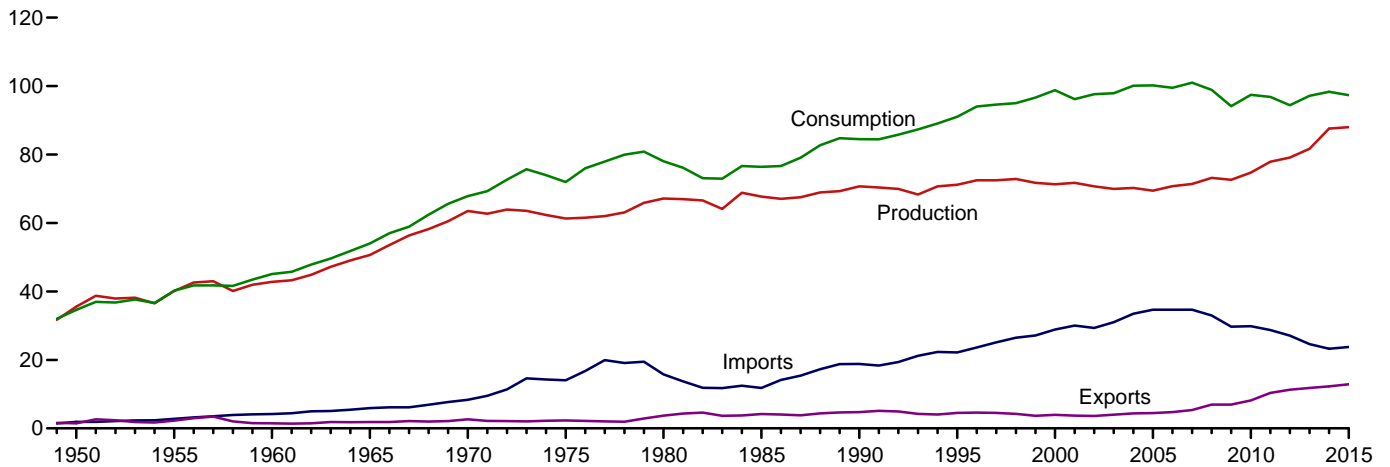


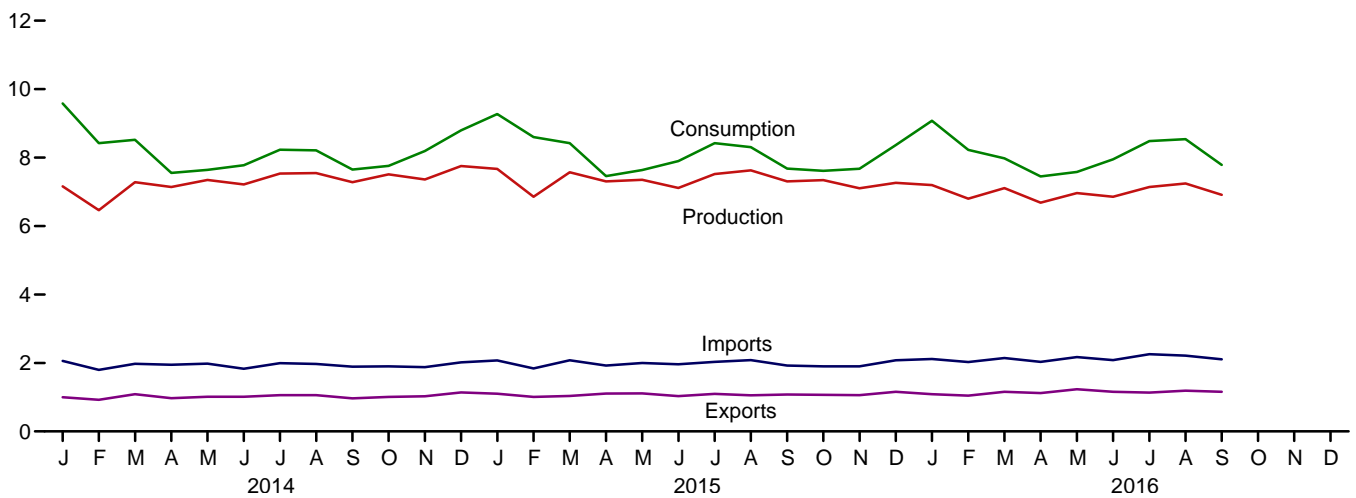
1. Energy Overview

Figure 1.1 Primary Energy Overview
(Quadrillion Btu)

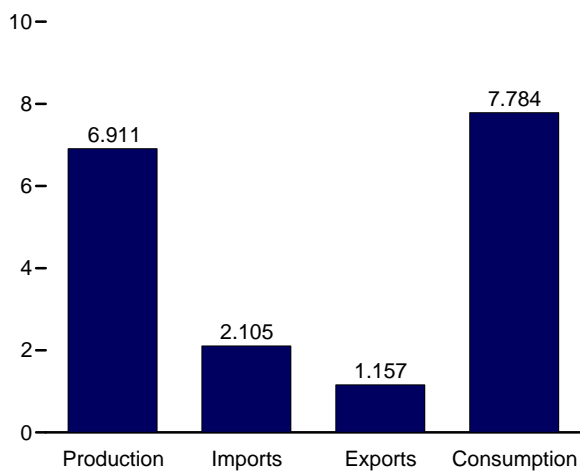
Overview, 1949–2015



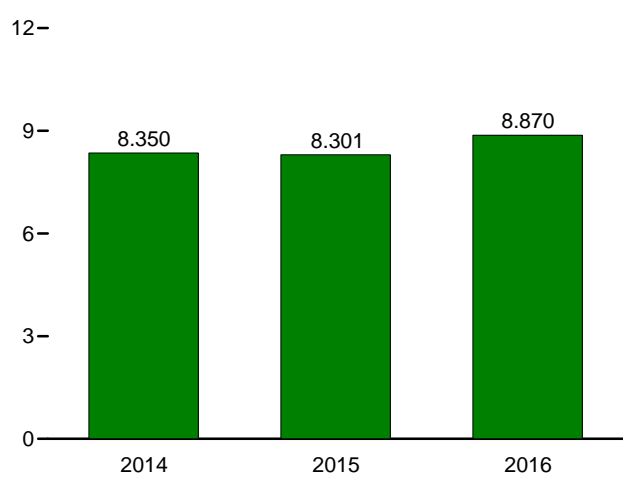
Overview, Monthly



Overview, September 2016



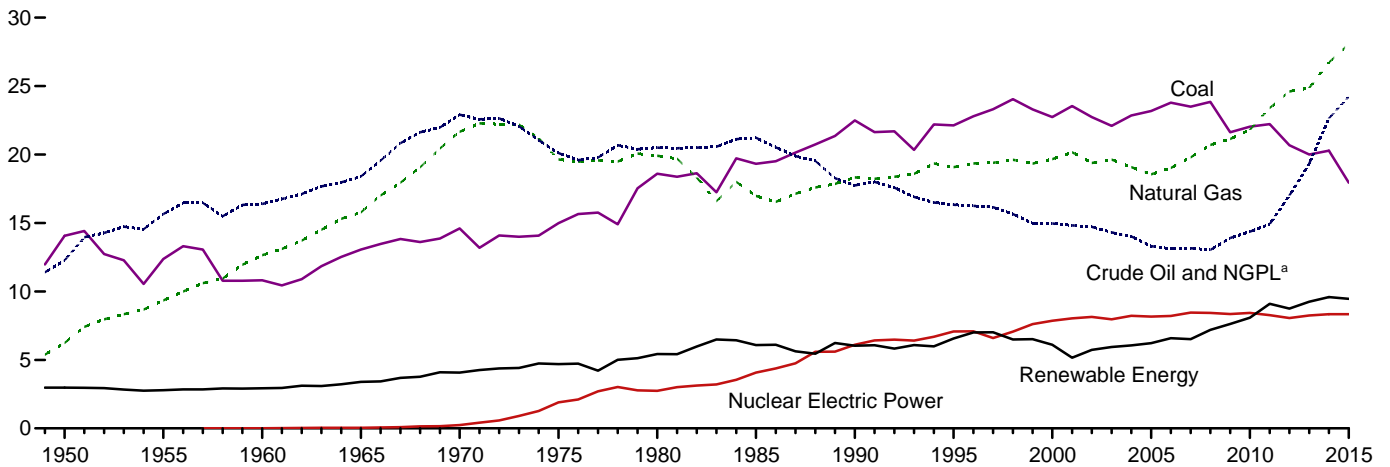
Net Imports, January–September



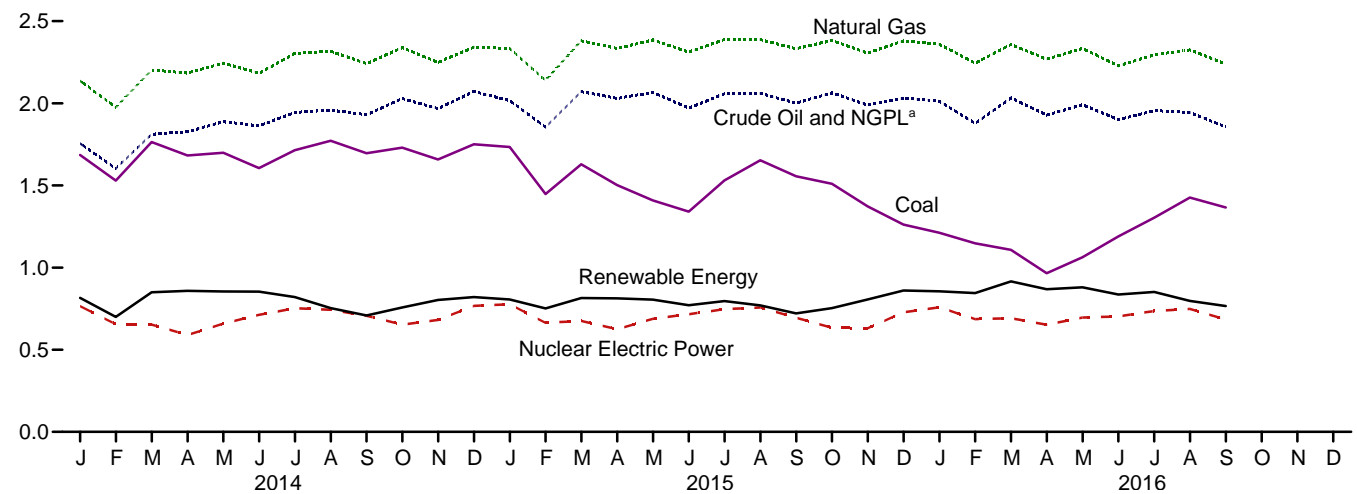
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.1.

Figure 1.2 Primary Energy Production
(Quadrillion Btu)

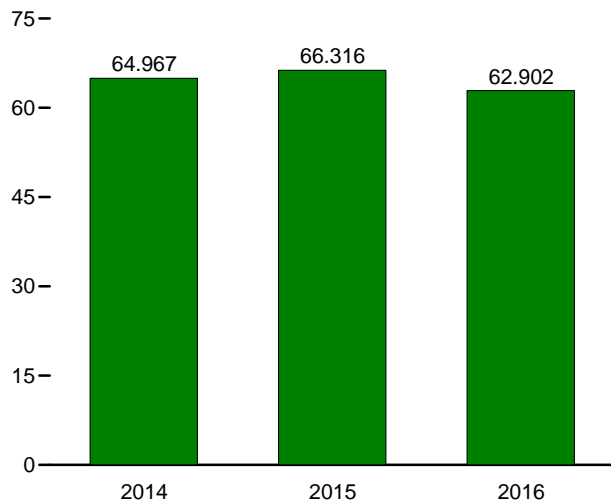
By Source, 1949–2015



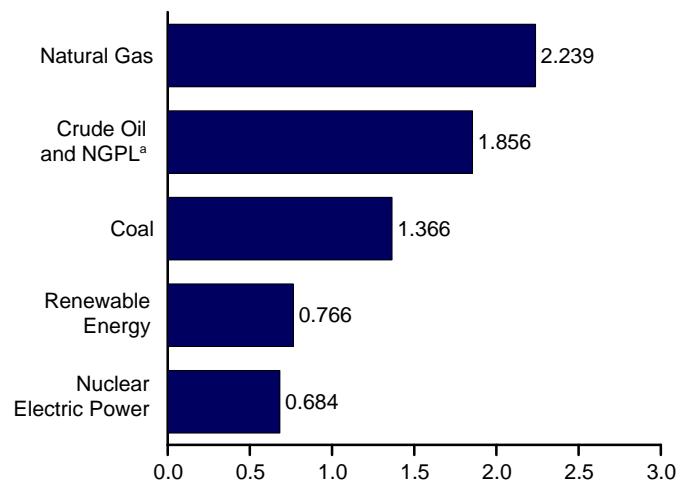
By Source, Monthly



Total, January–September



By Source, September 2016



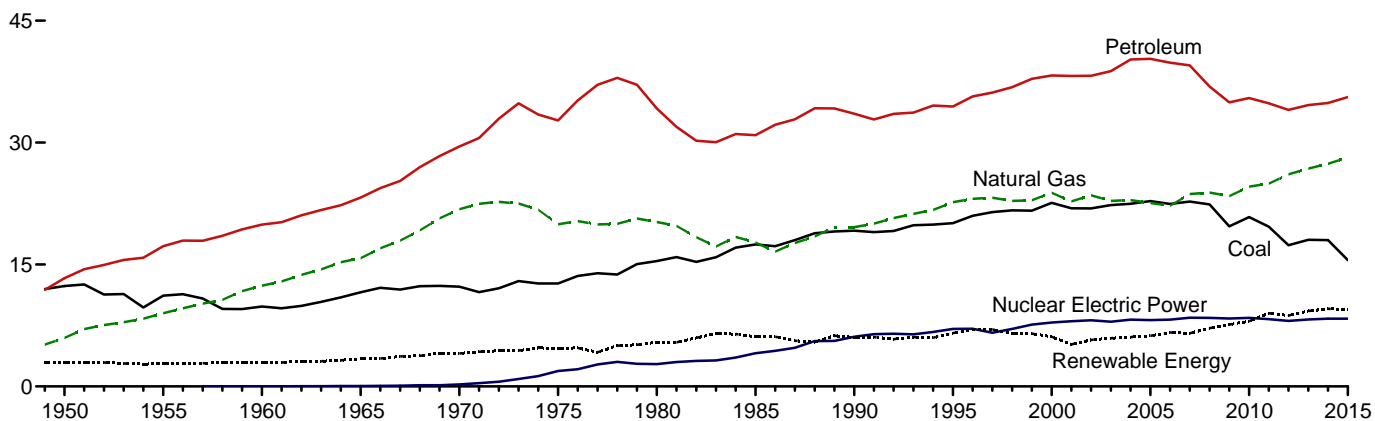
^a Natural gas plant liquids.

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

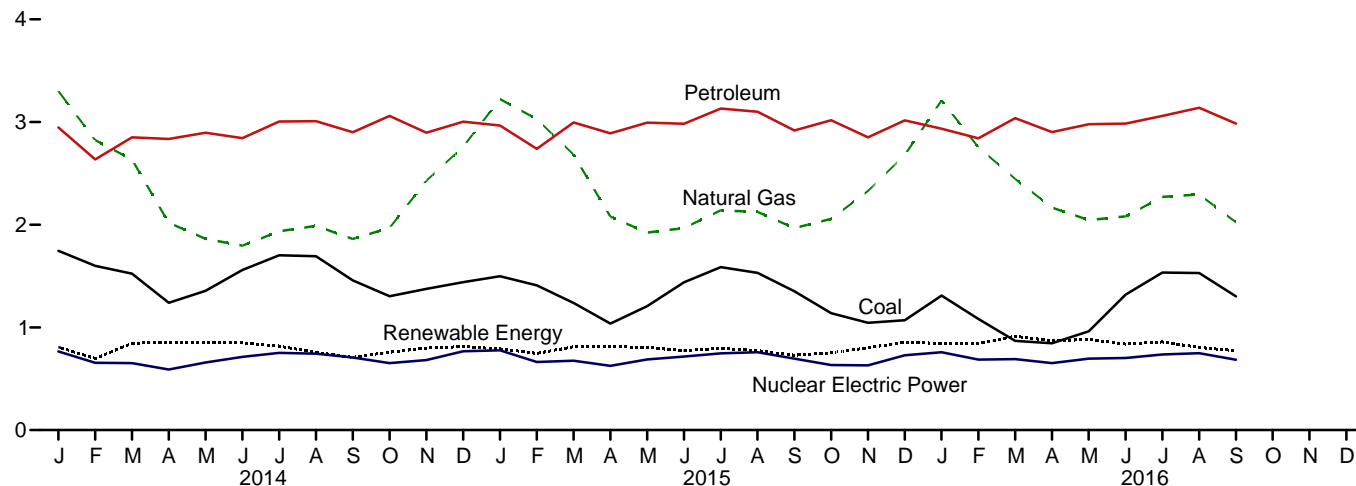
Source: Table 1.2.

Figure 1.3 Primary Energy Consumption
(Quadrillion Btu)

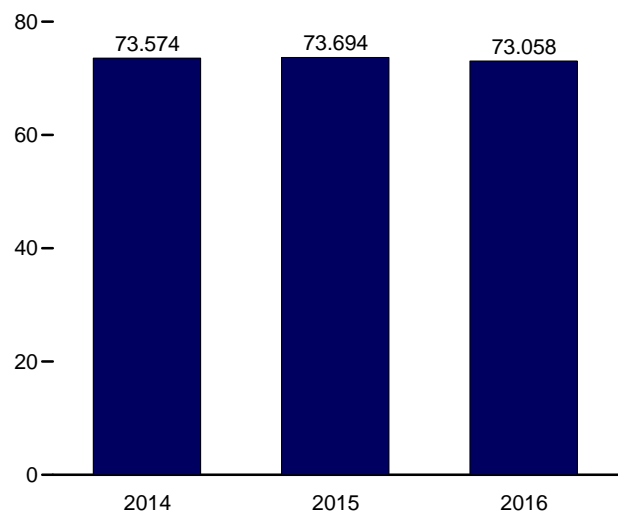
By Source,^a 1949–2015



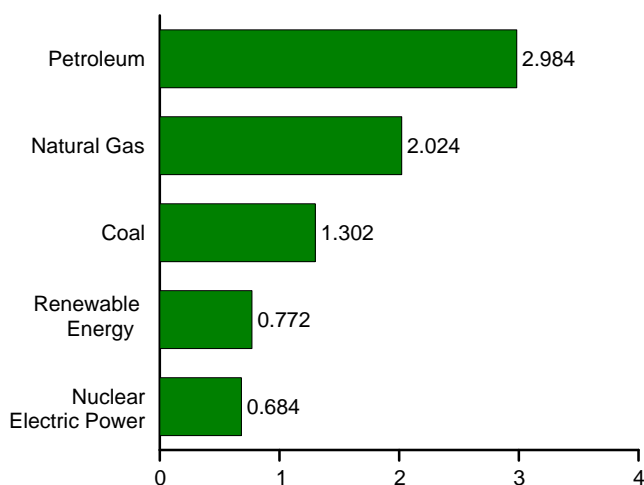
By Source,^a Monthly



Total, January–September



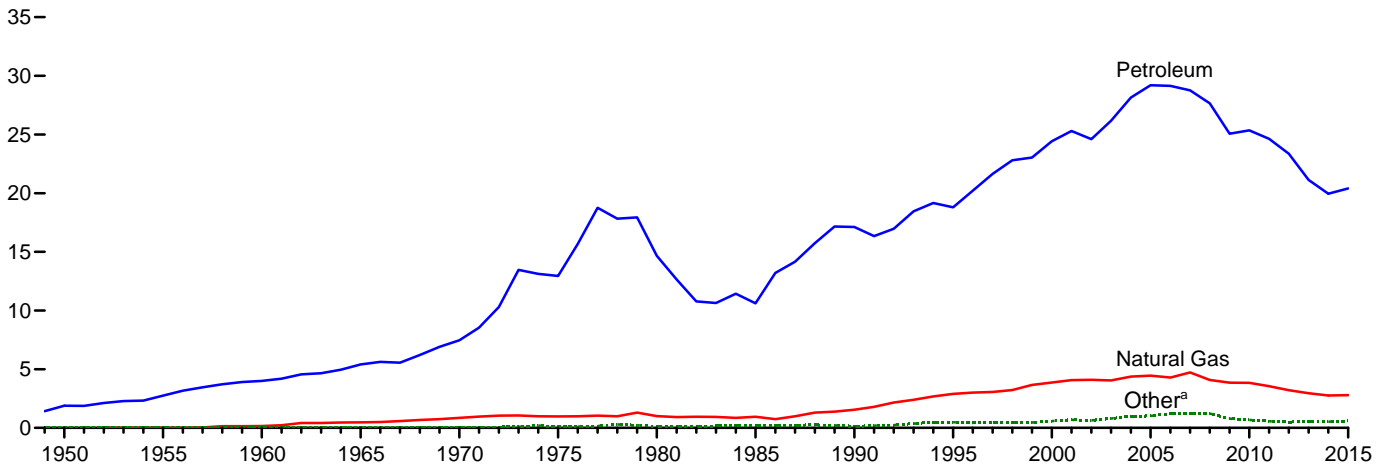
By Source,^a September 2016



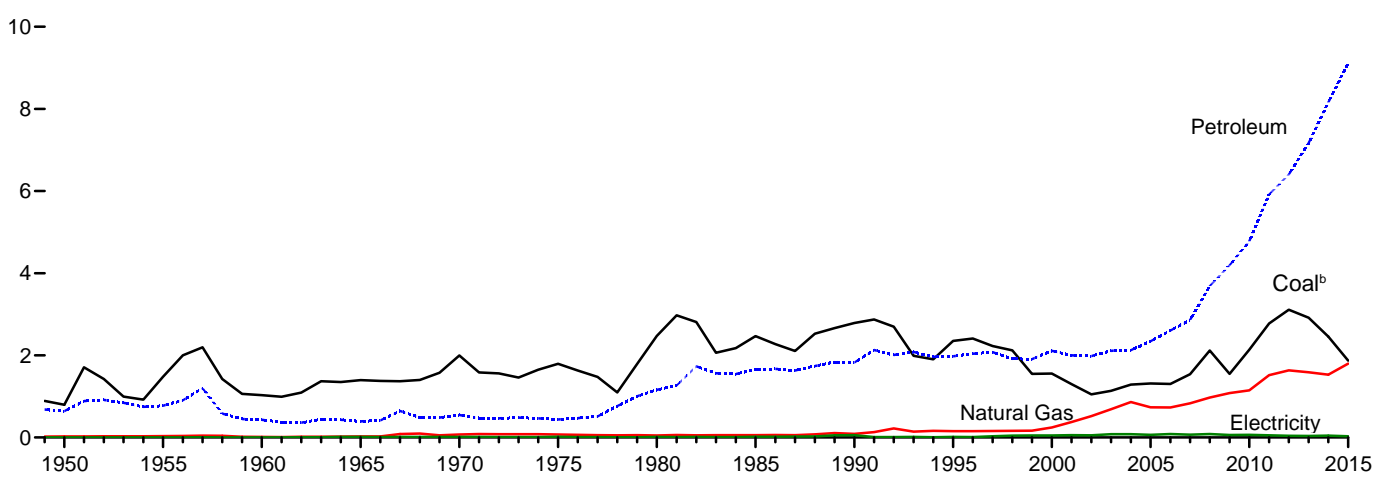
^a Small quantities of net imports of coal coke and electricity are not shown.
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.3.

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

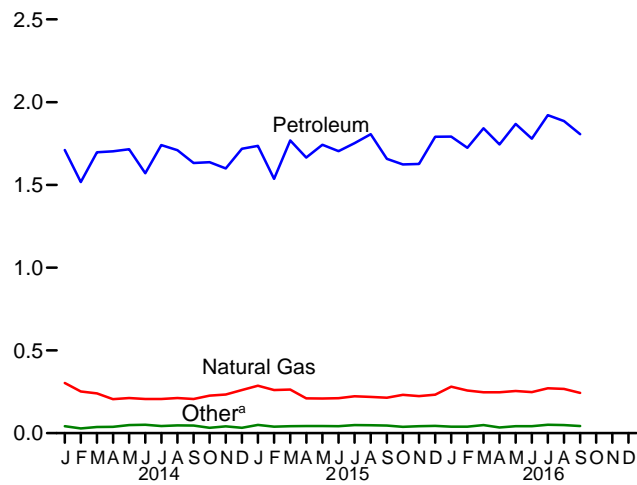
Imports by Source, 1949–2015



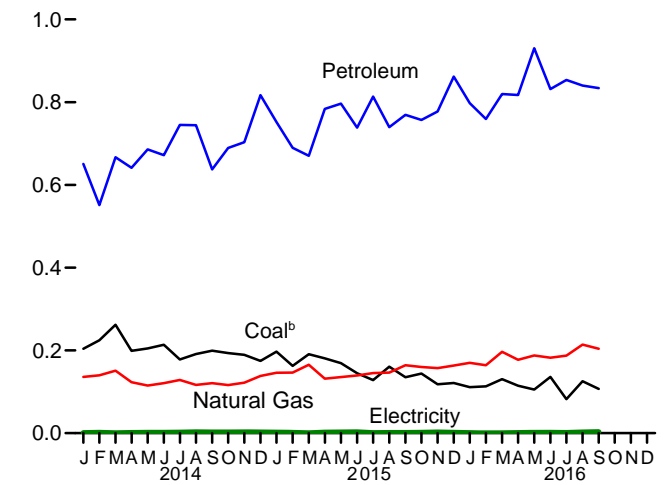
Exports by Source, 1949–2015



Imports by Source, Monthly



Exports by Major Source, Monthly



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

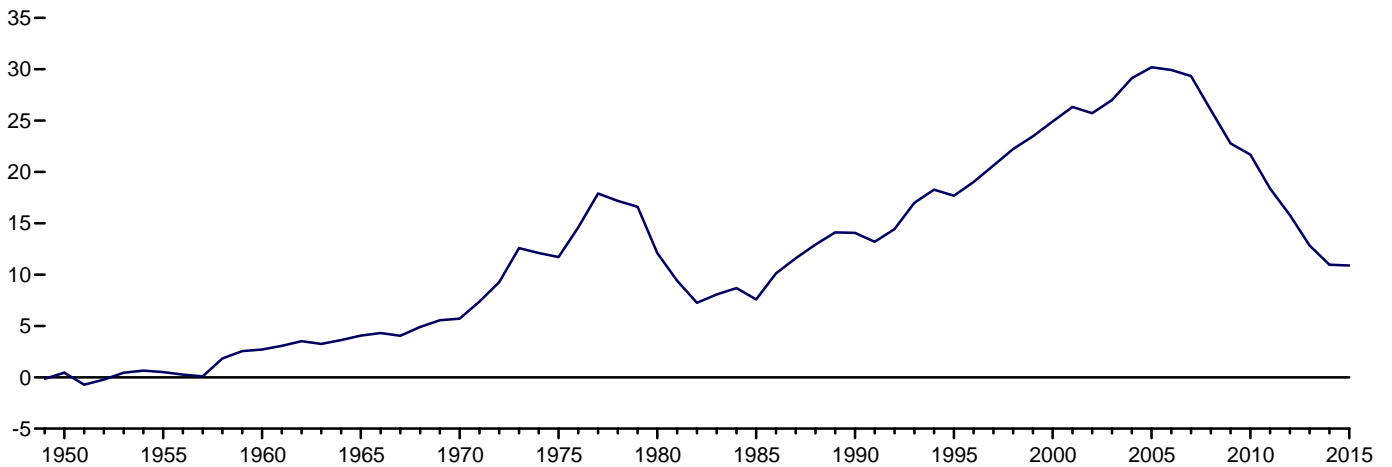
^b Includes coal coke.

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

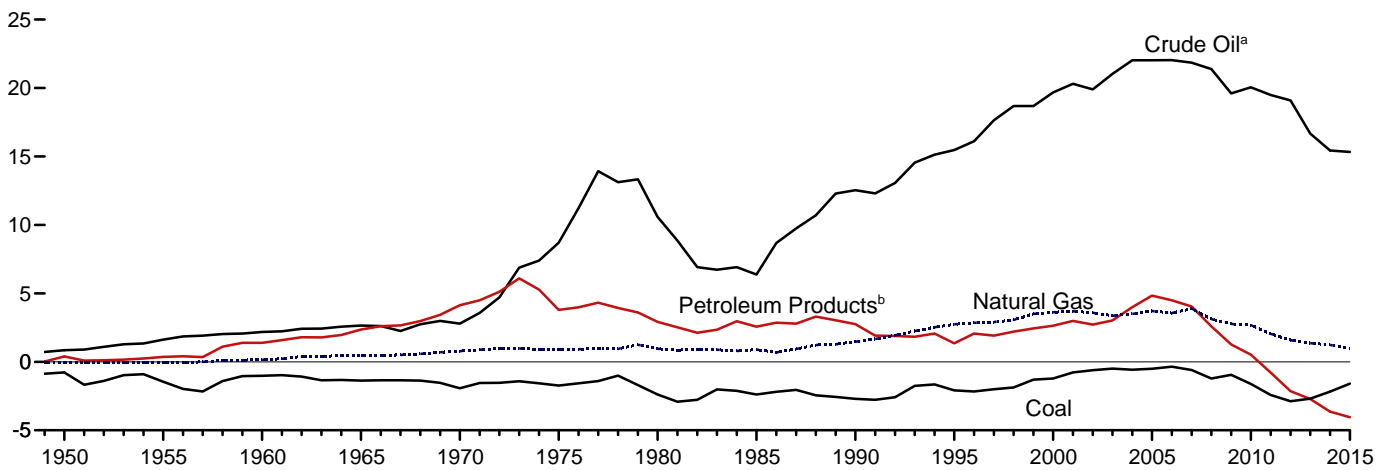
Sources: Tables 1.4a and 1.4b.

Figure 1.4b Primary Energy Net Imports
(Quadrillion Btu)

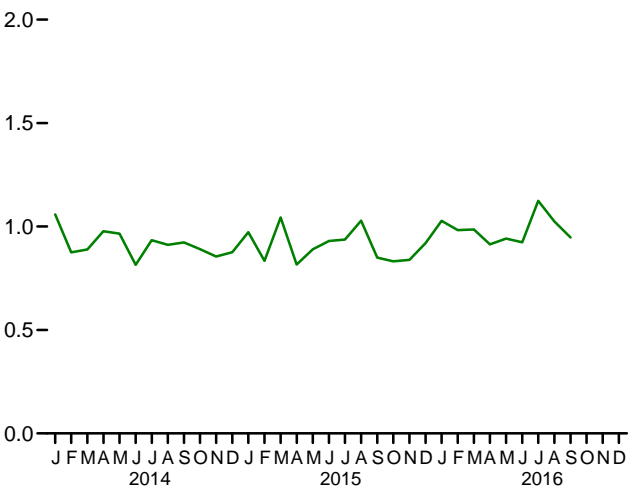
Total, 1949–2015



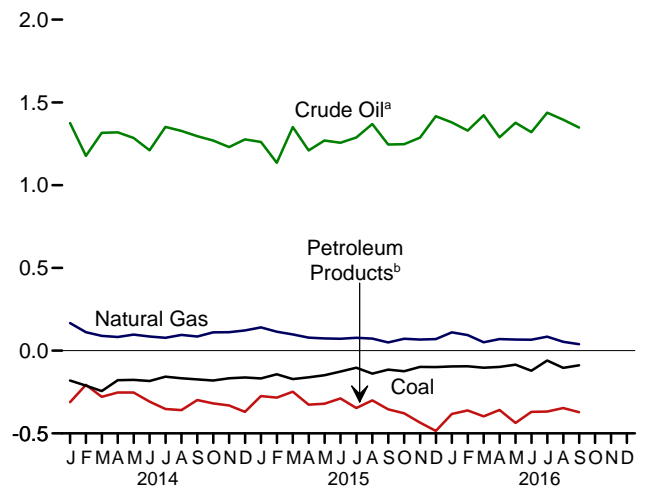
By Major Source, 1949–2015



Total, Monthly



By Major Source, Monthly



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

^b Petroleum products, unfinished oils, pentanes plus, and gasoline

blending components. Does not include biofuels.

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

Sources: Tables 1.4a and 1.4b.

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

	Imports								
	Coal	Coal Coke	Natural Gas	Petroleum			Biofuels ^c	Electricity	Total
				Crude Oil ^a	Petroleum Products ^b	Total			
1950 Total	0.009	0.011	0.000	1.056	0.830	1.886	NA	0.007	1.913
1955 Total	.008	.003	.011	1.691	1.061	2.752	NA	.016	2.790
1960 Total	.007	.003	.161	2.196	1.802	3.999	NA	.018	4.188
1965 Total	.005	.002	.471	2.654	2.748	5.402	NA	.012	5.892
1970 Total	.001	.004	.846	2.814	4.656	7.470	NA	.021	8.342
1975 Total	.024	.045	.978	8.721	4.227	12.948	NA	.038	14.032
1980 Total	.030	.016	1.006	11.195	3.463	14.658	NA	.085	15.796
1985 Total	.049	.014	.952	6.814	3.796	10.609	NA	.157	11.781
1990 Total	.067	.019	1.551	12.766	4.351	17.117	NA	.063	18.817
1995 Total	.237	.095	2.901	15.669	3.131	18.800	.001	.146	22.180
2000 Total	.313	.094	3.869	19.783	4.641	24.424	(s)	.166	28.865
2001 Total	.495	.063	4.068	20.348	4.946	25.294	.002	.131	30.052
2002 Total	.422	.080	4.104	19.920	4.677	24.597	.002	.125	29.331
2003 Total	.626	.068	4.042	21.060	5.105	26.165	.002	.104	31.007
2004 Total	.682	.170	4.365	22.082	6.063	28.145	.013	.117	33.492
2005 Total	.762	.088	4.450	22.091	7.108	29.198	.012	.150	34.659
2006 Total	.906	.101	4.291	22.085	7.054	29.139	.066	.146	34.649
2007 Total	.909	.061	4.723	21.914	6.842	28.756	.055	.175	34.679
2008 Total	.855	.089	4.084	21.448	6.214	27.662	.085	.195	32.970
2009 Total	.566	.009	3.845	19.699	5.367	25.066	.027	.178	29.690
2010 Total	.484	.030	3.834	20.140	5.219	25.359	.004	.154	29.866
2011 Total	.327	.035	3.555	19.595	5.038	24.633	.019	.178	28.748
2012 Total	.212	.028	3.216	19.239	4.122	23.361	.049	.202	27.068
2013 Total	.199	.003	2.955	16.957	4.169	21.126	.102	.236	24.623
2014 January	.024	(s)	.303	1.420	.291	1.710	.003	.019	2.058
February	.013	(s)	.252	1.216	.300	1.517	.002	.015	1.798
March	.018	(s)	.240	1.361	.336	1.697	.003	.019	1.977
April	.021	(s)	.206	1.368	.335	1.703	.004	.016	1.949
May	.028	(s)	.212	1.341	.375	1.716	.005	.018	1.979
June	.030	.001	.207	1.280	.291	1.571	.002	.019	1.829
July	.021	(s)	.206	1.427	.313	1.740	.006	.021	1.995
August	.024	(s)	.212	1.398	.312	1.710	.004	.023	1.972
September	.025	(s)	.207	1.357	.276	1.633	.003	.021	1.889
October	.013	.001	.226	1.337	.300	1.637	.004	.018	1.899
November	.022	(s)	.233	1.321	.278	1.599	.005	.019	1.879
December	.013	(s)	.260	1.352	.367	1.719	.005	.018	2.016
Total	.252	.002	2.763	16.178	3.773	19.951	.046	.227	23.241
2015 January	.029	(s)	.286	R 1.348	.388	R 1.736	.003	.021	R 2.075
February	R .020	(s)	.261	R 1.206	.331	R 1.536	.004	.019	R 1.840
March	.019	(s)	.264	R 1.427	.342	R 1.769	.004	.023	R 2.079
April	.020	(s)	.210	R 1.311	.354	R 1.665	.004	.022	R 1.922
May	.021	(s)	.209	R 1.362	R .380	R 1.743	.005	.023	R 2.000
June	.019	(s)	.211	R 1.332	.372	R 1.704	.006	.023	R 1.963
July	.025	(s)	.222	R 1.384	R .368	R 1.752	.009	R .024	R 2.032
August	.022	(s)	.219	R 1.451	.356	R 1.807	.010	.024	R 2.082
September	.020	.002	.214	R 1.315	.343	R 1.658	.009	.023	R 1.925
October	.019	(s)	.232	R 1.335	.288	R 1.623	.009	.018	R 1.901
November	.020	(s)	.224	R 1.341	.286	R 1.627	.008	.020	R 1.899
December	.022	.001	.233	R 1.486	.305	R 1.790	.009	.020	R 2.076
Total	R .256	.003	2.786	R 16.299	R 4.111	R 20.410	.079	R .259	R 23.794
2016 January	.016	(s)	.280	R 1.443	.349	R 1.792	.003	.024	R 2.114
February	R .019	(s)	.258	R 1.391	R .333	R 1.725	.003	.021	R 2.025
March	.027	(s)	.247	R 1.512	.330	R 1.842	.005	.022	R 2.142
April	.017	(s)	.247	R 1.389	.355	R 1.744	.007	.018	R 2.033
May	R .021	.001	.255	R 1.494	R .374	R 1.868	.008	.021	R 2.172
June	R .015	.002	.248	R 1.385	.395	R 1.779	.013	.025	R 2.081
July	.022	(s)	.272	R 1.521	.400	R 1.921	.012	.028	R 2.255
August	.021	(s)	.267	R 1.511	R .374	R 1.885	.014	.027	R 2.214
September	.018	.002	.243	1.466	.341	1.807	.012	.023	2.105
9-Month Total	.175	.004	2.317	13.113	3.250	16.363	.076	.207	19.142
2015 9-Month Total	.195	.002	2.097	12.137	3.232	15.369	.053	.200	17.918
2014 9-Month Total	.204	.001	2.043	12.168	2.829	14.996	.032	.171	17.447

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

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

^c Fuel ethanol (minus denaturant) and biodiesel.

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

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

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

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

Sources: See end of section.

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

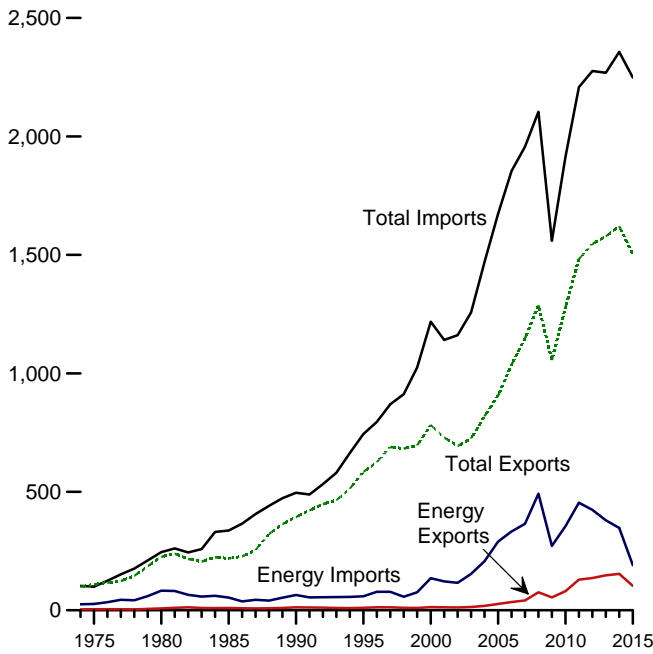
	Exports									Net Imports ^a
	Coal	Coal Coke	Natural Gas	Petroleum			Biofuels ^d	Electricity	Total	Total
				Crude Oil ^b	Petroleum Products ^c	Total				
1950 Total	0.786	0.010	0.027	0.202	0.440	0.642	NA	0.001	1.465	0.448
1955 Total	1.465	.013	.032	.067	.707	.774	NA	.002	2.286	2.504
1960 Total	1.023	.009	.012	.018	.413	.431	NA	.003	1.477	1.710
1965 Total	1.376	.021	.027	.006	.386	.392	NA	.013	1.829	4.063
1970 Total	1.936	.061	.072	.029	.520	.549	NA	.014	2.632	5.709
1975 Total	1.761	.032	.074	.012	.427	.439	NA	.017	2.323	11.709
1980 Total	2.421	.051	.049	.609	.551	1.160	NA	.014	3.695	12.101
1985 Total	2.438	.028	.056	.432	1.225	1.657	NA	.017	4.196	7.584
1990 Total	2.772	.014	.087	.230	1.594	1.824	NA	.055	4.752	14.065
1995 Total	2.318	.034	.156	.200	1.776	1.976	NA	.012	4.496	17.684
2000 Total	1.528	.028	.245	.106	2.003	2.110	NA	.051	3.962	24.904
2001 Total	1.265	.033	.377	.043	1.956	1.999	(s)	.056	3.731	26.321
2002 Total	1.032	.020	.520	.019	1.963	1.982	(s)	.054	3.608	25.722
2003 Total	1.117	.018	.686	.026	2.083	2.110	.001	.082	4.013	26.994
2004 Total	1.253	.033	.862	.057	2.068	2.125	.001	.078	4.351	29.141
2005 Total	1.273	.043	.735	.067	2.276	2.344	.001	.065	4.462	30.197
2006 Total	1.264	.040	.730	.052	2.554	2.606	.005	.083	4.727	29.921
2007 Total	1.507	.036	.830	.058	2.803	2.861	.036	.069	5.338	29.341
2008 Total	2.071	.049	.972	.061	3.626	3.686	.089	.083	6.949	26.021
2009 Total	1.515	.032	1.082	.093	4.101	4.194	.035	.062	6.920	22.770
2010 Total	2.101	.036	1.147	.088	4.691	4.780	.047	.065	8.176	21.690
2011 Total	2.751	.024	1.519	.100	5.820	5.919	.108	.051	10.373	18.375
2012 Total	3.087	.024	1.633	.143	6.261	6.404	.078	.041	11.267	15.801
2013 Total	2.895	.021	1.587	.284	6.886	7.170	.076	.039	11.788	12.835
2014 January .....	.204	.001	.136	.045	.602	.646	.008	.004	1.000	1.059
February .....	.225	.002	.140	.040	.507	.547	.006	.004	.923	.875
March .....	.262	.001	.151	.045	.615	.660	.008	.007	1.088	.889
April .....	.199	.001	.123	.049	.588	.637	.007	.005	.972	.977
May .....	.205	.002	.115	.055	.628	.683	.006	.003	1.013	.966
June .....	.214	.002	.121	.069	.600	.668	.006	.004	1.014	.815
July .....	.178	.002	.128	.076	.666	.741	.007	.004	1.061	.934
August .....	.191	.003	.116	.070	.671	.741	.006	.003	1.061	.912
September .....	.199	.003	.121	.061	.574	.635	.005	.003	.966	.923
October .....	.194	.002	.116	.068	.618	.686	.007	.003	1.009	.891
November .....	.189	.002	.122	.091	.610	.700	.008	.003	1.024	.855
December .....	.175	.003	.138	.076	.737	.813	.007	.004	1.140	.876
Total	2.435	.023	1.528	.744	7.414	8.158	.081	.045	12.270	10.971
2015 January .....	.197	.002	.146	.087	.662	.749	.006	.003	1.103	R .972
February .....	.163	.001	.146	.070	.615	.685	.006	.005	1.006	R .834
March .....	.191	.001	.165	.077	.590	.667	.008	.003	1.035	R 1.044
April .....	.181	.002	.132	.102	.680	.782	.007	.002	R 1.105	R .816
May .....	.169	.003	.135	.093	.701	.794	.007	.002	1.110	R .890
June .....	.145	.003	.139	.076	.660	R .736	.007	.002	R 1.032	R .930
July .....	.128	.001	.145	.096	.715	R .811	.007	.002	1.095	R .937
August	R .161	.001	.146	.081	.656	R .737	.006	.002	1.054	R 1.028
September .....	.135	.002	.164	.070	.697	.767	.006	.002	1.076	R .849
October .....	.144	.002	.160	.088	.667	.755	.007	.002	1.070	R .832
November .....	.118	.002	.157	.055	.721	.775	.005	.002	1.060	R .839
December .....	.121	.002	.163	.069	.790	.859	.008	.003	1.156	R .920
Total	R 1.852	.021	1.800	R .964	R 8.153	R 9.118	.080	.031	R 12.902	R 10.892
2016 January .....	.111	.001	.170	.064	.731	R .795	.007	.002	1.087	R 1.027
February .....	.113	(s)	.164	.062	.694	.756	.006	.003	1.043	R .983
March .....	.130	.001	.197	R .089	R .726	.816	.009	.004	1.156	R .986
April .....	.115	.001	.177	.101	R .713	R .814	.009	.003	1.120	R .914
May .....	.105	.001	.188	.117	.811	.928	.006	.003	1.231	R .941
June .....	.136	.002	.182	.065	.764	R .829	.005	.002	1.157	R .924
July .....	.082	.001	.187	R .083	.768	R .851	.007	.002	1.131	R 1.124
August .....	.125	.003	.214	.116	.722	R .837	.008	.003	1.190	R 1.024
September .....	.107	.003	.204	.118	.713	.831	.009	.003	1.157	.947
9-Month Total	1.025	.013	1.683	.815	6.643	7.458	.067	.025	10.272	8.870
2015 9-Month Total	1.469	.015	1.319	.753	5.976	6.729	.060	.024	9.616	8.301
2014 9-Month Total	1.877	.016	1.152	.510	5.449	5.959	.059	.035	9.097	8.350

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

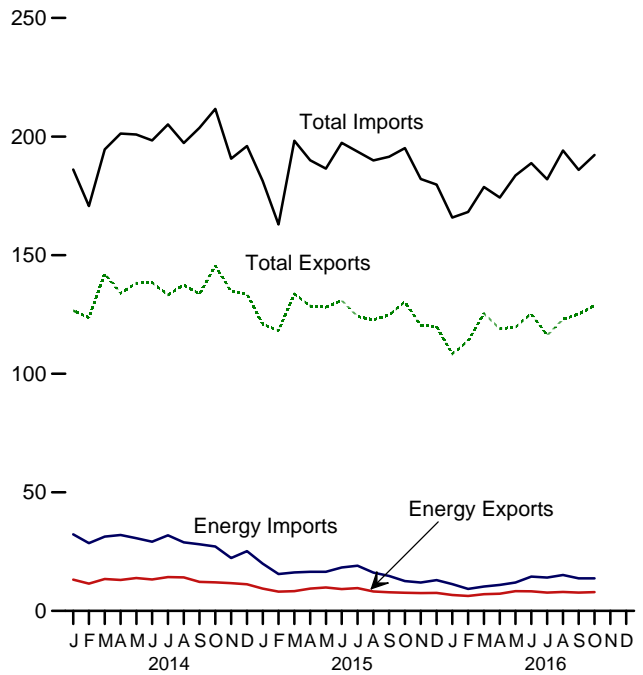
Notes: • See "Primary Energy" in Glossary. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#summary> (Excel and CSV files) for all available annual data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

Figure 1.5 Merchandise Trade Value
(Billion Dollars^a)

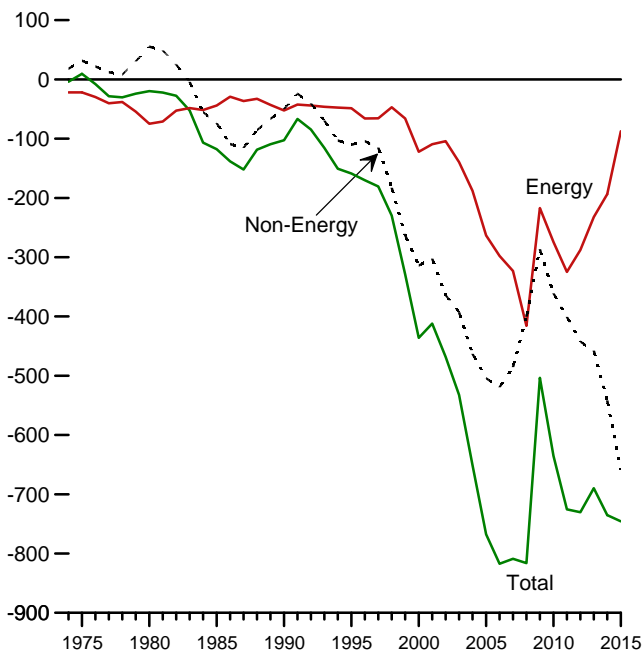
Imports and Exports, 1974–2015



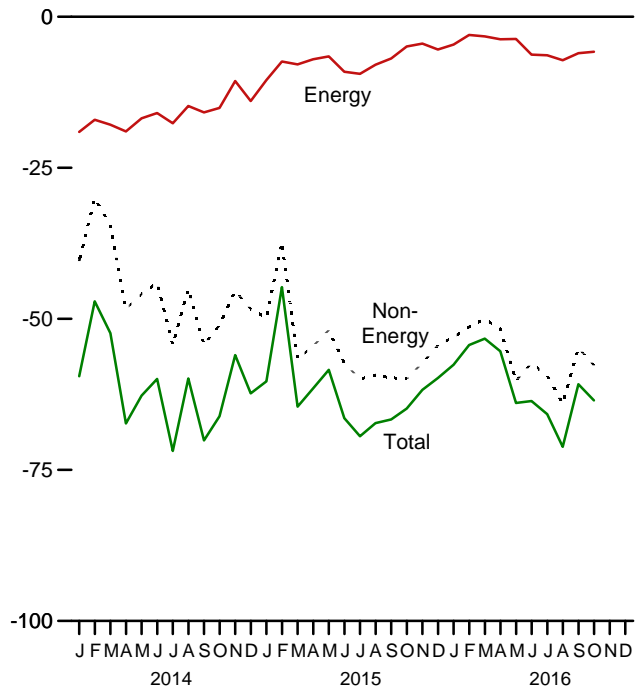
Imports and Exports, Monthly



Trade Balance, 1974–2015



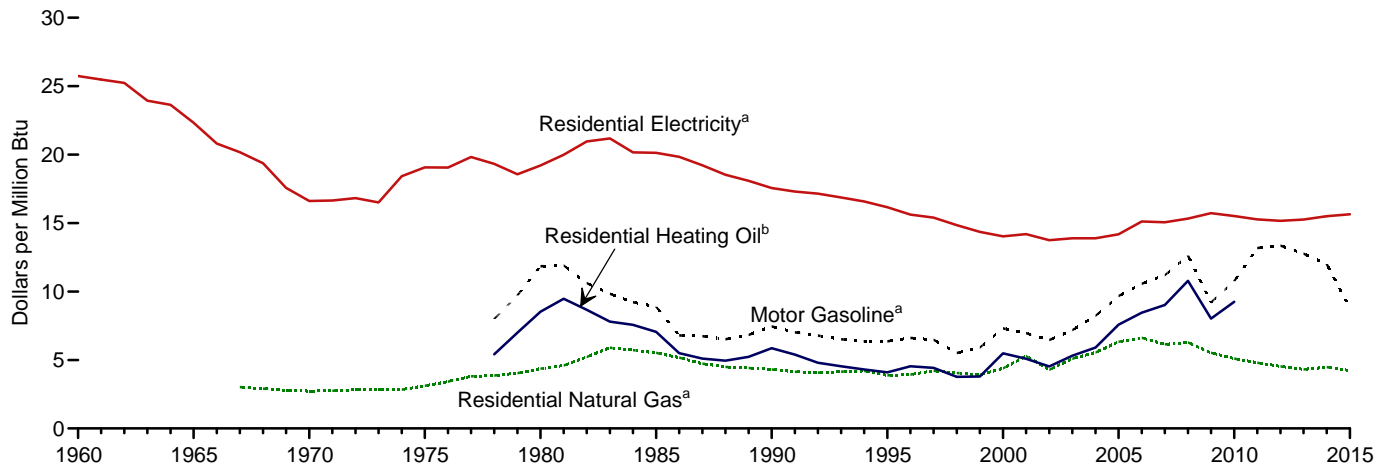
Trade Balance, Monthly



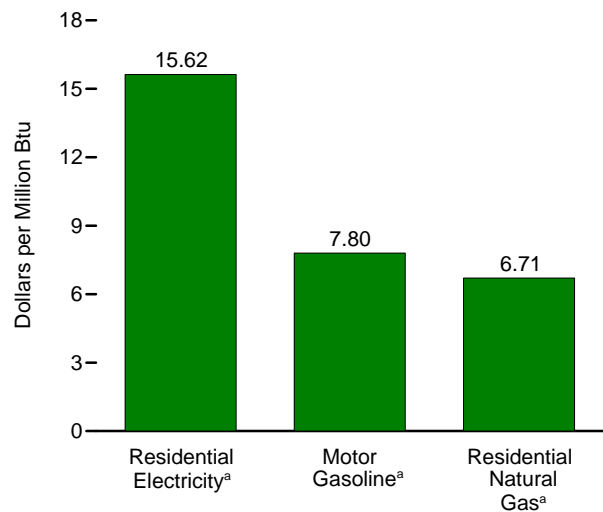
^a Prices are not adjusted for inflation. See "Nominal Dollars" in Glossary.
<http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.5.

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

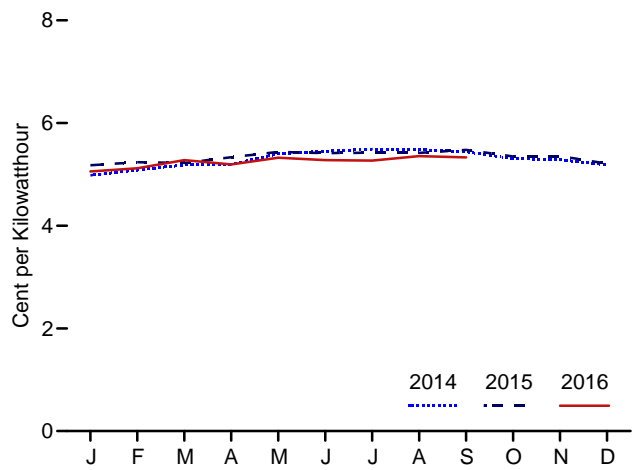
Costs, 1960–2015



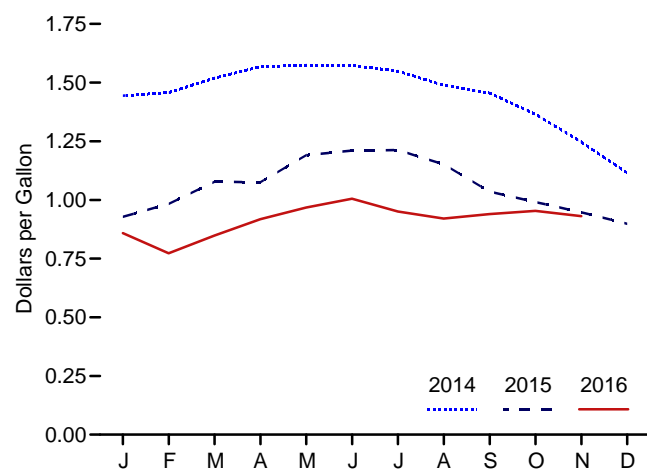
Costs, September 2016



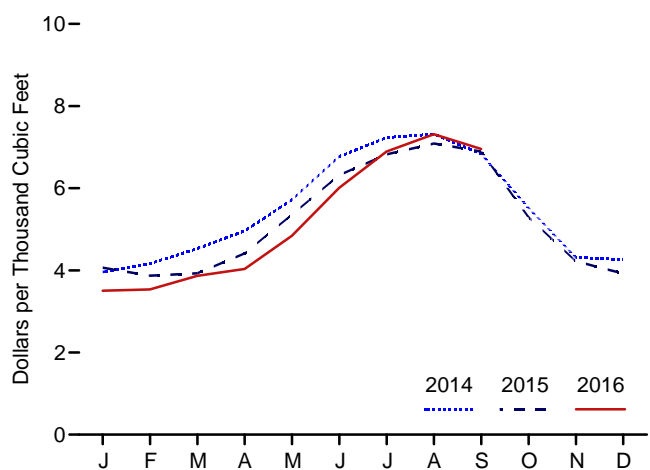
Residential Electricity,^a Monthly



Motor Gasoline,^a Monthly



Residential Natural Gas,^a Monthly



^a Includes taxes.

^b Excludes taxes.

Note: See "Real Dollars" in Glossary.

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

Source: Table 1.6.

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

	Consumer Price Index, All Urban Consumers ^a	Motor Gasoline ^b		Residential Heating Oil ^c		Residential Natural Gas ^b		Residential Electricity ^b	
	Index 1982–1984=100	Dollars per Gallon	Dollars per Million Btu	Dollars per Gallon	Dollars per Million Btu	Dollars per Thousand Cubic Feet	Dollars per Million Btu	Cents per Kilowatt-hour	Dollars per Million Btu
1960 Average	29.6	NA	NA	NA	NA	NA	NA	8.8	25.74
1965 Average	31.5	NA	NA	NA	NA	NA	NA	7.6	22.33
1970 Average	38.8	NA	NA	NA	NA	2.81	2.72	5.7	16.62
1975 Average	53.8	NA	NA	NA	NA	3.18	3.12	6.5	19.07
1980 Average	82.4	1.482	11.85	1.182	8.52	4.47	4.36	6.6	19.21
1985 Average	107.6	1.112	8.89	0.979	7.06	5.69	5.52	6.87	20.13
1990 Average	130.7	0.931	7.44	0.813	5.86	4.44	4.31	5.99	17.56
1995 Average	152.4	0.791	6.36	0.569	4.10	3.98	3.87	5.51	16.15
2000 Average	172.2	0.908	7.31	0.761	5.49	4.51	4.39	4.79	14.02
2001 Average	177.1	0.864	6.96	0.706	5.09	5.44	5.28	4.84	14.20
2002 Average	179.9	0.801	6.46	0.628	4.52	4.39	4.28	4.69	13.75
2003 Average	184.0	0.890	7.19	0.736	5.31	5.23	5.09	4.74	13.89
2004 Average	188.9	1.018	8.22	0.819	5.91	5.69	5.55	4.74	13.89
2005 Average	195.3	1.197	9.67	1.051	7.58	6.50	6.33	4.84	14.18
2006 Average	201.6	1.307	10.58	1.173	8.46	6.81	6.63	5.16	15.12
2007 Average	207.342	1.374	11.20	1.250	9.01	6.31	6.14	5.14	15.05
2008 Average	215.303	1.541	12.62	1.495	10.78	6.45	6.28	5.23	15.33
2009 Average	214.537	1.119	9.21	1.112	8.02	5.66	5.52	5.37	15.72
2010 Average	218.056	1.301	10.76	1.283	9.25	5.22	5.11	5.29	15.51
2011 Average	224.939	1.590	13.18	NA	NA	4.90	4.80	5.21	15.27
2012 Average	229.594	1.609	13.35	NA	NA	4.64	4.53	5.17	15.17
2013 Average	232.957	1.538	12.76	NA	NA	4.43	4.31	5.21	15.26
2014 January	233.916	1.444	11.99	NA	NA	3.96	3.83	4.98	14.60
February	234.781	1.458	12.10	NA	NA	4.16	4.03	5.09	14.91
March	236.293	1.519	12.61	NA	NA	4.53	4.38	5.18	15.19
April	237.072	1.568	13.01	NA	NA	4.96	4.80	5.19	15.22
May	237.900	1.574	13.07	NA	NA	5.72	5.53	5.40	15.83
June	238.343	1.573	13.06	NA	NA	6.77	6.55	5.45	15.97
July	238.250	1.549	12.86	NA	NA	7.23	7.00	5.49	16.10
August	237.852	1.488	12.35	NA	NA	7.32	7.09	5.48	16.07
September	238.031	1.455	12.08	NA	NA	6.84	6.62	5.44	15.95
October	237.433	1.365	11.33	NA	NA	5.52	5.35	5.31	15.55
November	236.151	1.247	10.35	NA	NA	4.32	4.18	5.28	15.49
December	234.812	1.115	9.25	NA	NA	4.26	4.13	5.18	15.19
Average	236.736	1.447	12.01	NA	NA	4.63	4.49	5.29	15.50
2015 January	233.707	0.929	7.71	NA	NA	4.07	3.92	5.18	15.17
February	234.722	0.983	8.16	NA	NA	3.87	3.73	5.24	15.35
March	236.119	1.077	8.94	NA	NA	3.93	3.79	R 5.22	R 15.30
April	236.599	1.076	8.93	NA	NA	4.41	4.26	R 5.33	R 15.63
May	237.805	1.191	9.88	NA	NA	5.35	5.16	R 5.44	R 15.94
June	238.638	1.211	10.05	NA	NA	6.32	6.09	R 5.41	R 15.87
July	238.654	1.212	10.06	NA	NA	6.82	6.58	R 5.42	R 15.89
August	238.316	1.152	9.56	NA	NA	7.09	6.83	R 5.42	R 15.88
September	237.945	1.035	8.59	NA	NA	6.89	6.65	R 5.48	R 16.05
October	237.838	0.991	8.23	NA	NA	5.30	5.11	R 5.35	R 15.67
November	237.336	0.948	7.87	NA	NA	4.22	4.07	R 5.36	R 15.70
December	236.525	0.898	7.46	NA	NA	3.92	3.78	R 5.21	R 15.27
Average	237.017	1.059	8.79	NA	NA	4.38	4.22	R 5.34	R 15.64
2016 January	236.916	0.859	7.13	NA	NA	3.50	3.38	R 5.06	R 14.82
February	237.111	0.773	6.42	NA	NA	3.53	3.41	5.12	15.01
March	238.132	0.849	7.04	NA	NA	3.87	3.73	5.28	15.47
April	239.261	0.918	7.62	NA	NA	4.03	3.89	5.20	15.23
May	240.229	0.967	8.03	NA	NA	4.84	4.67	R 5.32	R 15.60
June	241.018	1.005	8.34	NA	NA	6.01	5.79	5.28	R 15.47
July	240.628	0.950	7.89	NA	NA	6.89	6.65	5.27	15.44
August	240.849	0.921	7.64	NA	NA	7.32	7.05	5.36	15.70
September	241.428	0.940	7.80	NA	NA	R 6.95	R 6.71	R 5.33	R 15.62
October	241.729	0.953	7.91	NA	NA	NA	NA	NA	NA
November	241.353	0.931	7.72	NA	NA	NA	NA	NA	NA

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

^b Includes taxes.

^c Excludes taxes.

R=Revised. NA=Not available.

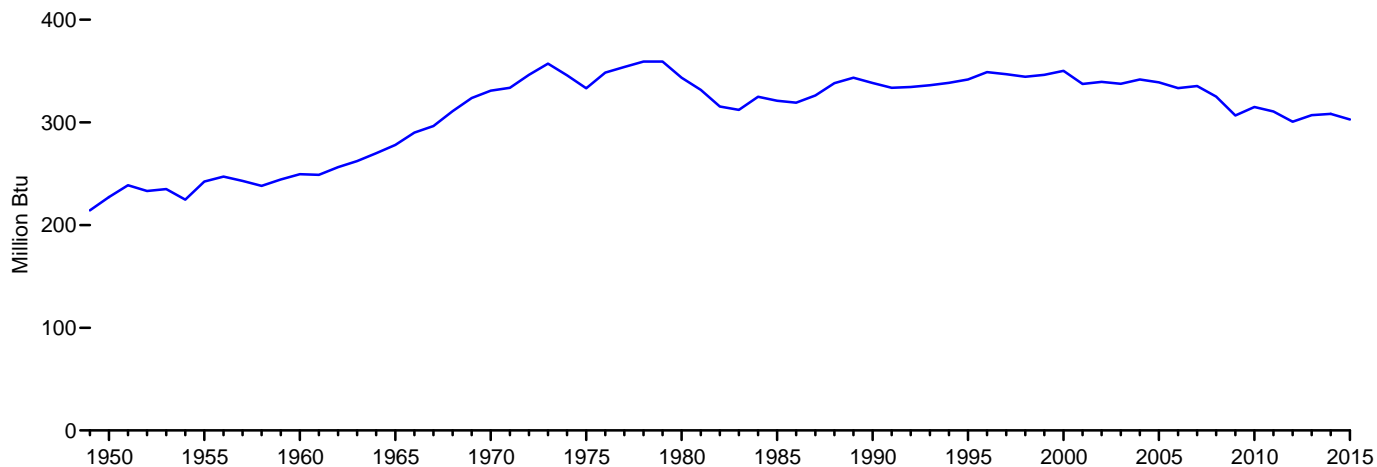
Notes: • See "Real Dollars" in Glossary. • Fuel costs are calculated by using the Urban Consumer Price Index (CPI) developed by the Bureau of Labor Statistics. • Annual averages may not equal average of months due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

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

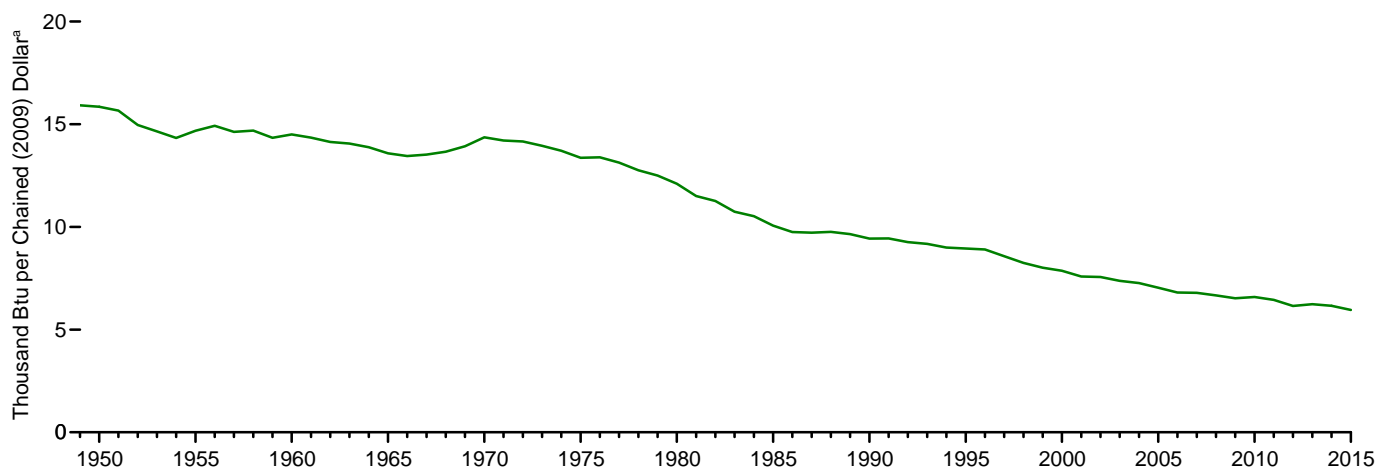
Sources: • **Fuel Prices:** Tables 9.4 (All Grades), 9.8, and 9.10, adjusted by the CPI; and *Monthly Energy Review*, September 2012, Table 9.8c. • **Consumer Price Index, All Urban Consumers:** U.S. Department of Labor, Bureau of Labor Statistics, series ID CUUR0000SA0. • **Conversion Factors:** Tables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

Figure 1.7 Primary Energy Consumption and Energy Expenditures Indicators

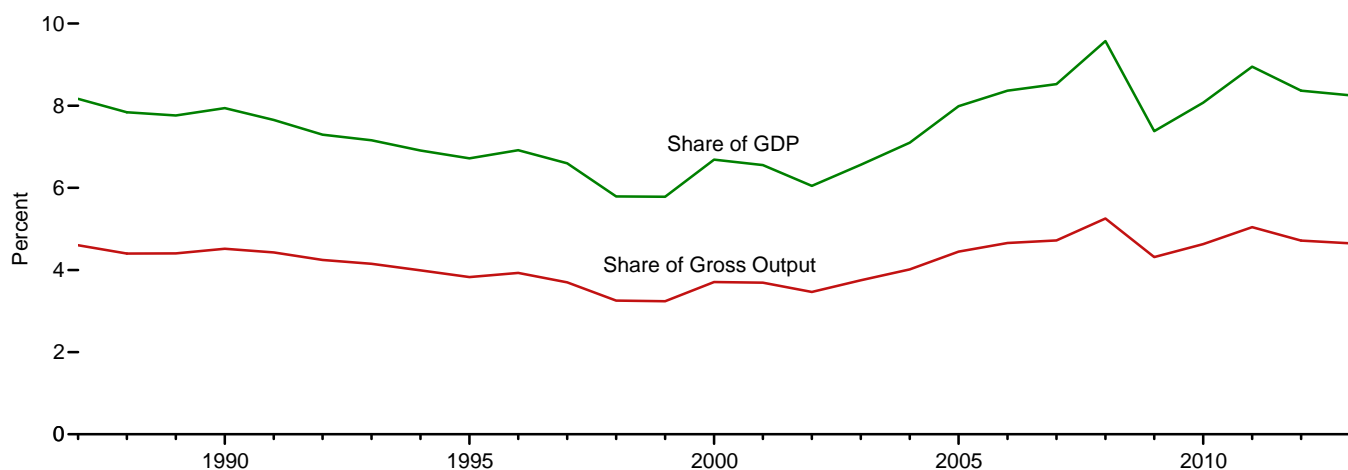
Energy Consumption per Capita, 1949–2015



Primary Energy Consumption per Real Dollar^a of Gross Domestic Product, 1949–2015



Energy Expenditures as Share of Gross Domestic Product and Gross Output,^b 1987–2013



^a See "Chained Dollars" and "Real Dollars" in Glossary.

^b Gross output is the value of gross domestic product (GDP) plus the value of intermediate inputs used to produce GDP.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#summary>.
Source: Table 1.7.

Table 1.7 Primary Energy Consumption, Energy Expenditures, and Carbon Dioxide Emissions Indicators

	Primary Energy Consumption ^a			Energy Expenditures ^b				Carbon Dioxide Emissions ^c		
	Consumption	Consumption per Capita	Consumption per Real Dollar ^d of GDP ^e	Expenditures	Expenditures per Capita	Expenditures as Share of GDP ^e	Expenditures as Share of Gross Output ^f	Emissions	Emissions per Capita	Emissions per Real Dollar ^d of GDP ^e
	Quadrillion Btu	Million Btu	Thousand Btu per Chained (2009) Dollar ^d	Million Nominal Dollars ^g	Nominal Dollars ^g	Percent	Percent	Million Metric Tons Carbon Dioxide	Metric Tons Carbon Dioxide	Metric Tons Carbon Dioxide per Million Chained (2009) Dollars ^d
1950	34.616	227	15.85	NA	NA	NA	NA	2,382	15.6	1,091
1955	40.208	242	14.68	NA	NA	NA	NA	2,685	16.2	980
1960	45.086	250	14.50	NA	NA	NA	NA	2,914	16.1	937
1965	54.015	278	13.58	NA	NA	NA	NA	3,462	17.8	871
1970	67.838	331	14.37	82,875	404	7.7	NA	4,261	20.8	902
1975	71.965	333	13.36	171,851	796	10.2	NA	4,439	20.6	824
1980	78.067	344	12.10	374,347	1,647	13.1	NA	4,771	21.0	740
1981	76.106	332	11.50	427,898	1,865	13.3	NA	4,646	20.2	702
1982	73.099	316	11.26	426,479	1,841	12.7	NA	4,405	19.0	679
1983	72.971	312	10.74	411,617	1,786	11.5	NA	4,377	18.7	644
1984	76.632	325	10.52	435,371	1,846	10.8	NA	4,614	19.6	633
1985	76.392	321	10.06	438,531	1,843	10.1	NA	4,600	19.3	606
1986	76.647	319	9.75	384,284	1,600	8.4	NA	4,608	19.2	586
1987	79.054	326	9.72	397,819	1,642	8.2	4.6	4,766	19.7	586
1988	82.709	338	9.76	411,739	1,684	7.8	4.4	4,984	20.4	588
1989	84.785	344	9.65	439,235	1,780	7.8	4.4	5,070	20.5	577
1990	84.484	338	9.43	474,831	1,902	7.9	4.5	5,039	20.2	563
1991	84.437	334	9.44	472,543	1,868	7.7	4.4	4,993	19.7	558
1992	85.782	334	9.26	477,024	1,860	7.3	4.2	5,087	19.8	549
1993	87.365	336	9.18	492,383	1,894	7.2	4.2	5,185	19.9	545
1994	89.087	339	8.99	504,988	1,919	6.9	4.0	5,261	20.0	531
1995	91.031	342	8.95	514,755	1,933	6.7	3.8	5,323	20.0	523
1996	94.021	349	8.90	560,409	2,080	6.9	3.9	5,510	20.5	522
1997	94.600	347	8.57	568,075	2,084	6.6	3.7	5,584	20.5	506
1998	95.018	344	8.24	526,394	1,908	5.8	3.3	5,635	20.4	489
1999	96.648	346	8.01	558,739	2,002	5.8	3.2	5,688	20.4	471
2000	98.817	350	7.87	687,824	2,438	6.7	3.7	5,868	20.8	467
2001	96.170	337	7.58	696,347	2,444	6.6	3.7	5,761	20.2	454
2002	97.643	339	7.56	664,072	2,309	6.0	3.5	5,804	20.2	450
2003	97.917	338	7.38	755,205	2,603	6.6	3.8	5,853	20.2	441
2004	100.090	342	7.27	871,337	2,976	7.1	4.0	5,970	20.4	433
2005	100.188	339	7.04	1,045,910	3,539	8.0	4.4	5,993	20.3	421
2006	99.484	333	6.81	1,159,022	3,884	8.4	4.7	5,910	19.8	404
2007	101.015	335	6.79	1,234,037	4,097	8.5	4.7	6,000	19.9	403
2008	98.891	325	6.67	1,409,247	4,634	9.6	5.3	5,809	19.1	392
2009	94.118	307	6.53	1,063,889	3,468	7.4	4.3	5,386	17.6	374
2010	97.444	315	6.59	1,208,443	3,906	8.1	4.6	5,582	18.0	378
2011	96.842	311	6.45	1,388,618	4,455	8.9	5.0	5,445	17.5	362
2012	94.416	301	6.15	1,351,513	4,303	8.4	4.7	5,232	16.7	341
2013	^R 97.157	307	6.23	1,375,306	4,346	8.3	4.7	5,360	16.9	344
2014	98.317	308	6.16	NA	NA	NA	NA	5,406	17.0	339
2015	^R 97.344	^R 303	^R 5.95	NA	NA	NA	NA	^R 5,259	16.4	322

^a See "Primary Energy Consumption" in Glossary.

^b Expenditures include taxes where data are available.

^c Carbon dioxide emissions from energy consumption. See Table 12.1.

^d See "Chained Dollars" and "Real Dollars" in Glossary.

^e See "Gross Domestic Product (GDP)" in Glossary.

^f Gross output is the value of GDP plus the value of intermediate inputs used to produce GDP.

^g See "Nominal Dollars" in Glossary.

^R=Revised. NA=Not available.

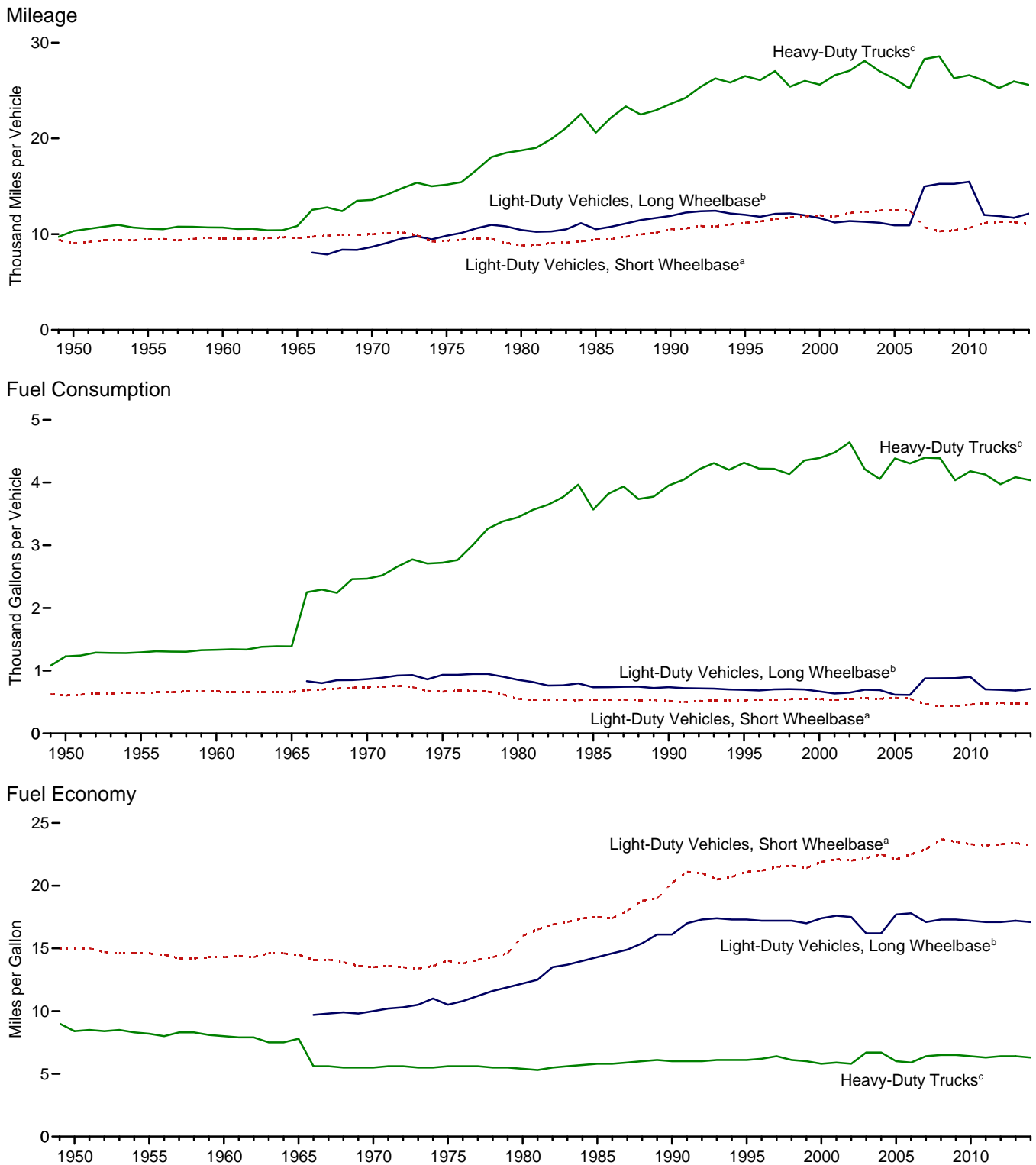
Notes: • Data are estimates. • Geographic coverage is the 50 states and the District of Columbia.

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

Sources: • **Consumption:** Table 1.3. • **Consumption per Capita:** Calculated as energy consumption divided by U.S. population (see Table C1).

• **Consumption per Real Dollar of GDP:** Calculated as energy consumption divided by U.S. gross domestic product in chained (2009) dollars (see Table C1).
 • **Expenditures:** U.S. Energy Information Administration, "State Energy Price and Expenditure Estimates, 1970 Through 2013" (July 2015), U.S. Table ET1.
 • **Expenditures per Capita:** Calculated as energy expenditures divided by U.S. population (see Table C1).
 • **Expenditures as Share of GDP:** Calculated as energy expenditures divided by U.S. gross domestic product in nominal dollars (see Table C1).
 • **Expenditures as Share of Gross Output:** Calculated as energy expenditures divided by U.S. gross output (see Table C1).
 • **Emissions:** 1949–1972—U.S. Energy Information Administration, *Annual Energy Review 2011*, Table 11.1. 1973 forward—Table 12.1. • **Emissions per Capita:** Calculated as carbon dioxide emissions divided by U.S. population (see Table C1).
 • **Emissions per Real Dollar of GDP:** Calculated as carbon dioxide emissions divided by U.S. gross domestic product in chained (2009) dollars (see Table C1).

Figure 1.8 Motor Vehicle Mileage, Fuel Consumption, and Fuel Economy, 1949–2014



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

^b For 1966–2000, data are for vans, pickup trucks, and sport utility vehicles. Beginning in 2007, data are for light-duty vehicles (passenger cars, light trucks, vans, and sport utility vehicles) with a wheelbase greater than 121 inches.

^c For 1949–1965, data are for single-unit trucks with 2 axles and 6 or more tires, combination trucks, and other vehicles with 2 axles and 4

tires that are not passenger cars. For 1966–2006 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.

Note: Through 1965, “Light-Duty Vehicles, Long Wheelbase” data are included in “Heavy-Duty Trucks.”

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

Source: Table 1.8.

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

	Light-Duty Vehicles, Short Wheelbase ^a			Light-Duty Vehicles, Long Wheelbase ^b			Heavy-Duty Trucks ^c			All Motor Vehicles ^d		
	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy	Mileage	Fuel Consumption	Fuel Economy
	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon	Miles per Vehicle	Gallons per Vehicle	Miles per Gallon
1950	9,060	603	15.0	(e)	(e)	(e)	10,316	1,229	8.4	9,321	725	12.8
1955	9,447	645	14.6	(e)	(e)	(e)	10,576	1,293	8.2	9,661	761	12.7
1960	9,518	668	14.3	(e)	(e)	(e)	10,693	1,333	8.0	9,732	784	12.4
1965	9,603	661	14.5	(e)	(e)	(e)	10,851	1,387	7.8	9,826	787	12.5
1970	9,989	737	13.5	8,676	866	10.0	13,565	2,467	5.5	9,976	830	12.0
1975	9,309	665	14.0	9,829	934	10.5	15,167	2,722	5.6	9,627	790	12.2
1980	8,813	551	16.0	10,437	854	12.2	18,736	3,447	5.4	9,458	712	13.3
1981	8,873	538	16.5	10,244	819	12.5	19,016	3,565	5.3	9,477	697	13.6
1982	9,050	535	16.9	10,276	762	13.5	19,931	3,647	5.5	9,644	686	14.1
1983	9,118	534	17.1	10,497	767	13.7	21,083	3,769	5.6	9,760	686	14.2
1984	9,248	530	17.4	11,151	797	14.0	22,550	3,967	5.7	10,017	691	14.5
1985	9,419	538	17.5	10,506	735	14.3	20,597	3,570	5.8	10,020	685	14.6
1986	9,464	543	17.4	10,764	738	14.6	22,143	3,821	5.8	10,143	692	14.7
1987	9,720	539	18.0	11,114	744	14.9	23,349	3,937	5.9	10,453	694	15.1
1988	9,972	531	18.8	11,465	745	15.4	22,485	3,736	6.0	10,721	688	15.6
1989	10,157	533	19.0	11,676	724	16.1	22,926	3,776	6.1	10,932	688	15.9
1990	10,504	520	20.2	11,902	738	16.1	23,603	3,953	6.0	11,107	677	16.4
1991	10,571	501	21.1	12,245	721	17.0	24,229	4,047	6.0	11,294	669	16.9
1992	10,857	517	21.0	12,381	717	17.3	25,373	4,210	6.0	11,558	683	16.9
1993	10,804	527	20.5	12,430	714	17.4	26,262	4,309	6.1	11,595	693	16.7
1994	10,992	531	20.7	12,156	701	17.3	25,838	4,202	6.1	11,683	698	16.7
1995	11,203	530	21.1	12,018	694	17.3	26,514	4,315	6.1	11,793	700	16.8
1996	11,330	534	21.2	11,811	685	17.2	26,092	4,221	6.2	11,813	700	16.9
1997	11,581	539	21.5	12,115	703	17.2	27,032	4,218	6.4	12,107	711	17.0
1998	11,754	544	21.6	12,173	707	17.2	25,397	4,135	6.1	12,211	721	16.9
1999	11,848	553	21.4	11,957	701	17.0	26,014	4,352	6.0	12,206	732	16.7
2000	11,976	547	21.9	11,672	669	17.4	25,617	4,391	5.8	12,164	720	16.9
2001	11,831	534	22.1	11,204	636	17.6	26,602	4,477	5.9	11,887	695	17.1
2002	12,202	555	22.0	11,364	650	17.5	27,071	4,642	5.8	12,171	719	16.9
2003	12,325	556	22.2	11,287	697	16.2	28,093	4,215	6.7	12,208	718	17.0
2004	12,460	553	22.5	11,184	690	16.2	27,023	4,057	6.7	12,200	714	17.1
2005	12,510	567	22.1	10,920	617	17.7	26,235	4,385	6.0	12,082	706	17.1
2006	12,485	554	22.5	10,920	612	17.8	25,231	4,304	5.9	12,017	698	17.2
2007	^a 10,710	^a 468	^a 22.9	^b 14,970	^b 877	^b 17.1	^c 28,290	^c 4,398	6.4	11,915	693	17.2
2008	10,290	435	23.7	15,256	880	17.3	28,573	4,387	6.5	11,631	667	17.4
2009	10,391	442	23.5	15,252	882	17.3	26,274	4,037	6.5	11,631	661	17.6
2010	10,650	456	23.3	15,474	901	17.2	26,604	4,180	6.4	11,866	681	17.4
2011	11,150	481	23.2	12,007	702	17.1	26,054	4,128	6.3	11,652	665	17.5
2012	11,262	484	23.3	11,885	694	17.1	25,255	3,973	6.4	11,707	665	17.6
2013	11,244	480	23.4	11,712	683	17.2	25,951	4,086	6.4	11,679	663	17.6
2014 ^p	11,048	476	23.2	12,138	710	17.1	25,594	4,036	6.3	11,621	666	17.5

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

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

^c For 1949–1965, data are for single-unit trucks with 2 axles and 6 or more tires, combination trucks, and other vehicles with 2 axles and 4 tires that are not passenger cars. For 1966–2006, data are for single-unit trucks with 2 axles and 6 or more tires, and combination trucks. Beginning in 2007, data are for single-unit trucks with 2 axles and 6 or more tires (or a gross vehicle weight rating exceeding 10,000 pounds), and combination trucks.

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

^e Included in "Heavy-Duty Trucks."

P=Preliminary.

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

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

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

Table 1.9 Heating Degree Days by Census Division

	New England ^a	Middle Atlantic ^b	East North Central ^c	West North Central ^d	South Atlantic ^e	East South Central ^f	West South Central ^g	Mountain ^h	Pacific ⁱ	United States
1950 Total	6,794	6,324	7,027	7,455	3,521	3,547	2,277	6,341	3,906	5,367
1955 Total	6,872	6,231	6,486	6,912	3,508	3,513	2,294	6,704	4,320	5,246
1960 Total	6,828	6,391	6,908	7,184	3,780	4,134	2,767	6,281	3,799	5,404
1965 Total	7,029	6,393	6,587	6,932	3,372	3,501	2,237	6,086	3,819	5,146
1970 Total	7,022	6,388	6,721	7,090	3,452	3,823	2,558	6,119	3,726	5,218
1975 Total	6,547	5,892	6,406	6,880	2,970	3,437	2,312	6,260	4,117	4,905
1980 Total	7,071	6,477	6,975	6,836	3,378	3,964	2,494	5,554	3,539	5,080
1985 Total	6,749	5,971	6,668	7,262	2,899	3,660	2,535	6,059	3,935	4,889
1990 Total	5,987	5,252	5,780	6,137	2,307	2,942	1,968	5,391	3,603	4,180
1995 Total	6,684	6,093	6,740	6,911	2,988	3,648	2,147	5,101	3,269	4,640
2000 Total	6,625	5,999	6,315	6,500	2,905	3,551	2,153	4,971	3,460	4,494
2001 Total	6,202	5,541	5,844	6,221	2,604	3,327	2,162	5,004	3,545	4,257
2002 Total	6,234	5,550	6,128	6,485	2,664	3,443	2,292	5,197	3,510	4,356
2003 Total	6,975	6,258	6,536	6,593	2,884	3,559	2,205	4,817	3,355	4,544
2004 Total	6,709	5,892	6,178	6,329	2,715	3,291	2,041	5,010	3,346	4,344
2005 Total	6,644	5,950	6,222	6,213	2,775	3,380	1,985	4,896	3,377	4,348
2006 Total	5,885	5,211	5,703	5,821	2,475	3,211	1,802	4,915	3,557	4,040
2007 Total	6,537	5,756	6,074	6,384	2,525	3,187	2,105	4,939	3,506	4,268
2008 Total	6,434	5,782	6,677	7,118	2,712	3,600	2,125	5,233	3,566	4,494
2009 Total	6,644	5,922	6,512	6,841	2,812	3,536	2,152	5,139	3,538	4,481
2010 Total	5,934	5,553	6,185	6,565	3,167	3,948	2,449	5,082	3,624	4,463
2011 Total	6,114	5,483	6,172	6,565	2,565	3,343	2,114	5,322	3,818	4,312
2012 Total	5,561	4,970	5,356	5,515	2,306	2,876	1,650	4,574	3,411	3,769
2013 Total	6,426	5,838	6,621	7,135	2,736	3,648	2,326	5,273	3,362	4,465
2014										
January	1,304	1,305	1,518	1,483	758	1,014	650	834	437	969
February	1,141	1,104	1,322	1,347	492	690	478	705	449	798
March	1,116	1,026	1,094	1,031	459	564	351	583	375	683
April	582	505	496	512	157	182	81	405	276	325
May	254	179	205	200	36	49	11	218	131	127
June	46	20	27	41	1	1	0	86	61	28
July	4	7	29	30	1	1	0	11	9	10
August	32	19	19	21	1	0	0	37	11	13
September	110	74	120	126	11	17	4	100	37	57
October	358	311	418	389	118	162	37	273	122	220
November	785	757	937	1,021	440	626	390	654	353	614
December	941	896	1,009	1,102	477	627	421	837	511	705
Total	6,674	6,203	7,194	7,304	2,951	3,932	2,422	4,743	2,773	4,549
2015										
January	1,336	1,259	R 1,334	1,267	643	R 835	624	818	470	890
February	R 1,411	R 1,317	1,405	1,306	666	R 864	R 499	601	333	867
March	1,100	R 1,001	R 951	802	358	444	278	484	284	R 583
April	587	R 481	R 454	R 399	131	146	56	396	R 294	300
May	147	R 99	159	215	22	37	14	268	R 208	119
June	R 83	29	45	40	1	1	0	42	R 25	24
July	7	4	12	12	0	0	0	24	8	6
August	8	R 8	25	33	0	1	0	21	13	11
September	43	27	39	50	8	13	1	78	57	32
October	R 458	391	365	355	143	164	42	247	R 111	227
November	609	R 528	603	R 650	237	R 312	R 219	686	R 470	445
December	R 723	625	774	961	279	R 400	356	937	618	581
Total	R 6,512	R 5,771	R 6,166	R 6,090	2,488	R 3,216	R 2,089	R 4,601	R 2,891	R 4,084
2016										
January	R 1,128	R 1,118	1,240	R 1,304	659	856	563	916	R 567	870
February	957	901	R 956	937	482	R 572	R 307	619	R 343	R 627
March	R 752	644	669	654	239	323	179	R 542	392	449
April	R 604	514	R 506	424	151	R 160	61	R 380	242	309
May	R 251	213	R 222	208	58	R 71	17	254	R 179	R 150
June	45	22	R 25	28	1	0	0	42	44	21
July	4	1	3	11	0	0	0	15	19	6
August	5	1	5	17	0	0	0	R 31	12	6
September	67	37	40	75	2	5	1	115	64	38
9-Month Total	3,813	3,451	3,667	3,657	1,593	1,987	1,128	2,913	1,862	2,477
2015 9-Month Total	4,723	4,227	4,424	4,123	1,829	2,340	1,473	2,731	1,692	2,832
2014 9-Month Total	4,591	4,239	4,830	4,792	1,917	2,517	1,574	2,980	1,786	3,010

^a Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

^b New Jersey, New York, and Pennsylvania.

^c Illinois, Indiana, Michigan, Ohio, and Wisconsin.

^d Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

^e Delaware, Florida, Georgia, Maryland (and the District of Columbia), North Carolina, South Carolina, Virginia, and West Virginia.

^f Alabama, Kentucky, Mississippi, and Tennessee.

^g Arkansas, Louisiana, Oklahoma, and Texas.

^h Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

ⁱ Alaska, California, Hawaii, Oregon, and Washington.

R=Revised.

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 degrees Fahrenheit (°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). • 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.

Source: State-level degree day data are from U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Centers for Environmental Information. Using these state-level data, the U.S. Energy Information Administration calculates population-weighted census-division and U.S. degree day averages using state populations from the same year the degree days are measured. See methodology at http://www.eia.gov/forecasts/steo/special/pdf/2012_sp_04.pdf.

Energy Overview

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

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

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

Table 1.2 Sources

Coal

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

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

Natural Gas (Dry)

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

Crude Oil

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

NGPL

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

Fossil Fuels Total

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

Nuclear Electric Power

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

Renewable Energy

1949 forward: Table 10.1.

Total Primary Energy Production

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

Table 1.3 Sources

Coal

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

Natural Gas

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

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

Petroleum

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

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

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

heat content factor in Table A1; for other renewable diesel fuel, the data are converted to Btu by multiplying by the other renewable diesel fuel heat content factor in Table A1).

Coal Coke Net Imports

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

Fossil Fuels Total

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

Nuclear Electric Power

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

Renewable Energy

1949 forward: Table 10.1.

Electricity Net Imports

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

Total Primary Energy Consumption

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

Table 1.4a Sources

Coal

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

Coal Coke

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

Natural Gas

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

Crude Oil

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

Petroleum Products

1949–1992: Petroleum products (excluding biofuels) imports are equal to total petroleum imports from Table 3.3b minus

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

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

2009 forward: Renewable fuels (excluding fuel ethanol) imports data are from U.S. Energy Information Administration, *Petroleum Supply Annual (PSA)*, Tables 1 and 25, and *Petroleum Supply Monthly (PSM)*, Tables 1 and 37 (for biomass-based diesel fuel and other renewable fuels, the data are converted to Btu by multiplying by the biodiesel heat content factor in Table A1; for other renewable diesel fuel, the data are converted to Btu by multiplying by the other renewable diesel fuel heat content factor in Table A1). Petroleum products (excluding biofuels) imports are equal to petroleum products (including biofuels) imports (see 1949–1992 sources above) minus fuel ethanol (minus denaturant) imports (see “Biofuels—Fuel Ethanol (Minus Denaturant)” sources below) minus renewable fuels (excluding fuel ethanol) imports.

Total Petroleum

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

Biofuels—Fuel Ethanol (Minus Denaturant)

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

Biofuels—Biodiesel

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

Biofuels—Other Renewable Fuels

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

Total Biofuels

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

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

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

Electricity

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

Total Primary Energy Imports

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

Table 1.4b Sources

Coal

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

Coal Coke

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

Natural Gas

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

Crude Oil

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

Petroleum Products

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

2010: Petroleum products (including biofuels) exports are equal to total petroleum exports from Table 3.3b minus crude oil exports from Table 3.3b; petroleum products (including biofuels) exports data are converted to Btu by multiplying by the total petroleum products exports heat content factors in Table A2. Petroleum products (excluding biofuels) exports are equal to petroleum products (including biofuels) exports minus fuel ethanol (minus denaturant) exports (see “Biofuels—Fuel Ethanol (Minus Denaturant)” sources below). 2011 forward: Biomass-based diesel fuel exports data are from U.S. Energy Information Administration, *Petroleum Supply Annual (PSA)*, Table 31, and *Petroleum Supply Monthly (PSM)*, Table 49, and are converted to Btu by

multiplying by the biodiesel heat content factor in Table A1. Petroleum products (excluding biofuels) exports are equal to petroleum products (including biofuels) exports (see 2010 sources above) minus fuel ethanol (minus denaturant) exports (see “Biofuels—Fuel Ethanol (Minus Denaturant)” sources below) minus biomass-based diesel fuel exports.

Total Petroleum

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

Biofuels—Fuel Ethanol (Minus Denaturant)

2010 forward: Fuel ethanol (including denaturant) exports data are from PSA/PSM Table 1. Fuel ethanol (minus denaturant) production is equal to fuel ethanol (including denaturant) production from Table 10.3 minus denaturant from Table 10.3. Fuel ethanol (minus denaturant) exports are equal to fuel ethanol (including denaturant) exports multiplied by the ratio of fuel ethanol (minus denaturant) production to fuel ethanol (including denaturant) production. Fuel ethanol (minus denaturant) exports are converted to Btu by multiplying by 3.539 million Btu per barrel, the undenatured ethanol heat content factor in Table A3.

Biofuels—Biodiesel

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

Total Biofuels

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

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

Electricity

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

Total Primary Energy Exports

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

Total Primary Energy Net Imports

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

Table 1.5 Sources

U.S. Department of Commerce, U.S. Census Bureau, 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.
2010–2011: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.
2012–2014: “U.S. International Trade in Goods and Services,” 2014 Annual Revisions.
2015 and 2016: “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.
2010–2011: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.
2012–2014: “U.S. International Trade in Goods and Services,” 2014 Annual Revisions.
2015 and 2016: “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.
2010–2011: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.
2012–2014: “U.S. International Trade in Goods and Services,” 2014 Annual Revisions.

2015 and 2016: “U.S. International Trade in Goods and Services,” FT-900, monthly.

Petroleum Balance

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

Energy Balance

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

Non-Energy Balance

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

Total Merchandise

1974–1987: U.S. merchandise trade press releases and database printouts for adjustments.
1988: “Report on U.S. Merchandise Trade, 1988 Final Revisions,” August 18, 1989.
1989: “Report on U.S. Merchandise Trade, 1989 Revisions,” July 10, 1990.
1990: “U.S. Merchandise Trade, 1990 Final Report,” May 10, 1991, and “U.S. Merchandise Trade, December 1992,” February 18, 1993, page 3.
1991: “U.S. Merchandise Trade, 1992 Final Report,” May 12, 1993.
1992–2009: “U.S. International Trade in Goods and Services,” Annual Revisions.
2010–2011: “U.S. International Trade in Goods and Services,” 2012 Annual Revisions.
2012–2014: “U.S. International Trade in Goods and Services,” 2014 Annual Revisions.
2015 and 2016: “U.S. International Trade in Goods and Services,” FT-900, monthly.

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