIA, *Petroleum Supply Annual*, Table 2.

**Lubricants.** EIA adopted the thermal conversion factor of 6.065 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Miscellaneous Products.** EIA adopted the thermal conversion factor of 5.796 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Motor Gasoline Consumption.** • 1949–1993: EIA adopted the Bureau of Mines thermal conversion factor of 5.253 million Btu per barrel for “Gasoline, Motor Fuel” as published by the Texas Eastern Transmission Corporation in Appendix V of *Competition and Growth in American Energy Markets 1947–1985*, a 1968 release of historical and projected statistics. • 1994 forward: EIA calculated

national annual quantity-weighted average conversion factors for conventional, reformulated, and oxygenated motor gasolines (see Table A3). The factor for conventional motor gasoline is 5.253 million Btu per barrel, as used for previous years. The factors for reformulated and oxygenated gasolines, both currently 5.150 million Btu per barrel, are based on data published in Environmental Protection Agency, Office of Mobile Sources, National Vehicle and Fuel Emissions Laboratory report EPA 420-F-95-003, "Fuel Economy Impact Analysis of Reformulated Gasoline." See **Fuel Ethanol (Denatured)**.

**Natural Gas Plant Liquids Production.** Calculated annually by EIA as the average of the thermal conversion factors for each natural gas plant liquid produced weighted by the quantities produced.

**Natural Gasoline.** EIA adopted the thermal conversion factor of 4.620 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

**Pentanes Plus.** EIA assumed the thermal conversion factor to be 4.620 million Btu or equal to that for natural gasoline. See **Natural Gasoline**.

**Petrochemical Feedstocks, Naphtha less than 401° F.** Assumed by EIA to be 5.248 million Btu per barrel or equal to the thermal conversion factor for special naphthas. See **Special Naphthas**.

**Petrochemical Feedstocks, Other Oils equal to or greater than 401° F.** Assumed by EIA to be 5.825 million Btu per barrel or equal to the thermal conversion factor for distillate fuel oil. See **Distillate Fuel Oil**.

**Petrochemical Feedstocks, Still Gas.** Assumed by EIA to be 6.000 million Btu per barrel or equal to the thermal conversion factor for still gas. See **Still Gas**.

**Petroleum Coke.** EIA adopted the thermal conversion factor of 6.024 million Btu per barrel as reported in Btu per short ton in the Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950." The Bureau of Mines calculated this factor by dividing 30.120 million Btu per short ton, as given in the referenced Bureau of Mines internal memorandum, by 5.0 barrels per short ton, as given in the Bureau of Mines Form 6-1300-M and successor EIA forms.

**Petroleum Consumption, Commercial Sector.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the commercial sector weighted by the estimated quantities consumed by the commercial sector. The quantities of petroleum products consumed by the commercial sector are estimated in the State Energy Data System—see

documentation at  
[http://www.eia.gov/state/seds/sep\\_use/notes/use\\_petrol.pdf](http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf).

**Petroleum Consumption, Electric Power Sector.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the electric power sector weighted by the quantities consumed by the electric power sector. Data are from Form EIA-923, "Power Plant Operations Report," and predecessor forms.

**Petroleum Consumption, Industrial Sector.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the industrial sector weighted by the estimated quantities consumed by the industrial sector. The quantities of petroleum products consumed by the industrial sector are estimated in the State Energy Data System—see documentation at  
[http://www.eia.gov/state/seds/sep\\_use/notes/use\\_petrol.pdf](http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf).

**Petroleum Consumption, Residential Sector.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the residential sector weighted by the estimated quantities consumed by the residential sector. The quantities of petroleum products consumed by the residential sector are estimated in the State Energy Data System—see documentation at  
[http://www.eia.gov/state/seds/sep\\_use/notes/use\\_petrol.pdf](http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf).

**Petroleum Consumption, Total.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed weighted by the quantities consumed.

**Petroleum Consumption, Transportation Sector.** Calculated annually by EIA as the average of the thermal conversion factors for all petroleum products consumed by the transportation sector weighted by the estimated quantities consumed by the transportation sector. The quantities of petroleum products consumed by the transportation sector are estimated in the State Energy Data System—see documentation at  
[http://www.eia.gov/state/seds/sep\\_use/notes/use\\_petrol.pdf](http://www.eia.gov/state/seds/sep_use/notes/use_petrol.pdf).

**Petroleum Products Exports.** Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product exported weighted by the quantities exported.

**Petroleum Products Imports.** Calculated annually by EIA as the average of the thermal conversion factors for each petroleum product imported weighted by the quantities imported.

**Plant Condensate.** Estimated to be 5.418 million Btu per barrel by EIA from data provided by McClanahan Consultants, Inc., Houston, Texas.

**Propane.** EIA adopted the Bureau of Mines thermal conversion factor of 3.836 million Btu per barrel as

published in the *California Oil World and Petroleum Industry*, First Issue, April 1942.

**Residual Fuel Oil.** EIA adopted the thermal conversion factor of 6.287 million Btu per barrel as reported in the Bureau of Mines internal memorandum, "Bureau of Mines Standard Average Heating Values of Various Fuels, Adopted January 3, 1950."

**Road Oil.** EIA adopted the Bureau of Mines thermal conversion factor of 6.636 million Btu per barrel, which was assumed to be equal to that of asphalt (see **Asphalt**) and was first published by the Bureau of Mines in the *Petroleum Statement, Annual, 1970*.

**Special Naphthas.** EIA adopted the Bureau of Mines thermal conversion factor of 5.248 million Btu per barrel, which was assumed to be equal to that of the total gasoline (aviation and motor) factor and was first published in the *Petroleum Statement, Annual, 1970*.

**Still Gas.** EIA adopted the Bureau of Mines estimated thermal conversion factor of 6.000 million Btu per barrel, first published in the *Petroleum Statement, Annual, 1970*.

**Total Petroleum Exports.** Calculated annually by EIA as the average of the thermal conversion factors for crude oil and each petroleum product exported weighted by the quantities exported. See **Crude Oil Exports** and **Petroleum Products Exports**.

**Total Petroleum Imports.** Calculated annually by EIA as the average of the thermal conversion factors for each type of crude oil and petroleum product imported weighted by the quantities imported. See **Crude Oil Imports** and **Petroleum Products Imports**.

**Unfinished Oils.** EIA assumed the thermal conversion factor to be 5.825 million Btu per barrel or equal to that for distillate fuel oil (see **Distillate Fuel Oil**) and first published it in EIA's *Annual Report to Congress, Volume 3, 1977*.

**Unfractionated Stream.** EIA assumed the thermal conversion factor to be 5.418 million Btu per barrel or equal to that for plant condensate (see **Plant Condensate**) and first published it in EIA's *Annual Report to Congress, Volume 2, 1981*.

**Waxes.** EIA adopted the thermal conversion factor of 5.537 million Btu per barrel as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*.

## Approximate Heat Content of Biofuels

**Biodiesel.** EIA estimated the thermal conversion factor for biodiesel to be 5.359 million Btu per barrel, or 17,253 Btu per pound.

**Biodiesel Feedstock.** EIA used soybean oil input to the production of biodiesel (million Btu soybean oil per barrel biodiesel) as the factor to estimate total biomass inputs to the production of biodiesel. EIA assumed that 7.65 pounds of soybean oil are needed to produce one gallon of biodiesel, and 5.433 million Btu of soybean oil are needed to produce one barrel of biodiesel. EIA also assumed that soybean oil has a gross heat content of 16,909 Btu per pound, or 5.483 million Btu per barrel.

**Ethanol (Undenatured).** EIA adopted the thermal conversion factor of 3.539 million Btu per barrel published in "Oxygenate Flexibility for Future Fuels," a paper presented by William J. Piel of the ARCO Chemical Company at the National Conference on Reformulated Gasolines and Clean Air Act Implementation, Washington, D.C., October 1991.

**Fuel Ethanol (Denatured).** • 1981–2008: EIA used the 2009 factor. • 2009 forward: Calculated by EIA as the annual quantity-weighted average of the thermal conversion factors for undenatured ethanol (3.539 million Btu per barrel), pentanes plus used as denaturant (4.620 million Btu per barrel), and conventional motor gasoline and motor gasoline blending components used as denaturant (5.253 million Btu per barrel). The quantity of ethanol consumed is from EIA's *Petroleum Supply Annual (PSA)* and *Petroleum Supply Monthly (PSM)*, Table 1, data for renewable fuels and oxygenate plant net production of fuel ethanol. The quantity of pentanes plus used as denaturant is from PSA/PSM, Table 1, data for renewable fuels and oxygenate plant net production of pentanes plus, multiplied by -1. The quantity of conventional motor gasoline and motor gasoline blending components used as denaturant is from PSA/PSM, Table 1, data for renewable fuels and oxygenate plant net production of conventional motor gasoline and motor gasoline blending components, multiplied by -1.

**Fuel Ethanol Feedstock.** EIA used corn input to the production of undenatured ethanol (million Btu corn per barrel undenatured ethanol) as the annual factor to estimate total biomass inputs to the production of undenatured ethanol. U.S. Department of Agriculture observed ethanol yields (gallons undenatured ethanol per bushel of corn) were 2.5 in 1980, 2.666 in 1998, 2.68 in 2002, and 2.764 in 2009; EIA estimated the ethanol yields in other years. EIA also assumed that corn has a gross heat content of 0.392 million Btu per bushel.

## Approximate Heat Content of Natural Gas

**Natural Gas Consumption, Electric Power Sector.** Calculated annually by EIA by dividing the heat content of natural gas consumed by the electric power sector by the quantity consumed. Data are from Form EIA-923, “Power Plant Operations Report,” and predecessor forms.

**Natural Gas Consumption, End-Use Sectors.** Calculated annually by EIA by dividing the heat content of natural gas consumed by the end-use sectors (residential, commercial, industrial, and transportation) by the quantity consumed. Data are from Form EIA-176, “Annual Report of Natural and Supplemental Gas Supply and Disposition.”

**Natural Gas Consumption, Total.** • 1949–1962: EIA adopted the thermal conversion factor of 1,035 Btu per cubic foot as estimated by the Bureau of Mines and first published in the *Petroleum Statement, Annual, 1956*. • 1963–1979: EIA adopted the thermal conversion factor calculated annually by the American Gas Association (AGA) and published in *Gas Facts*, an AGA annual publication. • 1980 forward: Calculated annually by EIA by dividing the total heat content of natural gas consumed by the total quantity consumed.

**Natural Gas Exports.** • 1949–1972: Assumed by EIA to be equal to the thermal conversion factor for dry natural gas consumed (see **Natural Gas Consumption, Total**). • 1973 forward: Calculated annually by EIA by dividing the heat content of natural gas exported by the quantity exported. For 1973–1995, data are from Form FPC-14, “Annual Report for Importers and Exporters of Natural Gas.” Beginning in 1996, data are from U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports*.

**Natural Gas Imports.** • 1949–1972: Assumed by EIA to be equal to the thermal conversion factor for dry natural gas consumed (see **Natural Gas Consumption, Total**). • 1973 forward: Calculated annually by EIA by dividing the heat content of natural gas imported by the quantity imported. For 1973–1995, data are from Form FPC-14, “Annual Report for Importers and Exporters of Natural Gas.” Beginning in 1996, data are from U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports*.

**Natural Gas Production, Dry.** Assumed by EIA to be equal to the thermal conversion factor for dry natural gas consumed. See **Natural Gas Consumption, Total**.

**Natural Gas Production, Marketed.** Calculated annually by EIA by dividing the heat content of dry natural gas produced (see **Natural Gas Production, Dry**) and natural gas plant liquids produced (see **Natural Gas Plant Liquids Production**) by the total quantity of marketed natural gas produced.

## Approximate Heat Content of Coal and Coal Coke

**Coal Coke Imports and Exports.** EIA adopted the Bureau of Mines estimate of 24.800 million Btu per short ton.

**Coal Consumption, Electric Power Sector.** Calculated annually by EIA by dividing the heat content of coal consumed by the electric power sector by the quantity consumed. Data are from Form EIA-923, “Power Plant Operations Report,” and predecessor forms.

### Coal Consumption, Industrial Sector, Coke Plants

- 1949–2012: Calculated annually by EIA based on the reported volatility (low, medium, or high) of coal received by coke plants. (For 2012, 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.
- 2013 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).

## 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
<b>Mass</b>	1 short ton (2,000 lb)	=	0.907 184 7 metric tons (t)
	1 long ton	=	1.016 047 metric tons (t)
	1 pound (lb)	=	0.453 592 37 <sup>a</sup> kilograms (kg)
	1 pound uranium oxide (lb U <sub>3</sub> O <sub>8</sub> )	=	0.384 647 <sup>b</sup> kilograms uranium (kgU)
	1 ounce, avoirdupois (avdp oz)	=	28.349 52 grams (g)
<b>Volume</b>	1 barrel of oil (bbl)	=	0.158 987 3 cubic meters (m <sup>3</sup> )
	1 cubic yard (yd <sup>3</sup> )	=	0.764 555 cubic meters (m <sup>3</sup> )
	1 cubic foot (ft <sup>3</sup> )	=	0.028 316 85 cubic meters (m <sup>3</sup> )
	1 U.S. gallon (gal)	=	3.785 412 liters (L)
	1 ounce, fluid (fl oz)	=	29.573 53 milliliters (mL)
	1 cubic inch (in <sup>3</sup> )	=	16.387 06 milliliters (mL)
<b>Length</b>	1 mile (mi)	=	1.609 344 <sup>a</sup> kilometers (km)
	1 yard (yd)	=	0.914 4 <sup>a</sup> meters (m)
	1 foot (ft)	=	0.304 8 <sup>a</sup> meters (m)
	1 inch (in)	=	2.54 <sup>a</sup> centimeters (cm)
<b>Area</b>	1 acre	=	0.404 69 hectares (ha)
	1 square mile (mi <sup>2</sup> )	=	2.589 988 square kilometers (km <sup>2</sup> )
	1 square yard (yd <sup>2</sup> )	=	0.836 127 4 square meters (m <sup>2</sup> )
	1 square foot (ft <sup>2</sup> )	=	0.092 903 04 <sup>a</sup> square meters (m <sup>2</sup> )
	1 square inch (in <sup>2</sup> )	=	6.451 6 <sup>a</sup> square centimeters (cm <sup>2</sup> )
<b>Energy</b>	1 British thermal unit (Btu) <sup>c</sup>	=	1,055.055 852 62 <sup>a</sup> joules (J)
	1 calorie (cal)	=	4.186 8 <sup>a</sup> joules (J)
	1 kilowatthour (kWh)	=	3.6 <sup>a</sup> megajoules (MJ)
<b>Temperature<sup>d</sup></b>	32 degrees Fahrenheit (°F)	=	0 <sup>a</sup> degrees Celsius (°C)
	212 degrees Fahrenheit (°F)	=	100 <sup>a</sup> degrees Celsius (°C)

<sup>a</sup>Exact conversion.<sup>b</sup>Calculated by the U.S. Energy Information Administration.<sup>c</sup>The Btu used in this table is the International Table Btu adopted by the Fifth International Conference on Properties of Steam, London, 1956.<sup>d</sup>To convert degrees Fahrenheit (°F) to degrees Celsius (°C) exactly, subtract 32, then multiply by 5/9.

Notes: • Spaces have been inserted after every third digit to the right of the decimal for ease of reading. • Most metric units belong to the International System of Units (SI), and the liter, hectare, and metric ton are accepted for use with the SI units. For more information about the SI units, see <http://physics.nist.gov/cuu/Units/index.html>.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#appendices>.

Sources: • General Services Administration, Federal Standard 376B, *Preferred Metric Units for General Use by the Federal Government* (Washington, DC, January 1993), pp. 9-11, 13, and 16. • U.S. Department of Commerce, National Institute of Standards and Technology, Special Publications 330, 811, and 814. • American National Standards Institute/Institute of Electrical and Electronic Engineers, ANSI/IEEE Std 268-1992, pp. 28 and 29.

**Table B2. Metric Prefixes**

<b>Unit Multiple</b>	<b>Prefix</b>	<b>Symbol</b>	<b>Unit Subdivision</b>	<b>Prefix</b>	<b>Symbol</b>
$10^1$	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	$\mu$
$10^9$	giga	G	$10^{-9}$	nano	n
$10^{12}$	tera	T	$10^{-12}$	pico	p
$10^{15}$	petra	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**

<b>Energy Source</b>	<b>Original Unit</b>		<b>Equivalent in Final Units</b>	
<b>Petroleum</b>	1 barrel (bbl)	=	42 <sup>a</sup>	U.S. gallons (gal)
<b>Coal</b>	1 short ton	=	2,000 <sup>a</sup>	pounds (lb)
	1 long ton	=	2,240 <sup>a</sup>	pounds (lb)
	1 metric ton (t)	=	1,000 <sup>a</sup>	kilograms (kg)
<b>Wood</b>	1 cord (cd)	=	1.25 <sup>b</sup>	shorts tons
	1 cord (cd)	=	128 <sup>a</sup>	cubic feet ( $\text{ft}^3$ )

<sup>a</sup>Exact conversion.<sup>b</sup>Calculated by the U.S. Energy Information Administration.Web Page: <http://www.eia.gov/totalenergy/data/monthly/#appendices>.Source: U.S. Department of Commerce, National Institute of Standards and Technology, *Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, NIST Handbook 44, 1994 Edition (Washington, DC, October 1993), pp. B-10, C-17 and C-21.

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# Glossary

**Alcohol:** The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a **hydrocarbon** plus a hydroxyl group; CH(3)-(CH(2))<sub>n</sub>-OH (e.g., **methanol**, **ethanol**, and tertiary butyl alcohol). See **Fuel Ethanol**.

**Alternative Fuel:** Alternative fuels, for transportation applications, include the following: **methanol**; denatured **ethanol**, and other **alcohols**; fuel mixtures containing 85 percent or more by volume of methanol, denatured ethanol, and other alcohols with **motor gasoline** or other fuels; **natural gas**; **liquefied petroleum gas (propane)**; **hydrogen**; **coal**-derived liquid fuels; fuels (other than alcohol) derived from biological materials (**biofuels** such as soy **diesel fuel**); **electricity** (including electricity from **solar energy**); and "... any other fuel the Secretary determines, by rule, is substantially not **petroleum** and would yield substantial energy security benefits and substantial environmental benefits." The term "alternative fuel" does not include alcohol or other blended portions of primarily petroleum-based fuels used as **oxygenates** or extenders, i.e., **MTBE**, **ETBE**, other ethers, and the 10-percent ethanol portion of **gasohol**.

**Alternative-Fuel Vehicle (AFV):** A vehicle designed to operate on an **alternative fuel** (e.g., compressed **natural gas**, **methane** blend, or **electricity**). The vehicle could be either a dedicated vehicle designed to operate exclusively on alternative fuel or a nondedicated vehicle designed to operate on alternative fuel and/or a traditional fuel.

**Anthracite:** The highest rank of **coal**; used primarily for residential and commercial space heating. It is a hard, brittle, and black lustrous coal, often referred to as hard coal, containing a high percentage of fixed carbon and a low percentage of volatile matter. The moisture content of fresh-mined anthracite generally is less than 15 percent. The heat content of anthracite ranges from 22 to 28 million **Btu** per **short ton** on a moist, mineral-matter-free basis. The heat content of anthracite coal consumed in the United States averages 25 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter). *Note:* Since the 1980's, anthracite refuse or mine waste has been used for steam-electric power generation. This fuel typically has a heat content of 15 million Btu per ton or less.

**Anthropogenic:** Made or generated by a human or caused by human activity. The term is used in the context of global **climate change** to refer to gaseous emissions that are the result of human activities, as well as other potentially climate-altering activities, such as deforestation.

**Asphalt:** A dark-brown-to-black cement-like material containing bitumens as the predominant constituents obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts.

**ASTM:** The American Society for Testing and Materials.

**Aviation Gasoline Blending Components:** Naphthas that will be used for blending or compounding into finished aviation gasoline (e.g., straight run gasoline, alkylate, reformate, benzene, toluene, and xylene). Excludes oxygenates (alcohols, ethers), butane, and pentanes plus.

**Aviation Gasoline, Finished:** A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in aviation reciprocating engines. Fuel specifications are provided in ASTM Specification D 910 and Military Specification MIL-G-5572. *Note:* Data on blending components are not counted in data on finished aviation gasoline.

**Barrel (Petroleum):** A unit of volume equal to 42 U.S. Gallons.

**Base Gas:** The quantity of **natural gas** needed to maintain adequate reservoir pressures and deliverability rates throughout the withdrawal season. Base gas usually is not withdrawn and remains in the reservoir. All natural gas native to a depleted reservoir is included in the base gas volume.

**Biodiesel:** A fuel typically made from soybean, canola, or other vegetable oils; animal fats; and recycled grease. It can serve as a substitute for **petroleum**-derived **diesel fuel** or **distillate fuel oil**. For U.S. Energy Information Administration reporting, it is a fuel composed of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats, designated B100, and meeting the requirements of ASTM (American Society for Testing & Materials) D 6751.

**Biofuels:** Liquid fuels and blending components produced from **biomass** (plant) feedstocks, used primarily for transportation. See **Biodiesel** and **Fuel Ethanol**.

**Biogenic:** Produced by biological processes of living organisms. Note: EIA uses the term "biogenic" to refer only to organic nonfossil material of biological origin.

**Biomass:** Organic non-fossil material of biological origin constituting a **renewable energy** source. See **Biodiesel**,

## **Biofuels, Biomass Waste, Fuel Ethanol, and Wood and Wood-Derived Fuels.**

**Biomass Waste:** Organic non-fossil material of biological origin that is a byproduct or a discarded product. "Biomass waste" includes municipal solid waste from **biogenic** sources, landfill gas, sludge waste, agricultural crop byproducts, straw, and other **biomass** solids, liquids, and gases; but excludes **wood and wood-derived fuels** (including **black liquor**), **biofuels** feedstock, **biodiesel**, and **fuel ethanol**. Note: EIA "biomass waste" data also include energy crops grown specifically for energy production, which would not normally constitute waste.

**Bituminous Coal:** A dense **coal**, usually black, sometimes dark brown, often with well-defined bands of bright and dull material, used primarily as fuel in steam-electric power generation, with substantial quantities also used for heat and power applications in manufacturing and to make **coke**. Bituminous coal is the most abundant coal in active U.S. mining regions. Its moisture content usually is less than 20 percent. The heat content of bituminous coal ranges from 21 to 30 million **Btu** per **short ton** on a moist, mineral-matter-free basis. The heat content of bituminous coal consumed in the United States averages 24 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Black Liquor:** A byproduct of the paper production process, alkaline spent liquor, that can be used as a source of energy. Alkaline spent liquor is removed from the digesters in the process of chemically pulping wood. After evaporation, the residual "black" liquor is burned as a fuel in a recovery furnace that permits the recovery of certain basic chemicals.

**British Thermal Unit (Btu):** The quantity of heat required to raise the temperature of 1 pound of liquid water by 1 degree Fahrenheit at the temperature at which water has its greatest density (approximately 39 degrees Fahrenheit). See **Heat Content**.

**Btu:** See **British Thermal Unit**.

**Btu Conversion Factor:** A factor for converting **energy** data between one unit of measurement and **British thermal units (Btu)**. Btu conversion factors are generally used to convert energy data from physical units of measure (such as **barrels**, **cubic feet**, or **short tons**) into the energy-equivalent measure of Btu. (See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for further information on Btu conversion factors.)

**Butane:** A normally gaseous straight-chain or branched-chain hydrocarbon ( $C_4H_{10}$ ). It is extracted from natural gas or refinery gas streams. It includes isobutane and normal butane and is designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial butane.

**Isobutane:** A normally gaseous branched-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams.

**Normal Butane:** A normally gaseous straight-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 31.1° F. It is extracted from natural gas or refinery gas streams.

**Butylene:** An olefinic hydrocarbon ( $C_4H_8$ ) recovered from refinery processes.

**Capacity Factor:** The ratio of the electrical energy produced by a generating unit for a given period of time to the electrical energy that could have been produced at continuous full-power operation during the same period.

**Carbon Dioxide ( $CO_2$ ):** A colorless, odorless, non-poisonous gas that is a normal part of Earth's atmosphere. Carbon dioxide is a product of **fossil-fuel** combustion as well as other processes. It is considered a **greenhouse gas** as it traps heat (infrared energy) radiated by the Earth into the atmosphere and thereby contributes to the potential for **global warming**. The **global warming potential** (GWP) of other greenhouse gases is measured in relation to that of carbon dioxide, which by international scientific convention is assigned a value of one (1).

**Chained Dollars:** A measure used to express **real prices**. Real prices are those that have been adjusted to remove the effect of changes in the purchasing power of the dollar; they usually reflect buying power relative to a reference year. Prior to 1996, real prices were expressed in constant dollars, a measure based on the weights of goods and services in a single year, usually a recent year. In 1996, the U.S. Department of Commerce introduced the chained-dollar measure. The new measure is based on the average weights of goods and services in successive pairs of years. It is "chained" because the second year in each pair, with its weights, becomes the first year of the next pair. The advantage of using the chained-dollar measure is that it is more closely related to any given period and is therefore subject to less distortion over time.

**CIF:** See **Cost, Insurance, Freight**.

**Citygate:** A point or measuring station at which a distribution gas utility receives gas from a **natural gas** pipeline company or transmission system.

**Climate Change:** A term used to refer to all forms of climatic inconsistency, but especially to significant change from one prevailing climatic condition to another. In some cases, "climate change" has been used synonymously with the term "**global warming**"; scientists, however, tend to use the term in a wider sense inclusive of natural changes in climate, including climatic cooling.

**Coal:** A readily combustible black or brownish-black rock whose composition, including inherent moisture, consists of more than 50 percent by weight and more than 70 percent by volume of carbonaceous material. It is formed from plant remains that have been compacted, hardened, chemically altered, and metamorphosed by heat and pressure over geologic time. See **Anthracite**, **Bituminous Coal**, **Lignite**, **Subbituminous Coal**, **Waste Coal**, and **Coal Synfuel**.

**Coal Coke:** See **Coke, Coal**.

**Coal Stocks:** Coal quantities that are held in storage for future use and disposition. Note: When coal data are collected for a particular reporting period (month, quarter, or year), coal stocks are commonly measured as of the last day of the period.

**Coal Synfuel:** Coal-based solid fuel that has been processed by a **coal synfuel plant**; and coal-based fuels such as briquettes, pellets, or extrusions, which are formed from fresh or recycled coal and binding materials.

**Coal Synfuel Plant:** A plant engaged in the chemical transformation of **coal** into **coal synfuel**.

**Coke, Coal:** A solid carbonaceous residue derived from low-ash, low-sulfur bituminous coal from which the volatile constituents are driven off by baking in an oven at temperatures as high as 2,000° F so that the fixed carbon and residual ash are fused together. Coke is used as a fuel and as a reducing agent in smelting iron ore in a blast furnace. Coke (coal) has a heating value of 24.8 million Btu per ton.

**Coke, Petroleum:** A residue high in carbon content and low in hydrogen that is the final product of thermal decomposition in the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion is 5 barrels (42 U.S. gallons each) per short ton. Coke (petroleum) has a heating value of 6.024 million Btu per barrel.

**Coking Coal:** Bituminous coal suitable for making coke. See **Coke, Coal**.

**Combined-Heat-and-Power (CHP) Plant:** A plant designed to produce both heat and electricity from a single heat source. Note: This term is being used in place of the term "cogenerator" that was used by EIA in the past. CHP better describes the facilities because some of the plants included do not produce heat and power in a sequential fashion and, as a result, do not meet the legal definition of cogeneration specified in the Public Utility Regulatory Policies Act (PURPA).

**Commercial Sector:** An energy-consuming sector that consists of service-providing facilities and equipment of businesses; federal, state, and local governments; and other private and public organizations, such as religious,

social, or fraternal groups. The commercial sector includes institutional living quarters. It also includes sewage treatment facilities. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a wide variety of other equipment. Note: This sector includes generators that produce electricity and/or useful thermal output primarily to support the activities of the above-mentioned commercial establishments. Various EIA programs differ in sectoral coverage—for more information see <http://www.eia.gov/neic/datadefinitions/Guideforwebcom.htm>. See **End-Use Sectors** and **Energy-Use Sectors**.

**Completion:** The installation of permanent equipment for the production of oil or gas. If a well is equipped to produce only oil or gas from one zone or reservoir, the definition of a well (classified as an oil well or gas well) and the definition of a completion are identical. However, if a well is equipped to produce oil and/or gas separately from more than one reservoir, a well is not synonymous with a completion.

**Conventional Hydroelectric Power:** Hydroelectric power generated from flowing water that is not created by **hydroelectric pumped storage**.

**Conventional Motor Gasoline:** See **Motor Gasoline Conventional**.

**Conversion Factor:** A factor for converting data between one unit of measurement and another (such as between **short tons** and **British thermal units**, or between **barrels** and gallons). (See <http://www.eia.gov/totalenergy/data/monthly/#appendices> for further information on conversion factors.) See **Btu Conversion Factor** and **Thermal Conversion Factor**.

**Cost, Insurance, Freight (CIF):** A sales transaction in which the seller pays for the transportation and insurance of the goods to the port of destination specified by the buyer.

**Crude Oil:** A mixture of hydrocarbons that exists in liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Depending upon the characteristics of the crude stream, it may also include: 1) small amounts of hydrocarbons that exist in gaseous phase in natural underground reservoirs but are liquid at atmospheric pressure after being recovered from oil well (casinghead) gas in lease separators and are subsequently commingled with the crude stream without being separately measured. Lease condensate recovered as a liquid from natural gas wells in lease or field separation facilities and later mixed into the crude stream is also included; 2) small amounts of nonhydrocarbons produced with the oil, such as sulfur and various metals; and 3) drip gases, and liquid hydrocarbons produced from tar sands, oil sands, gilsonite, and oil shale.

Liquids produced at natural gas processing plants are excluded. Crude oil is refined to produce a wide array of petroleum products, including heating oils; gasoline, diesel and jet fuels; lubricants; asphalt; ethane, propane, and butane; and many other products used for their energy or chemical content.

**Crude Oil F.O.B. Price:** The crude oil price actually charged at the oil-producing country's port of loading. Includes deductions for any rebates and discounts or additions of premiums, where applicable. It is the actual price paid with no adjustment for credit terms.

**Crude Oil (Including Lease Condensate):** A mixture of hydrocarbons that exists in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale. Drip gases are also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Where identifiable, liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded.

**Crude Oil Landed Cost:** The price of crude oil at the port of discharge, including charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. The cost does not include charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage).

**Crude Oil Refinery Input:** The total crude oil put into processing units at refineries.

**Crude Oil Stocks:** Stocks of crude oil and lease condensate held at refineries, in pipelines, at pipeline terminals, and on leases.

**Crude Oil Used Directly:** Crude oil consumed as fuel by crude oil pipelines and on crude oil leases.

**Crude Oil Well:** A well completed for the production of crude oil from one or more oil zones or reservoirs. Wells producing both crude oil and natural gas are classified as oil wells.

**Cubic Foot (Natural Gas):** A unit of volume equal to 1 cubic foot at a pressure base of 14.73 pounds standard per square inch absolute and a temperature base of 60° F.

**Degree-Day Normals:** Simple arithmetic averages of monthly or annual degree-days over a long period of time (usually the 30-year period 1961-1990). The averages may be simple degree-day normals or population-weighted degree-day normals.

**Degree-Days, Cooling (CDD):** A measure of how warm a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees

Fahrenheit. The measure is computed for each day by subtracting the base temperature (65 degrees) from the average of the day's high and low temperatures, with negative values set equal to zero. Each day's cooling degree-days are summed to create a cooling degree-day measure for a specified reference period. Cooling degree-days are used in energy analysis as an indicator of air conditioning energy requirements or use.

**Degree-Days, Heating (HDD):** A measure of how cold a location is over a period of time relative to a base temperature, most commonly specified as 65 degrees Fahrenheit. The measure is computed for each day by subtracting the average of the day's high and low temperatures from the base temperature (65 degrees), with negative values set equal to zero. Each day's heating degree-days are summed to create a heating degree-day measure for a specified reference period. Heating degree-days are used in energy analysis as an indicator of space heating energy requirements or use.

**Degree-Days, Population-Weighted:** Heating or cooling degree-days weighted by the population of the area in which the degree-days are recorded. To compute state population-weighted degree-days, each state is divided into from one to nine climatically homogeneous divisions, which are assigned weights based on the ratio of the population of the division to the total population of the state. Degree-day readings for each division are multiplied by the corresponding population weight for each division and those products are then summed to arrive at the state population-weighted degree-day figure. To compute national population-weighted degree-days, the nation is divided into nine Census regions, each comprising from three to eight states, which are assigned weights based on the ratio of the population of the region to the total population of the nation. Degree-day readings for each region are multiplied by the corresponding population weight for each region and those products are then summed to arrive at the national population-weighted degree-day figure.

**Denaturant:** Petroleum, typically **pentanes plus** or **conventional motor gasoline**, added to **fuel ethanol** to make it unfit for human consumption. Fuel ethanol is denatured, usually prior to transport from the ethanol production facility, by adding 2 to 5 volume percent denaturant. See **Fuel Ethanol** and **Fuel Ethanol Minus Denaturant**.

**Design Electrical Rating, Net:** The nominal net electrical output of a nuclear unit as specified by the electric utility for the purpose of plant design.

**Development Well:** A well drilled within the proved area of an oil or gas reservoir to the depth of a stratigraphic horizon known to be productive.

**Diesel Fuel:** A fuel composed of **distillate fuel oils** obtained in petroleum refining operation or blends of such

distillate fuel oils with **residual fuel oil** used in motor vehicles. The boiling point and specific gravity are higher for diesel fuels than for gasoline.

**Direct Use:** Use of electricity that 1) is self-generated, 2) is produced by either the same entity that consumes the power or an affiliate, and 3) is used in direct support of a service or industrial process located within the same facility or group of facilities that house the generating equipment. Direct use is exclusive of **station use**.

**Distillate Fuel Oil:** A general classification for one of the **petroleum** fractions produced in conventional distillation operations. It includes **diesel fuels** and fuel oils. Products known as No. 1, No. 2, and No. 4 diesel fuel are used in on-highway diesel engines, such as those in trucks and automobiles, as well as off-highway engines, such as those in railroad locomotives and agricultural machinery. Products known as No. 1, No. 2, and No. 4 fuel oils are used primarily for space heating and **electricity generation**.

**Dry Hole:** An exploratory or development well found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well.

**Dry Natural Gas Production:** See **Natural Gas (Dry Production)**.

**E85:** A fuel containing a mixture of 85 percent **ethanol** and 15 percent **motor gasoline**.

**Electric Power Plant:** A station containing prime movers, electric generators, and auxiliary equipment for converting mechanical, chemical, and/or fission energy into electric energy.

**Electric Power Sector:** An energy-consuming sector that consists of electricity-only and combined-heat-and-power (CHP) plants whose primary business is to sell electricity, or electricity and heat, to the public-i.e., North American Industry Classification System 22 plants. See also **Combined-Heat-and-Power (CHP) Plant**, **Electricity-Only Plant**, **Electric Utility**, and **Independent Power Producer**.

**Electric Utility:** Any entity that generates, transmits, or distributes **electricity** and recovers the cost of its generation, transmission or distribution assets and operations, either directly or indirectly, through cost-based rates set by a separate regulatory authority (e.g., State Public Service Commission), or is owned by a governmental unit or the consumers that the entity serves. Examples of these entities include: investor-owned entities, public power districts, public utility districts, municipalities, rural electric cooperatives, and state and federal agencies. Electric utilities may have Federal Energy Regulatory Commission approval for interconnection agreements and wholesale trade tariffs covering either cost-of-service and/or market-based rates under the authority of the Federal Power Act. See **Electric Power Sector**.

**Electrical System Energy Losses:** The amount of energy lost during generation, transmission, and distribution of electricity, including plant and unaccounted-for uses.

**Electricity:** A form of energy characterized by the presence and motion of elementary charged particles generated by friction, induction, or chemical change.

**Electricity Generation:** The process of producing electric energy, or the amount of electric energy produced by transforming other forms of energy, commonly expressed in **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 kilowatthours, while heat energy is usually measured in British thermal units.

**Energy Consumption:** The use of energy as a source of heat or power or as an input in the manufacturing process.

**Energy Service Provider:** An energy entity that provides service to a retail or end-use customer.

**Energy-Use Sectors:** A group of major energy-consuming components of U.S. society developed to measure and analyze energy use. The sectors most commonly referred to in EIA are: **residential**, **commercial**, **industrial**, **transportation**, and **electric power**.

**Ethane:** A normally gaseous straight-chain hydrocarbon ( $C_2H_6$ ). It is a colorless, paraffinic gas that boils at a temperature of  $-127.48^{\circ} F$ . It is extracted from natural gas and refinery gas streams.

**Ethanol ( $C_2H_5OH$ ):** A clear, colorless, flammable **alcohol**. Ethanol is typically produced biologically from **biomass** feedstocks such as agricultural crops and cellulosic residues from agricultural crops or wood. Ethanol can also be produced chemically from **ethylene**. See **Biomass, Fuel Ethanol, and Fuel Ethanol Minus Denaturant**.

**Ethylene:** An olefinic hydrocarbon ( $C_2H_4$ ) recovered from refinery processes or petrochemical processes.

**Exploratory Well:** A well drilled to find and produce oil or gas in an area previously considered an unproductive area, to find a new reservoir in a known field (i.e., one previously found to be producing oil or gas in another reservoir), or to extend the limit of a known oil or gas reservoir.

**Exports:** Shipments of goods from within the 50 states and the District of Columbia to U.S. possessions and territories or to foreign countries.

**Federal Energy Administration (FEA):** A predecessor of the U.S. Energy Information Administration.

**Federal Energy Regulatory Commission (FERC):** The Federal agency with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates, and gas pipeline certification. FERC is an independent regulatory agency within the U.S. Department of Energy and is the successor to the Federal Power Commission.

**Federal Power Commission (FPC):** The predecessor agency of the Federal Energy Regulatory Commission. The Federal Power Commission was created by an Act of Congress under the Federal Water Power Act on June 10, 1920. It was charged originally with regulating the electric power and natural gas industries. It was abolished on September 30, 1977, when the U.S. Department of Energy was created. Its functions were divided between the U.S. Department of Energy and the Federal Energy Regulatory Commission, an independent regulatory agency.

**First Purchase Price:** The price for domestic crude oil reported by the company that owns the crude oil the first time it is removed from the lease boundary.

**Flared Natural Gas:** **Natural gas** burned in flares on the base site or at gas processing plants.

**F.O.B. (Free on Board):** A sales transaction in which the seller makes the product available for pick up at a specified port or terminal at a specified price and the buyer pays for the subsequent transportation and insurance.

**Footage Drilled:** Total footage for wells in various categories, as reported for any specified period, includes (1) the deepest total depth (length of well bores) of all wells drilled from the surface, (2) the total of all bypassed footage drilled in connection with reported wells, and (3) all new footage drilled for directional sidetrack wells. Footage reported for directional sidetrack wells does not include footage in the common bore, which is reported as footage for the original well. In the case of old wells drilled deeper, the reported footage is that which was drilled below the total depth of the old well.

**Former U.S.S.R.:** See **Union of Soviet Socialist Republics (U.S.S.R.)**.

**Fossil Fuel:** An energy source formed in the Earth's crust from decayed organic material, such as **petroleum, coal, and natural gas**.

**Fossil-Fueled Steam-Electric Power Plant:** An electricity generation plant in which the prime mover is a turbine rotated by high-pressure steam produced in a boiler by heat from burning fossil fuels.

**Fuel Ethanol:** **Ethanol** intended for fuel use. Fuel ethanol in the United States must be anhydrous (less than 1 percent water). Fuel ethanol is denatured (made unfit for human consumption), usually prior to transport from the ethanol production facility, by adding 2 to 5 volume percent petroleum, typically **pentanes plus or conventional motor gasoline**. Fuel ethanol is used principally for blending in low concentrations with **motor gasoline** as an **oxygenate** or octane enhancer. In high concentrations, it is used to fuel **alternative-fuel vehicles** specially designed for its use. See **Alternative-Fuel Vehicle, Denaturant, E85, Ethanol, Fuel Ethanol Minus Denaturant, and Oxygenates**.

**Fuel Ethanol Minus Denaturant:** An unobserved quantity of anhydrous, **biomass**-derived, undenatured **ethanol** for fuel use. The quantity is obtained by subtracting the estimated **denaturant** volume from **fuel ethanol** volume. Fuel ethanol minus denaturant is counted as **renewable energy**, while denaturant is counted as **nonrenewable fuel**. See **Denaturant, Ethanol, Fuel Ethanol, Nonrenewable Fuels, Oxygenates, and Renewable Energy**.

**Full-Power Operation:** Operation of a nuclear generating unit at 100 percent of its design capacity. Full-power operation precedes commercial operation.

**Gasohol:** A blend of finished motor gasoline containing alcohol (generally **ethanol** but sometimes methanol) at a concentration between 5.7 percent and 10 percent by volume. See **Motor Gasoline, Oxygenated**.

**Gas Well:** A well completed for the production of **natural gas** from one or more gas zones or reservoirs. (Wells

producing both **crude oil** and natural gas are classified as oil wells.)

**Geothermal Energy:** Hot water or steam extracted from geothermal reservoirs in the earth's crust and used for geothermal heat pumps, water heating, or electricity generation.

**Global Warming:** An increase in the near-surface temperature of the Earth. Global warming has occurred in the distant past as the result of natural influences, but the term is today most often used to refer to the warming some scientists predict will occur as a result of increased **anthropogenic** emissions of **greenhouse gases**. See **Climate Change**.

**Global Warming Potential (GWP):** An index used to compare the relative radiative forcing of different gases without directly calculating the changes in atmospheric concentrations. GWPs are calculated as the ratio of the radiative forcing that would result from the emission of one kilogram of a **greenhouse gas** to that from the emission of one kilogram of **carbon dioxide** over a fixed period of time, such as 100 years.

**Greenhouse Gases:** Those gases, such as water vapor, **carbon dioxide**, nitrous oxide, **methane**, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride, that are transparent to solar (short-wave) radiation but opaque to long-wave (infrared) radiation, thus preventing long-wave radiant energy from leaving Earth's atmosphere. The net effect is a trapping of absorbed radiation and a tendency to warm the planet's surface.

**Gross Domestic Product (GDP):** The total value of goods and services produced by labor and property located in the United States. As long as the labor and property are located in the United States, the supplier (that is, the workers and, for property, the owners) may be either U.S. residents or residents of foreign countries.

**GT/IC:** Gas turbine and internal combustion plants.

**Heat Content:** The amount of heat energy available to be released by the transformation or use of a specified physical unit of an energy form (e.g., a ton of coal, a barrel of oil, a kilowatthour of electricity, a cubic foot of natural gas, or a pound of steam). The amount of heat energy is commonly expressed in **British thermal units (Btu)**. *Note:* Heat content of combustible energy forms can be expressed in terms of either gross heat content (higher or upper heating value) or net heat content (lower heating value), depending upon whether or not the available heat energy includes or excludes the energy used to vaporize water (contained in the original energy form or created during the combustion process). The U.S. Energy Information Administration typically uses gross heat content values.

**Heat Rate:** A measure of generating station thermal efficiency commonly stated as **Btu** per **kilowatthour**. *Note:* Heat rates can be expressed as either gross or net heat rates, depending whether the electricity output is gross or net generation. Heat rates are typically expressed as net heat rates.

**Hydrocarbon:** An organic chemical compound of **hydrogen** and carbon in the gaseous, liquid, or solid phase. The molecular structure of hydrocarbon compounds varies from the simplest (**methane**, the primary constituent of **natural gas**) to the very heavy and very complex.

**Hydroelectric Power:** The production of electricity from the kinetic energy of falling water.

**Hydroelectric Power Plant:** A plant in which the turbine generators are driven by falling water.

**Hydroelectric Pumped Storage:** Hydroelectricity that is generated during peak load periods by using water previously pumped into an elevated storage reservoir during off-peak periods when excess generating capacity is available to do so. When additional generating capacity is needed, the water can be released from the reservoir through a conduit to turbine generators located in a power plant at a lower level.

**Hydrogen (H):** The lightest of all gases, hydrogen occurs chiefly in combination with oxygen in water. It also exists in acids, bases, **alcohols**, **petroleum**, and other **hydrocarbons**.

**Imports:** Receipts of goods into the 50 states and the District of Columbia from U.S. possessions and territories or from foreign countries.

**Independent Power Producer:** A corporation, person, agency, authority, or other legal entity or instrumentality that owns or operates facilities for the generation of electricity for use primarily by the public, and that is not an **electric utility**.

**Industrial Sector:** An **energy-consuming** sector that consists of all facilities and equipment used for producing, processing, or assembling goods. The industrial sector encompasses the following types of activity: manufacturing (NAICS codes 31-33); agriculture, forestry, fishing and hunting (NAICS code 11); mining, including oil and gas extraction (NAICS code 21); and construction (NAICS code 23). Overall energy use in this sector is largely for process heat and cooling and powering machinery, with lesser amounts used for facility heating, air conditioning, and lighting. Fossil fuels are also used as raw material inputs to manufactured products. *Note:* This sector includes **generators** that produce **electricity** and/or **useful thermal output** primarily to support the above-mentioned industrial activities. Various EIA programs differ in sectoral coverage—for more information see <http://www.eia.gov/neic/databdefinitions/Guideforwebind.htm>. See **End-Use Sectors** and **Energy-Use Sectors**.

**Injections (Natural Gas):** Natural gas injected into storage reservoirs.

**Isobutane:** A normally gaseous branch-chain hydrocarbon. It is a colorless paraffinic gas that boils at a temperature of 10.9° F. It is extracted from natural gas or refinery gas streams. See **Butane**.

**Isobutylene:** An olefinic hydrocarbon recovered from refinery processes or petrochemical processes.

**Isopentane:** A saturated branched-chain hydrocarbon obtained by fractionation of natural gasoline or isomerization of normal pentane.

**Jet Fuel:** A refined petroleum product used in jet aircraft engines. It includes kerosene-type jet fuel and naphtha-type jet fuel.

**Jet Fuel, Kerosene-Type:** A kerosene-based product with a maximum distillation temperature of 400° F at the 10-percent recovery point and a final maximum boiling point of 572° F. Fuel specifications are provided in ASTM Specification D 1655 and Military Specifications MIL-T-5624P and MIL-T-83133D (Grades JP-5 and JP-8). It is used primarily for commercial turbojet and turboprop aircraft engines.

**Jet Fuel, Naphtha-Type:** A fuel in the heavy naphtha boiling range, with an average gravity of 52.8 degrees API, 20 to 90 percent distillation temperatures of 290° to 470° F and meeting Military Specification MIL-T-5624L (Grade JP-4). It is used by the military for turbojet and turboprop engines.

**Kerosene:** A petroleum distillate having a maximum distillation temperature of 401° F at the 10-percent recovery point, a final boiling point of 572° F, and a minimum flash point of 100° F. Included are the two grades designated in ASTM D3699 (No. 1-K and No. 2-K) and all grades of kerosene called range or stove oil. Kerosene is used in space heaters, cook stoves, and water heaters; it is suitable for use as an illuminant when burned in wick lamps.

**Kilowatt:** A unit of electrical power equal to 1,000 watts.

**Kilowatthour (kWh):** A measure of electricity defined as a unit of work or energy, measured as 1 kilowatt (1,000 watts) of power expended for 1 hour. One kilowatthour is equivalent to 3,412 Btu. See **Watthour**.

**Landed Costs:** The dollar-per-barrel price of crude oil at the port of discharge. Included are the charges associated with the purchase, transporting, and insuring of a cargo from the purchase point to the port of discharge. Not included are charges incurred at the discharge port (e.g., import tariffs or fees, wharfage charges, and demurrage charges).

**Lease and Plant Fuel:** Natural gas used in well, field, and lease operations (such as gas used in drilling operations, heaters, dehydrators, and field compressors) and used as fuel in natural gas processing plants.

**Lease Condensate:** Light liquid hydrocarbons recovered from lease separators or field facilities at associated and non-associated natural gas wells. Mostly pentanes and heavier hydrocarbons. Normally enters the crude oil stream after production.

**Lignite:** The lowest rank of coal, often referred to as brown coal, used almost exclusively as fuel for steam-electric power generation. It is brownish-black and has a high inherent moisture content, sometimes as high as 45 percent. The heat content of lignite ranges from 9 to 17 million Btu per short ton on a moist, mineral-matter-free basis. The heat content of lignite consumed in the United States averages 13 million Btu per short ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Liquefied Natural Gas (LNG):** Natural gas (primarily methane) that has been liquefied by reducing its temperature to -260° F at atmospheric pressure.

**Liquefied Petroleum Gases (LPG):** A group of hydrocarbon gases, primarily propane, normal butane, and isobutane, derived from crude oil refining or natural gas processing. These gases may be marketed individually or mixed. They can be liquefied through pressurization (without requiring cryogenic refrigeration) for convenience of transportation or storage. Excludes ethane and olefins. Note: In some EIA publications, LPG includes ethane and marketed refinery olefin streams, in accordance with definitions used prior to January 2014.

**Low-Power Testing:** The period of time between a nuclear generating unit's initial fuel loading date and the issuance of its operating (full-power) license. The maximum level of operation during that period is 5 percent of the unit's design thermal rating.

**Lubricants:** Substances used to reduce friction between bearing surfaces or as process materials either incorporated into other materials used as processing aids in the manufacturing of other products or as carriers of other materials. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. Excluded are byproducts of lubricating oil refining, such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. Included are all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. Lubricant categories are paraffinic and naphthenic.

**Marketed Production (Natural Gas):** See **Natural Gas Marketed Production**.

**Methane:** A colorless, flammable, odorless, hydrocarbon gas (CH<sub>4</sub>) that is the principal constituent of natural gas. It is also an important source of hydrogen in various industrial processes.

**Methyl Tertiary Butyl Ether (MTBE):** An ether, (CH<sub>3</sub>)<sub>3</sub>COCH<sub>3</sub>, intended for motor gasoline blending. See Oxygenates.

**Methanol:** A light, volatile alcohol (CH<sub>3</sub>OH) eligible for motor gasoline blending. See Oxygenates.

**Miscellaneous Petroleum Products:** All finished petroleum products not classified elsewhere—for example, petroleum, lube refining byproducts (aromatic extracts and tars), absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, and specialty oils.

**Motor Gasoline Blending:** Mechanical mixing of motor gasoline blending components and oxygenates as required, to produce finished motor gasoline. Finished motor gasoline may be further mixed with other motor gasoline blending components or oxygenates, resulting in increased volumes of finished motor gasoline and/or changes in the formulation of finished motor gasoline (e.g., conventional motor gasoline mixed with MTBE to produce oxygenated motor gasoline).

**Motor Gasoline Blending Components:** Naphtha (e.g., straight-run gasoline, alkylate, reformate, benzene, toluene, xylene) used for blending or compounding into finished motor gasoline. These components include reformulated gasoline blendstock (RBOB) but exclude oxygenates (alcohols, ethers), butane, and pentanes plus. Note: oxygenates are reported as individual components and are included in the total for other hydrocarbons, hydrogens, and oxygenates.

**Motor Gasoline, Conventional:** Finished motor gasoline not included in the oxygenated or reformulated motor gasoline categories. Note: This category excludes reformulated gasoline blendstock for oxygenate blending (RBOB) as well as other blendstock. Conventional motor gasoline can be leaded or unleaded; regular, midgrade, or premium. See Motor Gasoline Grades.

**Motor Gasoline, Finished:** A complex mixture of relatively volatile hydrocarbons with or without small quantities of additives, blended to form a fuel suitable for use in spark-ignition. Motor gasoline, as defined in ASTM Specification D-4814 or Federal Specification VV-G-1690C, is characterized as having a boiling range of 122°F to 158°F at the 10-percent recovery point to 365°F to 374°F at the 90-percent recovery point. “Motor gasoline” includes conventional gasoline, all types of oxygenated gasoline including gasohol, and reformulated gasoline, but excludes aviation gasoline. Note: Volumetric data on blending components, as well as oxygenates, are not counted in data on finished motor gasoline until the blending components are blended into the gasoline.

**Motor Gasoline Grades:** The classification of gasoline by octane ratings. Each type of gasoline (conventional, oxygenated, and reformulated) is classified by three grades: regular, midgrade, and premium. Note: Gasoline sales are reported by grade in accordance with their classification at the time of sale. In general, automotive octane requirements are lower at high altitudes. Therefore, in some areas of the United States, such as the Rocky Mountain States, the octane ratings for the gasoline grades may be 2 or more octane points lower.

**Regular Gasoline:** Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 85 and less than 88. Note: Octane requirements may vary by altitude. See Motor Gasoline Grades.

**Midgrade Gasoline:** Gasoline having an antiknock index, i.e., octane rating, greater than or equal to 88 and less than or equal to 90. Note: Octane requirements may vary by altitude. See Motor Gasoline Grades.

**Premium Gasoline:** Gasoline having an antiknock index, i.e., octane rating, greater than 90. Note: Octane requirements may vary by altitude. See Motor Gasoline Grades.

**Motor Gasoline, Oxygenated:** Finished motor gasoline, other than reformulated gasoline, having an oxygen content of 2.7 percent or higher by weight and required by the U.S. Environmental Protection Agency (EPA) to be sold in areas designated by EPA as carbon monoxide (CO) nonattainment areas. Note: Oxygenated gasoline excludes oxygenated fuels program reformulated gasoline (OPRG) and reformulated gasoline blendstock for oxygenate blending (RBOB). Data on gasohol that has at least 2.7 percent oxygen, by weight, and is intended for sale inside CO nonattainment areas are included in data on oxygenated gasoline. Other data on gasohol are included in data on conventional gasoline.

**Motor Gasoline, Reformulated:** Finished motor gasoline formulated for use in motor vehicles, the composition and properties of which meet the requirements of the reformulated gasoline regulations promulgated by the U.S. Environmental Protection Agency under Section 211(k) of the Clean Air Act. Note: This category includes oxygenated fuels program reformulated gasoline (OPRG) but excludes reformulated gasoline blendstock for oxygenate blending (RBOB).

**Motor Gasoline Retail Prices:** Motor gasoline prices calculated each month by the Bureau of Labor Statistics (BLS) in conjunction with the construction of the Consumer Price Index (CPI). Those prices are collected in 85 urban areas selected to represent all urban consumers—about 80 percent of the total U.S. population. The service stations are selected initially, and on a replacement basis, in such a way that they represent the purchasing habits of the CPI population. Service stations in the current sample include those

providing all types of service (i.e., full-, mini-, and self-service).

**Motor Gasoline (Total):** For stock level data, a sum including finished motor gasoline stocks plus stocks of motor gasoline blending components but excluding stocks of oxygenates.

**MTBE:** See **Methyl Tertiary Butyl Ether**.

**NAICS (North American Industry Classification System):** A coding system developed jointly by the United States, Canada, and Mexico to classify businesses and industries according to the type of economic activity in which they are engaged. NAICS replaces the Standard Industrial Classification (SIC) codes. For additional information on NAICS, go to <http://www.census.gov/eos/www/naics/>.

**Naphtha:** A generic term applied to a petroleum fraction with an approximate boiling range between 122 and 400° F.

**Natural Gas:** A gaseous mixture of **hydrocarbon** compounds, primarily **methane**, used as a fuel for **electricity generation** and in a variety of ways in buildings, and as raw material input and fuel for industrial processes.

**Natural Gas, Dry:** **Natural gas** which remains after: 1) the liquefiable **hydrocarbon** portion has been removed from the gas stream (i.e., gas after lease, field, and/or plant separation); and 2) any volumes of **nonhydrocarbon gases** have been removed where they occur in sufficient quantity to render the gas unmarketable. *Note:* Dry natural gas is also known as consumer-grade natural gas. The parameters for measurement are cubic feet at 60 degrees Fahrenheit and 14.73 pounds per square inch absolute.

**Natural Gas (Dry) Production:** The process of producing consumer-grade **natural gas**. Natural gas withdrawn from reservoirs is reduced by volumes used at the production (lease) site and by processing losses. Volumes used at the production site include 1) the volume returned to reservoirs in cycling, **repressuring** of oil reservoirs, and conservation operations; and 2) **vented natural gas** and **flared natural gas**. Processing losses include 1) **nonhydrocarbon gases** (e.g., water vapor, carbon dioxide, helium, hydrogen sulfide, and nitrogen) removed from the gas stream; and 2) gas converted to liquid form, such as **lease condensate** and **natural gas plant liquids**. Volumes of dry gas withdrawn from gas storage reservoirs are not considered part of production. Dry natural gas production equals **natural gas marketed production** less **natural gas plant liquids** production.

**Natural Gas Marketed Production:** Gross withdrawals of **natural gas** from production reservoirs, less gas used for reservoir **repressuring**; **nonhydrocarbon gases** removed in treating and processing operations; and quantities of **vented natural gas** and **flared natural gas**.

**Natural Gas Plant Liquids (NGPL):** Those **hydrocarbons** in **natural gas** that are separated as liquids at natural gas processing, fractionating, and cycling plants. Products obtained include **ethane**, **liquefied petroleum gases (propane, normal butane, and isobutane)**, and **natural gasoline**. Component products may be fractionated or mixed. **Lease condensate** and **plant condensate** are excluded. Note: Some EIA publications categorize NGPL production as field production, in accordance with definitions used prior to January 2014.

**Natural Gas Wellhead Price:** The **wellhead price** of **natural gas** is calculated by dividing the total reported value at the wellhead by the total quantity produced as reported by the appropriate agencies of individual producing states and the U.S. Minerals Management Service. The price includes all costs prior to shipment from the lease, including gathering and compression costs, in addition to state production, severance, and similar charges.

**Natural gasoline:** A commodity product commonly traded in **natural gas liquids** (NGL) markets that comprises liquid **hydrocarbons** (mostly pentanes and hexanes) and generally remains liquid at ambient temperatures and atmospheric pressure. Natural gasoline is equivalent to **pentanes plus**.

**Net Summer Capacity:** The maximum output, commonly expressed in **kilowatts** (kW) or megawatts (MW), that generating equipment can supply to system load, as demonstrated by a multi-hour test, at the time of summer peak demand (period of June 1 through September 30). This output reflects a reduction in capacity due to electricity use for station service or auxiliaries.

**Neutral Zone:** A 6,200 square-mile area shared equally between Kuwait and Saudi Arabia under a 1992 agreement. The Neutral Zone contains an estimated 5 billion barrels of oil and 8 trillion cubic feet of natural gas.

**Nominal Dollars:** A measure used to express **nominal price**.

**Nominal Price:** The price paid for a product or service at the time of the transaction. Nominal prices are those that have not been adjusted to remove the effect of changes in the purchasing power of the dollar; they reflect buying power in the year in which the transaction occurred.

**Non-Biomass Waste:** Material of non-biological origin that is a byproduct or a discarded product. "Non-biomass waste" includes municipal solid waste from non-biogenic sources, such as plastics, and tire-derived fuels.

**Nonhydrocarbon Gases:** Typical nonhydrocarbon gases that may be present in reservoir **natural gas** are **carbon dioxide**, helium, hydrogen sulfide, and nitrogen.

**Nonrenewable Fuels:** Fuels that cannot be easily made or "renewed," such as **crude oil**, **natural gas**, and **coal**.

**Nuclear Electric Power (Nuclear Power):** Electricity generated by the use of the thermal energy released from the fission of nuclear fuel in a reactor.

**Nuclear Electric Power Plant:** A single-unit or multiunit facility in which heat produced in one or more reactors by the fissioning of nuclear fuel is used to drive one or more steam turbines.

**Nuclear Reactor:** An apparatus in which a nuclear fission chain reaction can be initiated, controlled, and sustained at a specific rate. A reactor includes fuel (fissionable material), moderating material to control the rate of fission, a heavy-walled pressure vessel to house reactor components, shielding to protect personnel, a system to conduct heat away from the reactor, and instrumentation for monitoring and controlling the reactor's systems.

**OECD:** See **Organization for Economic Cooperation and Development**.

**Offshore:** That geographic area that lies seaward of the coastline. In general, the coastline is the line of ordinary low water along with that portion of the coast that is in direct contact with the open sea or the line marking the seaward limit of inland water.

**Oil:** See **Crude Oil**.

**OPEC:** See **Organization of the Petroleum Exporting Countries**.

**Operable Unit (Nuclear):** In the United States, a nuclear generating unit that has completed low-power testing and been issued a full-power operating license by the Nuclear Regulatory Commission, or equivalent permission to operate.

**Organization for Economic Cooperation and Development (OECD):** An international organization helping governments tackle the economic, social and governance challenges of a globalized economy. Its membership comprises about 30 member countries. With active relationships with some 70 other countries, non-governmental organizations (NGOs) and civil society, it has a global reach. For details about the organization, see <http://www.oecd.org>.

**Organization of the Petroleum Exporting Countries (OPEC):** An intergovernmental organization whose stated objective is to "coordinate and unify the petroleum policies of member countries." It was created at the Baghdad Conference on September 10–14, 1960. Current members (with years of membership) include Algeria (1969–present), Angola (2007–present), Ecuador (1973–1992 and 2007–present), Iran (1960–present), Iraq (1960–present),

Kuwait (1960–present), Libya (1962–present), Nigeria (1971–present), Qatar (1961–present), Saudi Arabia (1960–present), United Arab Emirates (1967–present), and Venezuela (1960–present). Countries no longer members of OPEC include Gabon (1975–1994) and Indonesia (1962–2008).

**Oxygenates:** Substances which, when added to gasoline, increase the amount of oxygen in that gasoline blend. **Ethanol**, **Methyl Tertiary Butyl Ether (MTBE)**, Ethyl Tertiary Butyl Ether (ETBE), and methanol are common oxygenates.

**PAD Districts:** Petroleum Administration for Defense Districts. Geographic aggregations of the 50 states and the District of Columbia into five districts for the Petroleum Administration for Defense in 1950. The districts were originally instituted for economic and geographic reasons as Petroleum Administration for War (PAW) Districts, which were established in 1942.

**Pentanes Plus:** A mixture of liquid **hydrocarbons**, mostly pentanes and heavier, extracted from **natural gas** in a gas processing plant. Pentanes plus is equivalent to **natural gasoline**.

**Petrochemical Feedstocks:** Chemical feedstocks derived from petroleum principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics.

**Petroleum:** A broadly defined class of liquid hydrocarbon mixtures. Included are crude oil, lease condensate, unfinished oils, refined products obtained from the processing of crude oil, and natural gas plant liquids. Note: Volumes of finished petroleum products include nonhydrocarbon compounds, such as additives and detergents, after they have been blended into the products.

**Petroleum Coke:** See **Coke, Petroleum**.

**Petroleum Consumption:** See **Products Supplied (Petroleum)**.

**Petroleum Imports:** Imports of petroleum into the 50 states and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. territories and possessions. Included are imports for the Strategic Petroleum Reserve and withdrawals from bonded warehouses for onshore consumption, offshore bunker use, and military use. Excluded are receipts of foreign petroleum into bonded warehouses and into U.S. territories and U.S. Foreign Trade Zones.

**Petroleum Products:** Products obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, liquefied petroleum gases, pentanes plus, aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil,

residual fuel oil, petrochemical feedstocks, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Stocks, Primary:** For individual products, quantities that are held at refineries, in pipelines, and at bulk terminals that have a capacity of 50,000 barrels or more, or that are in transit thereto. Stocks held by product retailers and resellers, as well as tertiary stocks held at the point of consumption, are excluded. Stocks of individual products held at gas processing plants are excluded from individual product estimates but are included in other oils estimates and total.

**Photovoltaic Energy:** Direct-current electricity generated from sunlight through solid-state semiconductor devices that have no moving parts.

**Pipeline Fuel:** Gas consumed in the operation of pipelines, primarily in compressors.

**Plant Condensate:** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquid at gas inlet separators or scrubbers in processing plants.

**Primary Energy:** Energy in the form that it is first accounted for in a statistical energy balance, before any transformation to secondary or tertiary forms of energy. For example, **coal** can be converted to synthetic gas, which can be converted to **electricity**; in this example, coal is primary energy, synthetic gas is secondary energy, and electricity is tertiary energy. See **Primary Energy Production** and **Primary Energy Consumption**.

**Primary Energy Consumption:** Consumption of **primary energy**. (Energy sources that are produced from other energy sources—e.g., **coal coke** from **coal**—are included in primary energy consumption only if their energy content has not already been included as part of the original energy source. Thus, U.S. primary energy consumption does include net imports of coal coke, but not the coal coke produced from domestic coal.) The U.S. Energy Information Administration includes the following in U.S. primary energy consumption: coal consumption; coal coke net imports; **petroleum consumption (petroleum products supplied, including natural gas plant liquids and crude oil burned as fuel); dry natural gas—excluding supplemental gaseous fuels—consumption; nuclear electricity net generation (converted to Btu using the nuclear plants heat rate); conventional hydroelectricity net generation (converted to Btu using the fossil-fueled plants heat rate); geothermal electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and geothermal heat pump energy and geothermal direct use energy; solar thermal and photovoltaic electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; wind electricity net generation (converted to Btu using the fossil-fueled plants heat rate); wood and wood-derived fuels consumption; biomass waste consumption; fuel ethanol and biodiesel consumption; losses and co-products from the production of fuel ethanol and biodiesel; and electricity net imports (converted to Btu using the electricity heat content of 3,412 Btu per kilowatthour). See **Total Energy Consumption**.**

plants heat rate), and solar thermal direct use energy; **wind** electricity net generation (converted to Btu using the fossil-fueled plants heat rate); **wood and wood-derived fuels** consumption; **biomass waste** consumption; **fuel ethanol** and **biodiesel** consumption; losses and co-products from the production of fuel ethanol and biodiesel; and electricity net imports (converted to Btu using the electricity heat content of 3,412 Btu per kilowatthour). See **Total Energy Consumption**.

**Primary Energy Production:** Production of **primary energy**. The U.S. Energy Information Administration includes the following in U.S. primary energy production: **coal** production, **waste coal** supplied, and coal refuse recovery; **crude oil and lease condensate** production; **natural gas plant liquids** production; **dry natural gas**—excluding **supplemental gaseous fuels**—production; **nuclear electricity net generation** (converted to Btu using the nuclear plants **heat rate**); **conventional hydroelectricity** net generation (converted to Btu using the fossil-fueled plants heat rate); **geothermal** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and geothermal heat pump energy and geothermal direct use energy; **solar thermal and photovoltaic** electricity net generation (converted to Btu using the fossil-fueled plants heat rate), and solar thermal direct use energy; **wind** electricity net generation (converted to Btu using the fossil-fueled plants heat rate); **wood and wood-derived fuels** consumption; **biomass waste** consumption; and **biofuels** feedstock.

**Prime Mover:** The engine, turbine, water wheel, or similar machine that drives an electric generator; or, for reporting purposes, a device that converts energy to electricity directly.

**Products Supplied (Petroleum):** Approximately represents consumption of petroleum products because it measures the disappearance of these products from primary sources, i.e., refineries, natural gas-processing plants, blending plants, pipelines, and bulk terminals. In general, product supplied of each product in any given period is computed as follows: field production, plus refinery production, plus imports, plus unaccounted-for crude oil (plus net receipts when calculated on a PAD District basis) minus stock change, minus crude oil losses, minus refinery inputs, and minus exports.

**Propane:** A normally gaseous straight-chain hydrocarbon ( $C_3H_8$ ). It is a colorless paraffinic gas that boils at a temperature of -43.67° F. It is extracted from natural gas or refinery gas streams. It includes all products designated in ASTM Specification D1835 and Gas Processors Association Specifications for commercial propane and HD-5 propane.

**Propylene:** An olefinic hydrocarbon ( $C_3H_6$ ) recovered from refinery or petrochemical processes.

**Real Dollars:** These are dollars that have been adjusted for inflation. See **Real Price**.

**Real Price:** A price that has been adjusted to remove the effect of changes in the purchasing power of the dollar. Real prices, which are expressed in constant dollars, usually reflect buying power relative to a base year.

**Refiner Acquisition Cost of Crude Oil:** The cost of crude oil to the refiner, including transportation and fees. The composite cost is the weighted average of domestic and imported crude oil costs.

**Refinery and Blender Net Inputs:** Raw materials, **unfinished oils**, and blending components processed at refineries, or blended at refineries or petroleum storage terminals to produce finished **petroleum products**. Included are gross inputs of **crude oil**, **natural gas plant liquids**, other **hydrocarbon** raw materials, **hydrogen**, **oxygenates** (excluding **fuel ethanol**), and renewable fuels (including fuel ethanol). Also included are net inputs of unfinished oils, **motor gasoline blending components**, and **aviation gasoline blending components**. Net inputs are calculated as gross inputs minus gross production. Negative net inputs indicate gross inputs are less than gross production. Examples of negative net inputs include reformulated gasoline blendstock for oxygenate blending (RBOB) produced at refineries for shipment to blending terminals, and unfinished oils produced and added to inventory in advance of scheduled maintenance of a refinery crude oil distillation unit.

**Refinery and Blender Net Production:** Liquefied refinery gases, and finished **petroleum products** produced at a **refinery** or petroleum storage terminal blending facility. Net production equals gross production minus gross inputs. Negative net production indicates gross production is less than gross inputs for a finished petroleum product. Examples of negative net production include reclassification of one finished product to another finished product, or reclassification of a finished product to **unfinished oils** or blending components.

**Refinery (Petroleum):** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**Refuse Mine:** A surface site where **coal** is recovered from previously mined coal. It may also be known as a silt bank, culm bank, refuse bank, slurry dam, or dredge operation.

**Refuse Recovery:** The recapture of **coal** from a **refuse mine** or the coal recaptured by that process. The resulting product has been cleaned to reduce the concentration of noncombustible materials.

**Renewable Energy:** Energy obtained from sources that are essentially inexhaustible (unlike, for example, the **fossil fuels**, of which there is a finite supply). Renewable sources

of energy include **conventional hydroelectric power**, **biomass**, **geothermal**, **solar**, and **wind**.

**Repressuring:** The injection of a pressurized fluid (such as air, gas, or water) into oil and gas reservoir formations to effect greater ultimate recovery.

**Residential Sector:** An energy-consuming sector that consists of living quarters for private households. Common uses of energy associated with this sector include space heating, water heating, air conditioning, lighting, refrigeration, cooking, and running a variety of other appliances. The residential sector excludes institutional living quarters. Note: Various EIA programs differ in sectoral coverage for more information see

<http://www.eia.gov/neic/datadefinitions/Guideforwebres.htm>. See **End-Use Sectors** and **Energy-Use Sectors**.

**Residual Fuel Oil:** The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations and that conform to ASTM Specifications D396 and 975. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; and No. 6, which includes Bunker C fuel oil and is used for commercial and industrial heating, for electricity generation, and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.

**Road Oil:** Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades, from 0, the most liquid, to 5, the most viscous.

**Rotary Rig:** A machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

**Short Ton (Coal):** A unit of weight equal to 2,000 pounds.

**SIC (Standard Industrial Classification):** A set of codes developed by the U.S. Office of Management and Budget which categorizes industries into groups with similar economic activities. Replaced by **NAICS (North American Industry Classification System)**.

**Solar Energy:** See **Solar Thermal Energy** and **Photovoltaic Energy**.

**Solar Thermal Energy:** The radiant energy of the sun that can be converted into other forms of energy, such as heat or electricity.

**Special Naphthas:** All finished products within the naphtha boiling ranges that are used as paint thinner, cleaners or solvents. Those products are refined to a specified flash point. Special naphthas include all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline, or that are

to be used as petrochemical and synthetic natural gas (SNG) feedstocks, are excluded.

**Station Use:** Energy that is used to operate an **electric power plant**. It includes energy consumed for plant lighting, power, and auxiliary facilities, regardless of whether the energy is produced at the plant or comes from another source.

**Steam Coal:** All nonmetallurgical coal.

**Steam-Electric Power Plant:** A plant in which the prime mover is a steam turbine. The steam used to drive the turbine is produced in a boiler where fossil fuels are burned.

**Still Gas (Refinery Gas):** Any form or mixture of gas produced in refineries by distillation, cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, normal butane, butylene, propane, and propylene. It is used primarily as refinery fuel and, petrochemical feedstock.

**Stocks:** See **Coal Stocks**, **Crude Oil Stocks**, or **Petroleum Stocks, Primary**.

**Strategic Petroleum Reserve (SPR):** Petroleum stocks maintained by the federal Government for use during periods of major supply interruption.

**Subbituminous Coal:** A **coal** whose properties range from those of **lignite** to those of **bituminous coal** and used primarily as fuel for steam-electric power generation. It may be dull, dark brown to black, soft and crumbly, at the lower end of the range, to bright, jet black, hard, and relatively strong, at the upper end. Subbituminous coal contains 20 to 30 percent inherent moisture by weight. The heat content of subbituminous coal ranges from 17 to 24 million **Btu per short ton** on a moist, mineral-matter-free basis. The heat content of subbituminous coal consumed in the United States averages 17 to 18 million Btu per ton, on the as-received basis (i.e., containing both inherent moisture and mineral matter).

**Supplemental Gaseous Fuels:** Synthetic **natural gas**, propane-air, coke oven gas, **still gas (refinery gas)**, **biomass** gas, air injected for Btu stabilization, and manufactured gas commingled and distributed with natural gas.

**Synthetic Natural Gas (SNG):** (Also referred to as substitute natural gas) A manufactured product, chemically similar in most respects to **natural gas**, resulting from the conversion or reforming of **hydrocarbons** that may easily be substituted for or interchanged with pipeline-quality natural gas.

**Thermal Conversion Factor:** A factor for converting data between physical units of measure (such as **barrels**, **cubic feet**, or **short tons**) and thermal units of measure (such as **British thermal units**, calories, or joules); or for

converting data between different thermal units of measure. See **Btu Conversion Factor**.

**Total Energy Consumption: Primary energy consumption** in the **end-use sectors**, plus **electricity retail sales** and **electrical system energy losses**.

**Transportation Sector:** An energy-consuming sector that consists of all vehicles whose primary purpose is transporting people and/or goods from one physical location to another. Included are automobiles; trucks; buses; motorcycles; trains, subways, and other rail vehicles; aircraft; and ships, barges, and other waterborne vehicles. Vehicles whose primary purpose is not transportation (e.g., construction cranes and bulldozers, farming vehicles, and warehouse tractors and forklifts) are classified in the sector of their primary use. Note: Various EIA programs differ in sectoral coverage—for more information see <http://www.eia.gov/neic/datadefinitions/Guideforwebtrans.htm> See **End-Use Sectors** and **Energy-Use Sectors**.

**Underground Storage:** The storage of **natural gas** in underground reservoirs at a different location from which it was produced.

**Unfinished Oils:** All oils requiring further refinery processing except those requiring only mechanical blending. Includes naphthas and lighter oils, kerosene and light gas oils, heavy gas oils, and residuum.

**Unfractionated Stream:** Mixtures of unsegregated natural gas liquid components, excluding those in plant condensate. This product is extracted from natural gas.

**Union of Soviet Socialist Republics (U.S.S.R.):** A political entity that consisted of 15 constituent republics: Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan. The U.S.S.R. ceased to exist as of December 31, 1991.

**United States:** The 50 states and the District of Columbia. Note: The United States has varying degrees of jurisdiction over a number of territories and other political entities outside the 50 states and the District of Columbia, including Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, Johnston Atoll, Midway Islands, Wake Island, and the Northern Mariana Islands. EIA data programs may include data from some or all of these areas in U.S. totals. For these programs, data products will contain notes explaining the extent of geographic coverage included under the term "United States."

**Useful Thermal Output:** The thermal energy made available in a combined-heat-and-power system for use in any industrial or commercial process, heating or cooling application, or delivered to other end users, i.e., total thermal energy made available for processes and applications other than electrical generation.

**U.S.S.R.:** See **Union of Soviet Socialist Republics (U.S.S.R.).**

**Vented Natural Gas:** **Natural gas** released into the air on the production site or at processing plants.

**Vessel Bunkering:** Includes sales for the fueling of commercial or private boats, such as pleasure craft, fishing boats, tugboats, and ocean-going vessels, including vessels operated by oil companies. Excluded are volumes sold to the U.S. Armed Forces.

**Waste Coal:** Usable material that is a byproduct of previous **coal** processing operations. Waste coal is usually composed of mixed coal, soil, and rock (mine waste). Most waste coal is burned as-is in unconventional fluidized-bed combustors. For some uses, waste coal may be partially cleaned by removing some extraneous noncombustible constituents. Examples of waste coal include fine coal, coal obtained from a refuse bank or slurry dam, anthracite culm, bituminous gob, and lignite waste.

**Waste:** See **Biomass Waste** and **Non-Biomass Waste**.

**Watt (W):** The unit of electrical power equal to one ampere under a pressure of one volt. A watt is equal to 1/746 horsepower.

**Watthour (Wh):** The electrical energy unit of measure equal to one watt of power supplied to, or taken from, an electric circuit steadily for one hour.

**Waxes:** Solid or semisolid material derived from petroleum distillates or residues. Waxes are light-colored, more or less translucent crystalline masses, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Included are all marketable waxes, whether crude scale or fully refined. Waxes are used primarily as industrial coating for surface protection.

**Wellhead Price:** The value of **crude oil** or **natural gas** at the mouth of the well.

**Wind Energy:** Kinetic energy present in wind motion that can be converted to mechanical energy for driving pumps, mills, and electric power generators.

**Wood and Wood-Derived Fuels:** Wood and products derived from wood that are used as fuel, including round wood (cord wood), limb wood, wood chips, bark, sawdust, forest residues, charcoal, paper pellets, railroad ties, utility poles, **black liquor**, red liquor, sludge wood, spent sulfite liquor, and other wood-based solids and liquids.

**Working Gas:** The quantity of **natural gas** in the reservoir that is in addition to the cushion or **base gas**. It may or may not be completely withdrawn during any particular withdrawal season. Conditions permitting, the total working capacity could be used more than once during any season. Volumes of working gas are reported in thousand cubic feet at standard temperature and pressure.